University of South Carolina
Scholar Commons

2018

The Impact Of A Blended Learning Rotational Model On Student Achievement In An Eighth-Grade Social Studies Class

Amanda Mings
University of South Carolina

Follow this and additional works at: https://scholarcommons.sc.edu/etd

Part of the Curriculum and Instruction Commons

THE IMPACT OF A BLENDED LEARNING ROTATIONAL MODEL ON STUDENT
ACHIEVEMENT IN AN EIGHTH-GRADE SOCIAL STUDIES CLASS

by

Amanda Mings

Bachelor of Science
Winthrop University, 2004

Master of Education
Columbia College, 2007

_____

Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Education in

Curriculum and Instruction

College of Education

University of South Carolina

2018

Accepted by:

Toby Jenkins-Henry, Major Professor

Linda Silvernail, Committee Member

Suha Tamim, Committee Member

William Morris, Committee Member

Cheryl L. Addy, Vice Provost and Dean of the Graduate School

DEDICATION

This dissertation is dedicated to the most important person in my life, my baby boy,

Camden. Never would I have imagined I would be able to accomplish everything I have

accomplished while at the same time welcoming you into this world. You have been my

drive and my inspiration. Everything I do, I do for you. While this is one of my biggest

accomplishments, nothing will ever compare to being your mom. I love you to the moon

and back, and back again. I also want to dedicate this paper to the friends, family, and

colleagues who played some instrumental roles in helping me get to this point. I want to

thank a special person who came in to my life towards the end of this process and

continued to offer motivation and support as I weathered these last few storms. I will

always love you for that.

ABSTRACT

One of the biggest determining factors of effective education is the implementation of standardized testing as a way to access students and hold schools accountable. Some educators argue that this system of accountability has done more harm than good. Many teachers have adopted a teach to the test approach to learning as they succumb to the pressures of high stakes testing linked to performance evaluation. Many educational scholars agree that instructional practices must cater to the needs and interests of the learner in order to yield positive results. The so-called, Net Generation, learns differently from their predecessors and these students are currently in middle-level schools requiring a more technologically integrated curriculum and instructional experience. The present action research study involves the implementation of a technology-integrated, blended-learning rotational model in an eighth-grade social studies classroom in South Carolina. The research question associated with the identified problem of practice follows: What are the perceived effects of a technology- integrated, blended-learning rotational model on student achievement in an eighth-grade, social studies classroom? A six-week study was conducted using a one-group pretest/posttest method to determine the impact a blended approach has on the students. Participants included seventy-one eighth grade students in a northwestern South Carolina middle school. The second stage of the study involved the collecting and analyzing of data. The developing stage involved the creation of an action plan based on the data results. Lastly, an overall reflection of the study was done to address implications for future research.

iii

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION

Background

In *Experience and Education*, John Dewey (1938) describes the characteristics of progressive education as opposed to traditional education. Dewey makes the claim that learning is acquired through experiences. Dewey (1938) proclaims learning should be free and individualized, playing on the interests and individuality of students. "There is an intimate and necessary relation between the processes of actual experience and education" (Dewey, 1938, p. 20). Too often in education many develop a one size fits all mind-set where it is "assumed the future would be much like the past, and yet it is used as educational food in a society where change is the rule, not the exception" (Dewey, 1938, p. 19). As we progress more into the twenty-first century, new technological advances and web media have become prevalent in today's society and in schools as a means of communicating, collaborating, researching and learning (Taylor & Parsons, 2011). There have been countless debates on whether or not technology use in schools positively affects the level of engagement and academic success among students (Oblinger & Oblinger, 2005). Parents and many in education worry about the negative effects too much "screen time" (e.g., television, smart phones, computers, video games, and social media) has on today's students. Considering the popularity of social media, hand-held devices, and video games, some suggest students are not able to focus when required to multi-task in the classroom (Devlin, Feldhaus, & Bentrem, 2013).

However, today's middle level students are part of what is known as the Net Generation. Learners in the present digital age are highly social and interactive beings. For today's learners, technology and media seem to be, in some aspect, a part of their everyday lives (Barnes, Marateo & Ferris, 2007). They yearn to communicate instantly with their peers and the rest of the world (Taylor Parsons, 2011). This generation is presumed to be a homogenous group branded by their use and exposure to various types of technology along with their need to have instant access to information. Many assume that these students have a greater interest in technology than their teachers and generations before them. It is commonly believed that experiences with technology and digital media by the Net Generation has influenced their preferences in education (Kennedy, Judd, Dalgarno, & Waycott, 2010). Students in the present digital age have unique ways of thinking, communicating, and learning. The 21st century learner requires autonomy and independence as a part of their learning styles. They prefer learning strategies that provide a more innovative and up to date approach. Today's students tend to display a much a greater desire for active and engaging learning tasks such as: online notetaking, viewing interactive media like digital photos or multimedia presentations, or collaborating with peers (Barnes, Mareto, & Ferris, 2007). These students are interested more in self-directed learning experiences that include interactive elements, multiple forms of feedback, and a variety of resources and choices used to create learning that is personal and meaningful (Glenn, 2000).

A constant concern among teachers and stakeholders in education is increasing student learning. Many believe changes in teaching practices and methodologies are necessary to address these concerns. Research suggests changes in teaching strategies by

2

implementing the use of new information and communication technologies (ICT) as a supplement to traditional approaches will provide positive results. Blended learning is the integration of traditional face-to-face teaching with computer-based activities (Lopez-Perez, Perez-Lopez, Rodŕıguez-Ariza, & Argente-Linares, 2013). Various multimedia and technology resources aid teachers in engaging students in their respective subject areas. Students are provided with more autonomy and control in constructing their own learning and understanding argues Taylor and Parsons (2011). Several studies have examined the effects of instructional technology and online materials in the classroom setting. Such studies have focused on the effectiveness of technology integration and blended learning as a supplement to traditional teacher-led instruction. Moreover, a blended learning model has the potential to provide authentic and meaningful learning experiences that may not otherwise be accessible to students outside of school in their own communities (Lopez-Perez, Perez-Lopez, Rodŕıguez-Ariza, & Argente-Linares, 2013).

The Digital Divide

When analyzing the issue of social equality, it is clear that the digital divide among K-12 students, especially those affected by poverty, has become an increasing problem in education. Teachers are challenged with the task of helping students develop necessary digital literacy skills. However, Baverman (2016) argues that many of these students lack the foundations and digital skills needed to fully engage in online educational learning experiences that foster critical thinking. Additionally, teachers may tend to avoid assigning projects or homework assignments that require internet access if they assume many of their students do not have adequate web and computer access at

3

home. This type of practice prevents students from engaging in online literacy and comprehension skills they may utilize in higher education (Braverman, 2016). A 2011 survey reported 95 percent of teens admitted being connected to the Internet on a daily basis (Harlan, 2014). However, the data does not paint a true picture says Harlan (2014). The access to digital technology and internet is highly inequitable, especially in rural areas (Harlan, 2014). According to the 2014 United States Census report, 95% of homes with an income of $150,000 or higher reported having high speed internet. However, 62% of homes earning less than $25,000 owned computers, and less than half indicated access to high-speed internet (Braverman, 2016). Limited internet access could have a significant impact on the development of advanced digital literacy skills. Having adequate access to technology helps to build skills such as creativity, collaboration, research skills, problem solving, and digital citizenship. These areas could prove very beneficial when transitioning into the workforce (Harlan, 2014). As Mertler (2014) argues, teachers and other educators must work actively in their classrooms to address problems and find solutions that will ultimately lead to increased student achievement or improvement in their school climate and culture. This research study intends to encourage educators to help narrow the digital divide by implementing technology in an authentic and meaningful way to ultimately impact student achievement. Chapter Two of this study will provide a more in depth look at social justice and the digital divide in K-12 schools.

Problem of Practice

The identified problem of practice for this action research study stems from the evolution of the 21st Century learner and the desire to meet the needs of the Net

Generation. With the growing pressure on classroom teachers due to high-stakes testing and state and federal mandates, it is often common to find teachers spending a considerable amount of classroom time drilling facts to prepare students for end of year examinations. Classrooms have become more teacher-centered as educators succumb to the pressures of these high-stakes tests. Teachers often take control of the classrooms while limiting the opportunities for students to engage in quality learning activities building on students' strengths and interests that will foster self-reliance and build the skills necessary to become productive citizens (Amrein & Berliner, 2003). The testing and accountability movement in education is rooted in the behaviorist theory of education that assumes high stakes linked to testing will increase student achievement. While some teachers do not specifically engage in a teach-to-the-test mindset, studies suggest that many teachers tend to confine their instruction to only information included on state tests. Furthermore, due to pressures of high-stakes testing some teachers create more teacher-centered environments supplemented with traditional lecture and textbooks. Standardized testing and accountability has steered public education away from the constructivist approach to learning that engages in more student-centered instructional practices (Vogler & Virtue, 2007).

The goal for all stakeholders in education is to ensure that all children have the ability and opportunity to succeed. Teachers have the responsibility to help students develop the necessary skills needed to function in a democratic society. Social and emotional development in addition to academic achievement will allow students to become productive members of society. In helping students develop these necessary skills, it is important that instructional practices are student-centered with regard to their

5

learning styles, interests, and developmental needs (Camahalan, & Ruley, 2014). The teach-to-the test essentialist approach to learning influenced by high-stakes testing conflicts with the needs and interests of today's learners. Increasing improvements and advancements in the field of ICT has had much influence on education. As a result, new instructional choices for teaching and curriculum design have come to the forefront (Eryilmaz, 2015). The Net Generation is one that was born into the world of information technology. Children age six or younger are spending just as much time playing video and computer games as they do playing outside. Children are also utilizing computers and other digital media almost as much as they watch television. These children are able to multitask by talking on the phone or watching TV while surfing the internet. Smartphone and internet use among teens has increased substantially. One in four teens report using their phone over a desktop or laptop computer to go online. Overall youth ages 12-17 living in lower socioeconomic households are likely to use their cell phone as a primary means to access the internet (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). Home computer access is not always equitable due to certain variables such as race, socioeconomic status or geography. However, even with limited access to computers and the Internet at home, students in this generation consider technology to be an important aspect of their lives (Oblinger & Oblinger, 2005). This study addresses the intersectionality of children in the digital age and economically insecure communities.

While the research setting for this study is a 1:1 technology school, it is common to find teachers frustrated with the task of integrating technology in their daily lessons. Many find technology to be added pressure when trying to prepare students for end of year tests. Teachers most often rely on traditional methods such as drilling, lecture, and

notetaking to deliver tested content. The integration of technology does not always reflect the interests of the students. Technology is used by many as a substitution for things that could be easily done on paper. This limited use of technology is due to the lack of support offered to help teachers use the technology in a more authentic and engaging way. Effective and meaningful use of technology requires tasks that go beyond substitution. To address the needs and interests of today's learners, technology must be used in a way that is transformative. Tasks must be designed in a way that requires students to collaborate, interact, create, and redefine their learning. Teachers must find ways to incorporate the technological skills and preferences of their students into their lessons.

Purpose Statement

The primary purpose of this action research study was to determine the impact of a technology-integrated, blended learning rotational model on the achievement of students in an eighth-grade, social studies classroom. The secondary purpose of this research study was to develop an Action Plan designed to enable middle-level teachers to work more effectively with the so-called, Net Generation. The blended learning model enables teachers to provide students with opportunities to engage in meaningful technology-based learning tasks during the school day while still addressing the demands of state testing and accountability. Even though they may spend a considerable amount of time playing video games or engaging in social media, students living in poverty or economically insecure communities may not always have adequate access to educational technology. Integrating technology into classroom learning will provide students with access to a wide range of resources and media used to develop their critical thinking and digital literacy skills.

Research Questions

What is the possible impact of a technology- integrated, blended learning rotational model on student achievement in an eighth-grade, social studies classroom?

What impact does a blended learning rotational model have on the attitudes of students in an eighth-grade social studies classroom?

Theoretical Framework

Within any research study there are essential underlying assumptions related to the research and problem. These assumptions are rooted in theory and ideologies that ensure the proposed study is not based on personal interests, but rather grounded in theories and principles acquired from reliable sources (Simon & Goes, 2011). The theoretical framework creates a foundation from which a research study is developed. It provides structure for the problem and purpose of the research questions (Grant & Osanloo, 2014). The theoretical framework for this action research study addresses the theories of Essentialism, Progressivism, Social Constructivism, and 21st Century Learners.

Essentialism

Essentialism provides the background for current educational policy and its influence on teachers' instructional practices. Federal education policies and mandates have become a major player in deciding the structure of curriculum and content in America's schools. These polices tend to dictate how and when content and pedagogical practices are implemented in the classroom. In line with the standards driven polices in

place today, the theory of Essentialism promotes a back-to-basics movement that includes curriculum standards, rote memorization, and high-stakes testing and accountability as routine practices (Kessinger, 2011).

Essentialism dates back to 1938 and William Bagley's response to John Dewey and Progressive Education. While Progressivism focuses on learning through the senses involving interdisciplinary activities, individual growth and development, cooperative learning and collaboration, Essentialism calls for a back-to-basics ideology of learning calling attention to traditional practices and subject matter. The Essentialist Educational Theory defines the teacher's role as the expert and the student's role as one who complies with authority and acts as a passive learner (Schramm-Pate, 2015). In "An Essentialist's Platform for the Advancement of American Education," Bagley argued that education requires respect for authority. The Essentialist movement advocated for knowledge and intelligence instead of "child growth and development." Bagley's supporters argued that progressive educational practices were too lenient and did not place enough emphasis on the basics such as the Three Rs and factual knowledge (Kessinger, 2011).

Progressivism

John Dewey is most associated with the ideals of progressive education. Dewey (1938) suggests that progressive education is expressive in nature. It involves individuality and learning through experiences. The catalyst for the transition from traditional education to a more progressive society was the shift from agrarianism to industrialism in America. Educational implications developed from this change in social order. Progressivists argued that the traditional school did not meet the needs of an

industrial society (Mosier, 1952). In today's educational society, pedagogical progressivism bases instruction on the needs and interests of the child. Skills are taught that could be applied to any subject matter. Modern Progressivism promotes discovery, engagement, social interaction, etc. Progressive education is viewed as student-centered where the focus is on the learner (Labaree, Hirsch, & Beatty, 2004).

Social Constructivism

Roots of Constructivism can be traced back to John Dewey, Piaget, Vygotsky and Jerome Bruner (Applefield, Huber & Moallem, 2001). The Constructivist theory of learning represents a paradigm shift among theories of experience and learning. The Constructivist approach to learning and education involves a substantial change in the structure of a traditional teacher-centered classroom. Constructivists believe learners should construct their own learning through prior experiences, social interaction and authentic and meaningful tasks. In order to construct meaning, the learner must connect their own experiences, both old and new, to develop understanding and a sense of self-efficacy. The way in which information is presented and how learners are supported is very important argues Applefield, Huber and Moallem (2001). A critical characteristic of Social Constructivism is the opportunity to engage in meaningful collaborative social interactions among learners. When provided with opportunities for collaboration and social interactions, students are able to construct personal knowledge (Applefield, Huber & Moallem, 2001). Constructivism provides a theoretical foundation for the rise in digital media, information technology and social network connections among the Net Generation. Studies show most teens engage in technology aided communication such as text messaging, instant messaging, email, and social networking sites (Strasburger,

10

Jordan & Donnerstein, 2010). Teens today utilize cell phones to connect on various mainstream social networking sites such as Myspace and Facebook (Madden, Lenhart, Duggan, Cortesi & Gasser, 2013).

The New Twenty First Century Learner

There seems to be a distinct difference between the technological skills and preferences of school age children at the turn of the 21st century and those in the present digital age (Blair, 2012). Today's learners have experienced several technology milestones over the last decade. The emergence of various technologies such as iPods (2001), Facebook (2004), YouTube (2005), the Google cloud (2006), smartphones (2007) and tablets and iPads (2010) have all become an important aspect in the everyday lives of teens (Wang et al., 2014). The emergence of various types of technology and media has influenced the way students retrieve information as well as how they communicate and establish personal relationships. However, there seems to be a disconnect between school-aged students' personal use of technology and their educational experiences with technology (Wang et al., 2014). Students in today's K-12 schools are highly social and demand a much more interactive and independent role in the integration of technology. Simply watching videos, viewing an image, or moving objects on an interactive whiteboard has become somewhat obsolete. Students in the present digital age prefer to be engaged in exploration and discovery. Engaging in real-world experiences allow students to take ownership for their learning and apply these skills in authentic and meaningful ways. Providing opportunities to redefine, create, and design using technology helps students develop necessary problem-solving skills and creativity (Blair, 2012). Today's students are extremely social, and their outside use of technology is

11

driven by the need to maintain social connections and personal communication. Students spend a considerable amount of time using social networking sites (Facebook; Snapchat), sending text messages, face timing, and emailing (Wang et al., 2014). These types of resources can potentially benefit education by creating gateways for students to interact and share their learning with the world. It is essential that educators redefine the role of technology to meet the needs of 21st century learners (Blair, 2012).

Nature of the Study

An action research methodology was appropriate for this research study as the researcher was totally immersed in the educational setting as the teacher-researcher. According to Mertler (2014), "Teachers must be able and willing to critically examine their own practice as well as how students (both collectively and individually) learn best (p. 12)." Mertler (2014) indicates action research is composed of four stages: planning, acting, developing, and reflecting. This research study follows this framework in order to address the research question.

This study utilized a one-group pretest-posttest design. The independent variable in this study was the blended learning rotational model instructional method. Students included in the sample completed a unit of study that incorporated the blended learning model as a supplement to the traditional brick and mortar setting. Throughout the unit of study, students were introduced to the lesson topic via traditional teacher led lecture followed by a rotation of activities including an online learning station. The dependent variable in this study was student achievement as measured by a district-wide pretest and posttest.

12

A pretest and posttest was used to gather data to determine if the blended learning rotational model had an impact on students' achievement. Both the pretest and posttest were created by the school Social Studies Department planning team in response to the Student Learning Objectives (SLO) teacher evaluation process required by the state of South Carolina. Additionally, the questions included in the pretest and posttest were selected from a test question bank using the USA Test Prep Software. Student achievement and growth was measured by calculating the difference between the pretest and posttest score.

A Likert scale survey was also administered to gather information concerning student participants' perception of the blended learning instructional model and their overall experience throughout the instructional learning unit. The teacher-researcher utilized an informal observation journal throughout the study. The journal consisted of students' verbal and non-verbal interactions while engaging in the blended learning instructional unit. The mixed-method approach comprised of a pretest, posttest, observation journal, and Likert scale survey provided data used to make decisions concerning the effectiveness of the learning model and the action plan for the future.

A convenience sample was used for the purposes of this study. The sample consisted of students enrolled in a year-long eighth-grade social studies course. The sample group was assigned as part of the school's regular course scheduling process. Students were randomly selected and enrolled into class sections using the Power School computer-based software. In rare instances, students were hand placed into class sections upon parent request or decisions made by the principal to deescalate any potential

13

discipline problems. A more detailed description of the research design will be discussed in Chapter Three.

Assumptions

There are two assumptions that can be made in this research study. The first assumption is that the pretest and posttest generated by the teacher planning team is aligned with the learning objectives stated in the South Carolina Social Studies Curriculum Standards. It is assumed that the instruction being delivered to students will match the summative assessment. Assessment questions that do not accurately address the objectives for the unit of study could have an effect on the measure of students' academic achievement. The second assumption is that students extended their best effort when completing the posttest. While no extrinsic reward will be offered for demonstrating mastery on the test, students will receive a classroom grade. It is assumed that students will be motivated to put forth their best effort in order to make the best grade possible.

Limitations

Utilizing a convenience sample is one limitation to this study. Since the sample participants are unique to the school setting, the results of the study cannot be applied to a larger population. However, since this study utilizes an action research design, results can be used to improve upon the problem of practice unique to this particular research study and school population. Another limitation in this study is the fact that the data collection takes place during a particular interval of time within a regular school setting. This study is vulnerable to certain environmental conditions such as school assemblies, student

absences, and field trips that may affect class scheduling or the flow of instruction.

Adjustments were made to the instructional phase and administration of the posttest to

account for student absences. Class scheduling was adjusted as needed to reflect any lost

instructional time due to field trips or other school-wide non-instructional activities.

Delimitations

The data collected in this study included only scores from students enrolled in one

section of eighth grade social studies at a South Carolina Middle School. This

delimitation ensures that external variables that may affect the outcome of the study are

limited. Such variables include teaching styles, demographics, and learning objectives.

The student population, teacher's instructional choices and objectives were all unique to

the research site and study.

Overview

Chapter One of this Dissertation in Practice (DP) has identified the problem of

practice, the purpose of the action research study, an overarching research question, a

brief discussion of related literature, and the research methods used in the duration of the

study. Chapter Two will provide a more detailed review of literature as it relates to

educational theory, blended learning, and the impact of instructional technology on

academic achievement in the various subject areas. Chapter Three will describe the initial

problem of practice, the purpose of the Action Research study and the methodology used

in the research design. Chapter Four will provide the reader with a report of the findings

and an interpretation of the data in relation to the research question and problem of

practice. Chapter Five will provide an overview and summary of the major points of the

study. Additionally, Chapter Five of the DP will discuss a plan of action for addressing the problem of practice as determined by the research findings and suggestions for future research on the topic.

Conclusion

In order to examine the effectiveness of instructional technology on student academic achievement the proposed Action Research study intends to answer the following questions:

What is the impact of a technology- integrated, blended learning rotational model on student achievement in an eighth-grade, social studies classroom?

What impact does a blended learning rotational model have on the attitudes of students in an eighth-grade social studies classroom?

The data collected during this action research study was used to determine if the integration of instructional technology through the use of a blended learning rotational model has any impact on student achievement in an eighth-grade social studies class. Research tells us that today's students rely heavily on technology as a means to communicate or search for information (Bennett, Maton and Kervin 2008). Integration of technology in the classroom provides students with a vast array of resources that can be used to take ownership of their learning (Taylor and Parsons, 2011). By conducting this research study, the goal was to improve instructional practices and techniques for professional development. Additionally, planning is in place to provide colleagues with pedagogical strategies to help increase academic achievement and ultimately drive instruction.

16

Glossary of Key Terms

Technology Integration: The application of educational technology including any piece of equipment or device that can be used to achieve specific learning objectives (Davies & West, 2014).

Traditional Learning: An educational strategy relying on face-to-face instruction. Instructional materials include textbooks, lectures, and individual written assignments (Staker & Horn, 2011).

Blended Learning: An education strategy in which students learn at least in part through online delivery of instruction with some element of student control over time and pace (Staker & Horn, 2011).

Blended Learning Rotational Model: Rotation-model in which students rotate on a fixed schedule or at the teacher's discretion among classroom learning activities that include at least one online learning station (Staker & Horn, 2011).

Middle-Level: Middle level schools house young adolescent students between grades 5 and 9, with most ranging from grade 6-8. Middle schools with students in grades 7-9 are often referred to as junior high schools (United, 2008).

Social Studies: Integration of social sciences such as history, geography, and civics to help children understand American heritage and acquire the skills needed for participation in a democratic society (Mindes, 2005).

Net Generation: Young adolescents born after the time when digital technologies became engrained in everyday social life (Jones, Ramanau, Cross & Healing, 2010).

18

CHAPTER TWO: LITERATURE REVIEW

Topic and Background

The twenty-first century has continuously introduced new technological advances. Internet use has become ubiquitous in today's society and in public schools as a means of communicating, collaborating, researching and learning (Taylor & Parsons, 2011). There are many arguments on whether or not technology integration into classroom curriculum and instruction produces positive outcomes in student engagement and achievement (Oblinger & Oblinger, 2005). Some stakeholders in education worry about the negative effects of too much "screen time" (e.g., television, smart phones, computers, video games, and social media) on today's students. Despite the current technological movement of popular social media sites, cell phones, and video games, some suggest students are not able to focus when these types of stimuli are embedded in everyday instruction (Devlin, Feldhaus, & Bentrem, 2013). Middle-level students in schools today are part of the Net Generation. This generation has been raised in an age where media and digital technology are readily available. Learners in the digital age are very social and tend to be saturated with technology due to the fact that some aspect of digital media is a part of their everyday lives. According to Barnes, Marateo and Ferris (2007 "By the time he or she has reached 21 years of age, the average Net Gener will have spent 10,000 hours playing video games, 20,000 hours watching TV, 10,000 hours on cell phones, and

under 5,000 hours reading (p. 1). This generation is characterized by their use and immersion into various types of technology and their need for instant connections. Net Geners long to communicate instantaneously with their peers and the rest of society (Taylor & Parsons, 2011). Many believe these experiences with technology influence how and what students learn (Kennedy, Judd, Dalgarno, & Waycott, 2010). One characteristic of the Net Generation is they do value education. Educational pressure begins as early as their first year of high school. However, these students learn differently from older generations. Net Geners have a unique way of thinking, communicating, and learning. Net Geners require individuality and autonomy in their learning environment, which has an impact upon instructional choices in the classroom. These students tend to make conscious choices about what learning strategies they prefer, which can include online lectures, PowerPoint presentations, digital photos, or working in collaborative groups (Barnes, Marateo & Ferris, 2007).

An important goal in public education is to increase student achievement. The challenge to meet the needs of Net Generation students can be difficult and many believe a change in teaching practices and methodologies is necessary to address these concerns. Researchers have found that changes in strategies by implementing the use of new information and communication technologies (ICT) can potentially result in positive outcomes for students. Blended learning is the integration of traditional face-to-face teaching with computer-based activities (Lopez-Perez, et al., 2013). Various multimedia and technology resources supplement traditional classroom practices. Students are provided with more autonomy and control in constructing their own learning and understanding (Taylor & Parsons, 2011). Several studies have examined the effects of

instructional technology and blended learning on students' achievement. These studies have concluded that the blended learning model provides learning opportunities not always available outside of school (Lopez-Perez, et al., 2013).

As part of the planning phase of action research methodology, the following review of literature will provide the historical context and theoretical foundations for the action research study. This section includes a description of blended learning, a review of characteristics of the twenty-first century learner and the Net Generation, previous research studies on the effects of technology and blended learning on student achievement and the effects of high-stakes testing on teachers' instructional practices.

What is Blended Learning?

The evolution of online learning in K–12 schools occurs in both virtual schools and on campuses through blended learning. Staker and Horn (2012) defines blended learning as a convergence of online delivery of content and instruction and traditional instruction. Traditional learning and technology-rich instruction share some of the same characteristics as blended learning. Traditional instruction focuses on face-to-face teacher-centered instruction. This typically includes formal lecture, teacher led instruction, regular use of textbooks and written assignments. Students in a traditional setting receive a one size fits all curriculum where subject matter is intertwined (Staker & Horn, 2012). Technology-rich instruction includes many of the same pedagogical practices of traditional instruction, but includes certain technological enhancements such as electronic whiteboards, document cameras, and digital textbooks. (Staker & Horn, 2012). Historically, these two learning environments have operated separately due to the

21

different methods and media used to address the needs of students. However, the recent rise in technology and digital advancements has had a tremendous impact on learning and education. Blended learning environments support the facilitation of human interaction through real-time collaboration, virtual communities, instant messaging, etc. These types of computer-supported environments provide opportunities for self-directed learning (Bonk & Graham, 2012).

Why Choose Blended Learning?

Blended learning has the potential to make learning more productive by providing better resources, more time, and further information. Students in a regular classroom setting can work at their own pace while the teacher serves as a guide or facilitator (Camahalan and Ruley, 2014). Reasons educators may opt to engage students in blended learning activities include creating a more student-centered environment and increased student achievement.

Student-Centered Learning

Due to the pressures of high stakes testing and accountability, most teaching practices have become teacher-centered and focused on content and subject matter (Vogler & Virtue, 2007). A change in teaching methodologies could improve the quality of instruction and increase student learning outcomes. Blended learning allows students to learn at their own pace as well as take ownership of their learning. Blended learning also taps into students interests in technology and interactive media. A 2013 study conducted by the Idaho Digital Learning Academy (IDLA) surveyed 627 teachers across the state of Idaho to obtain information concerning the impact of blended learning as

22

observed in their classrooms and schools. More than half of teachers reported observing more students on task, increased student participation, less behavior issues, and an increase in the interest levels of students during class (Werth et al., 2013). Blended learning provides a more differentiated experience with immediate feedback and interventions that may deem beneficial to student success. Blended learning focuses on redesigning instruction by applying technology as a way to personalize learning. Patrick et al. (2013) compares blended learning to a Global Positioning System (GPS). Effective blended learning environments provide direction for students and teachers by allowing them to navigate paths specifically designed for their individual needs (Patrick et al., 2013).

Student Achievement

Increased student learning is also a potential impact of blended learning in education. Research studies have found that the combination of traditional classroom instruction with technology resources can have a positive impact on the achievement of students. The IDLA (Werth et al., 2013) survey administered to Idaho teachers resulted in positive feedback concerning student achievement. Over 50 percent of teachers reported seeing an increase in the academic ability of students. Nearly 68 percent of teachers noted that students took more responsibility for their learning when engaging in blended learning. Approximately 54 percent of teachers saw an improvement in homework and test scores of students from blended learning environments. A 2014 report showed that integrating e-books into early childhood programs provided measurable results for at-risk students' reading competencies (Braverman, 2016). A more extensive look at student achievement in relation to blended learning is discussed throughout this chapter.

Blended Learning Models

Staker and Horn (2012) developed a list of blended learning models by analyzing blended learning programs in 80 K-12 schools across the nation. The programs were examined and grouped into four models: flex model, self-blend model, enriched virtual model, and rotational model (Figure 2.1). The flex model consists of learners receiving online instruction inside of a brick and mortar school with face-to-face support offered on an as needed basis. Learners in self-blend model take online courses in addition to their traditional face-to-face classes. The enriched virtual model requires learners to fully engage in online courses while attending school occasionally for support. The rotational model consists of sub models in which students rotate between online and face-to-face learning. Rotational models include rotating within a classroom, to a computer lab, to a small group, or off-site location (Staker & Horn, 2012).

Research Studies Implementing a Blended Learning Rotational Model

One variation of a rotational model is the flipped classroom in which learners view class lectures online at home prior to attending physical class (Strayer, 2012). A 2012 study was conducted comparing two groups of college level statistics students. One group of students received instruction online using the flipped classroom method while the other group participated in traditional face-to-face lecture. The study concluded that the learners who participated in the flipped lessons were more receptive to collaboration than the traditional setting students (Strayer, 2012). Students included in the inverted or flipped classroom group reported on a classroom environment inventory that they valued the idea of working with partners. Those students in the traditional class rarely mentioned
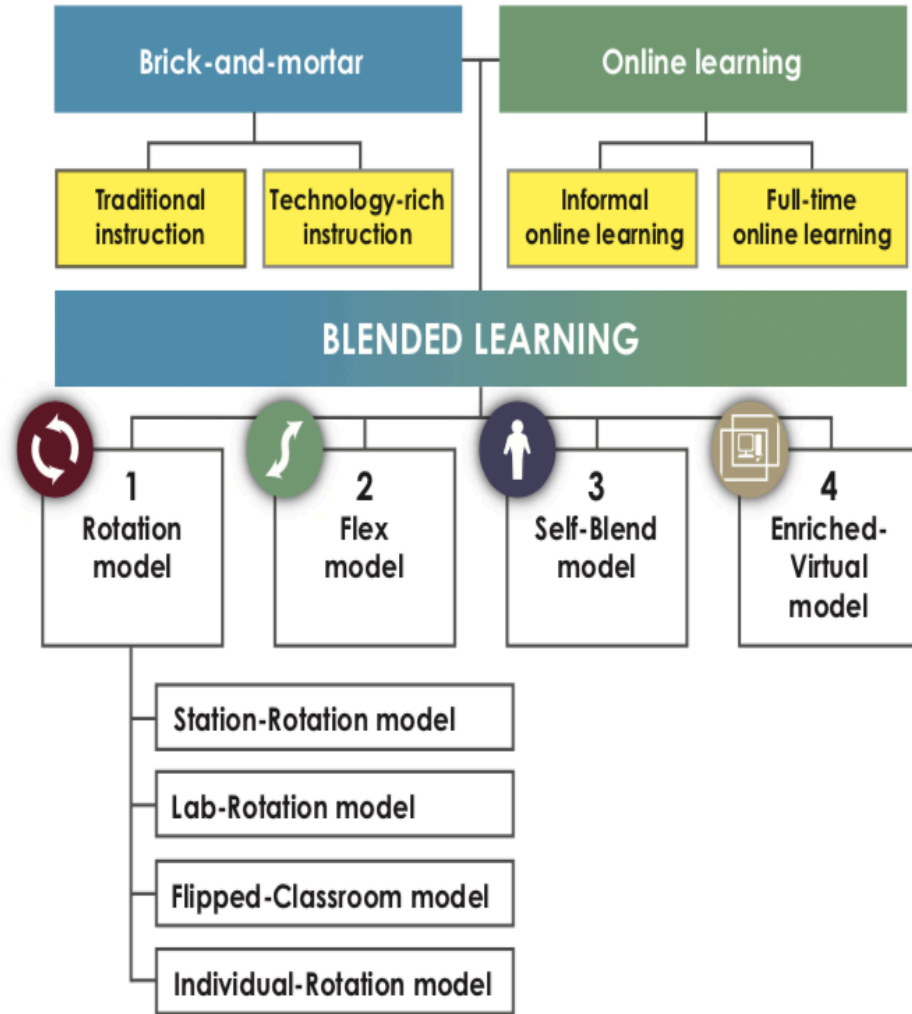
Figure 2.1 Blended Learning Models (Staker & Horn, 2012)

collaboration as a key component when asked about their ideal classroom environment.

Those students in the flipped group did mention they had some difficulty figuring out the

learning tasks without direction from the teacher, however, they like the innovation of the

flipped model. The researcher did note some limitations to the study that could be taken

into account by educators wanting to use the flipped model. There were high levels of

unpredictability for students when adjusting to the learning tasks. Students in the flipped

group had to take on several tasks at once such as making sense of their assignment,

25

using the computer tools appropriately, and working with a partner. Students in the traditional group environment seemed more focused and task oriented (Strayer, 2012).

Yapici and Akbayin (2012) conducted a quantitative study in a high school comparing the achievement of ninth grade students in a traditional classroom and those participating in a flipped blended learning model. The results of the study found that students in the flipped group achieved higher scores on the posttest than those receiving traditional instruction. Students in this study were administered an attitude survey that intended to gauge their attitudes toward the blended learning model. Students indicated that the blended learning model allowed them the be prepared before coming to class and to learn at their own pace. Students also noted the blended learning model also allowed for revisions of their work, self-assessing via quizzes on the instructional website used during the study, and self-inquiry by searching the web for answers to their questions (Yapici &Akbayin, 2012).

Kenney and Newcombe (2011) compared three groups of undergraduate students in a study to determine the effectiveness of a blended learning rotational model. As a problem of practice for the study, the researchers were concerned about the below average test scores for a number of the students. The students also commented that there were too many lectures and too much information being presented at once. The researchers decided to investigate alternatives to their traditional approaches in order to increase understanding and active student involvement. A group of sixty students participated in traditional face-to-face classroom instruction, a small group of thirty students participated in traditional instruction and a group of sixty students participated in blended learning. Throughout the blended rotational model, half of the group of learners

would be excused from participating in class to participate in the online sessions. The following week, the other half of the group would participate in the online classes as the other half attended class. The results of the study found that the students who participated in the blended learning model achieved higher scores on the posttests than either of the two groups of traditional learners. A survey was administered to the blended section to measure student perceptions of how the model impacted their understanding of the content, class participation, student attention, and overall satisfaction of the unit. The survey results indicated that the majority of students felt more prepared for class, more responsive, and more interested in the course material. There were some challenges presented in this study that the researchers noted as important for future research. The student participants showed some hesitation in taking responsibility for their own learning. There were issues with time management and the students' ability to meet deadlines. The researchers were also surprised that the students were not as proficient in using technology tools for educational purposes as they are for social purposes (Kenney & Newcombe, 2011). This is an important factor in the need to address the digital divide and to provide students with authentic online educational learning experiences. While today's learners may be immersed in the technological age, their ability to use technology as a gateway to education and learning may be lacking.

The lab rotational model requires learners to rotate between classroom instruction and a computer lab (Staker & Horn, 2012). Bargagliotti, et al. (2012) conducted a study in which the Memphis Mathematics Method (MMM) was used. The MMM style of learning aims to balance traditional teaching with online learning through the use of a computer lab as an instructional tool. A lecture introducing the lesson topic was followed

27

by a computer lab session of various online activities. The instructor was available to provide support or answer questions as students worked independently. The study found that the blended learning lab rotational model increased student success rates and lowered the dropout rates for the University of Memphis' general education math courses. The researchers attribute the achievement to the structure and interactive elements of the MMM which forced each student to be a daily active learner (Bargagliotti et al., 2012).

In a study including elementary students within an after-school reading program, Kim et al. (2011) investigated the impact of an online reading intervention on vocabulary, comprehension, spelling, and fluency among fourth through sixth graders who scored below proficiency on the Massachusetts state reading test. The researchers implemented the READ 180 system by Scholastic in which learners rotated between different learning stations that included an online reading based lesson activity. Students were also engaged in one station that included teacher directed instruction. The study results showed increases on test scores for reading comprehension and vocabulary, but no significant impact on spelling and oral reading. The researchers suggest this could be due to the amount of time spent on spelling. The READ 180 program itself may not have offered enough opportunities for students to read aloud to themselves (Kim et al,, 2011).

Effectiveness of Blended Learning

In 2008 the U.S. Department of Education conducted a meta-analysis of over one thousand studies dealing with online learning. The analysis searched specifically for studies that compared online and face-to-face environments, measured student achievement, utilized a precise research model, and provided sufficient information to

28

determine the effect. The investigation into online learning sought to answer the following questions:

1. How does the effectiveness of online learning compare with that of face-to-face instruction?
2. Does supplementing face-to-face instruction with online instruction enhance learning?
3. What practices are associated with more effective online learning?
4. What conditions influence the effectiveness of online learning?

The meta-analysis concluded that, on average, students immersed into online learning environments outperformed students who received only face-to-face instruction. Blended instruction showed to be more effective and provides some evidence for the implementation of blended learning approaches in K-12 education. Even when online learning is implemented solely by itself, there appears to be a slight advantage over the traditional face-to-face method. However, the studies in this meta-analysis do not suggest that online learning a superior instructional method. In many of the studies mentioned in the analysis, a combination of online and classroom environmental conditions contributed to the learning advantages. The report also noted that there were very few rigorous research studies concerning online learning in K-12 settings and caution should be taken when generalizing to the K-12 population (United States Department of Education, 2008). This lack of research in comparing online learning and traditional face-to-face instruction was a key catalyst in the development of my research design. Much of the research on technology seems to be outdated or lacking especially in elementary and middle level education. However, with the current push for technology integration across

public schools and the implementation of one-to-one devices it is important that educators receive current information regarding the effectiveness of technology and how best to utilize it in their classrooms. Providing more up-to-date research on the topic of technology and blended learning will provide vital information for those teachers wishing to improve their educational practices and increase student achievement.

Eryilmaz (2015) conducted a study to measure the effectiveness of a blended learning environment on 110 students who were enrolled in an Introduction to Computers Course at Atilim University in Ankara, Turkey. Throughout the study, students enrolled in "Introduction to Computers" in a blended learning environment were asked to evaluate the course. The aim was to measure the effectiveness of the blended learning environment in comparison with the other environments. The fourteen-week study included two weeks of exams, four weeks in the form of 100 percent online instruction, four weeks of traditional face to face instruction and four weeks of blended instruction. The blended learning model was administered in the form of online forums, exams, picture and video enhanced lessons. Eryilmaz (2015) concluded that the blended learning environments had more positive effects than face-to-face instruction. In the blended learning environments, learners seemed to be more actively involved. Learners appeared to use existing knowledge to create new knowledge through various cognitive activities. The results indicated that students' opinions of the blended learning environment were more positive than that of the traditional face-to-face approach. Eryilmaz (2015) concluded that in light of the opinions expressed by the participants in the study, educational blended learning environments are valuable in increasing learning, increasing attention and increasing student motivation.

In a 2014 action research study, a blended learning model was implemented in response to the need to improve students' writing skills (Camahalan & Ruley, 2014). The researchers aimed to help students develop the necessary skills to function in everyday situations. Camahalan and Ruley (2014) argued that while educating students to become active citizens, it is important educators use strategies that cater to the learning styles and interests of students. A typical classroom includes students of varying learning styles and levels. The participants in this study each received an iPad mini intended to help students learn better. "In the present time, the students are going to school in the technology age, but the teachers are not teaching them with technology" says Camahalan and Ruley (2014, p. 2). The research question for this study was, "What happens to student learning when face-to-face writing instruction is supplemented with online instruction?" Sixteen seventh-grade students from a small school in the Midwestern United States were assessed with a writing sample applying the new skills they learned. The study included a pre-assessment and post-assessment to measure growth during the two-week study. Participants in the study were divided into two groups based on their pre-assessment scores. Group A was given instruction using the blended learning approach. Group B was given traditional face to face instruction. The results of the study indicated an increase in performance using the blended learning model. The use of blended learning also allowed the instructors to effectively work with small groups (Camahalan & Ruley, 2014).

Smith and Suzuki (2015) conducted a two group, pretest-posttest, quasi-experimental study to compare secondary students' learning of Algebra II when taught using either a blended learning approach or traditional lecture. For both groups, instruction was delivered in a normal classroom setting. A math test and a student survey

were used to measure students' learning of Algebra II and their overall perceptions of the lessons. Participants included ninth through twelfth grade students enrolled in two sections of Algebra II. Instruction during the four-week study covered content from California High School Mathematics Standards that included graphing quadratic functions and equations. Throughout the four-week study, identical lessons were provided by the math teacher to both the traditional lecture group and the blended learning group. Both groups were expected to follow standard classroom procedures, such as note taking. At the conclusion of the study and after analysis of the findings, Smith and Suzuki (2015) found that students immersed within the blended learning environment exhibited significantly higher achievement than students taught in the traditional format. Furthermore, researchers found that students benefitted from the lack of distractions in blended learning environment as traditional lecture classrooms tend to be filled with side conversations and discussions that often impeded the flow of instruction. The absence of distractions in the blended learning group allowed students to focus more on their learning according to Smith and Suzuki (2015).

Harwell, Gunter, Montgomery, Shelton and West (2001) describe a collaborative action research study between a university and a local school district to employ a constructivist approach while integrating technology into classroom instruction. The school participants consisted of a four-member team of sixth grade teachers and sixty-five sixth grade students. The study developed from the sixth-grade teacher's interest in improving their knowledge of computer technology and to incorporate technology into their curriculum. The teachers collaborated in creating two interdisciplinary units. One unit in Science and Math; the other unit in Social Studies and Language Arts. In both

units students engaged in online activities such as research and multimedia projects. Students were also given a Constructivist Learning Environment Survey (CLES) to determine their perception of the classroom learning environments before and after implementation of the technology integrated instructional units. The study found no significant difference in students' perception of the learning environment after integrating technology. Teachers attributed these results to the fact that the surveys were administered at the beginning and end of the year. Students tended to be less focused and not fully engaged in learning at the end of the school year. However, as the teacher-researchers became more competent in technology use they were more committed in reflecting upon their practice and modifying them to create a more student-centered classroom environment (Harwell et al., 2001).

Casey (2013) conducted an action research study that incorporated the use of social media to determine its effectiveness on student participation and engagement in a mathematics course. Activities were designed that allowed for interaction and discussion among students in different online groups designated by the teacher. The researcher found no evidence of a positive or negative affect on student assessment. However, based on teacher observations and filed notes, the researcher did see positive results in terms of student engagement and participation when social media activities were integrated with face-to-face instruction (Casey, 2013).

Twenty-First Century Learners

Students in today's society are obviously engaged in very different experiences than that of their parents. The experiences among students in the twenty-first century is

33

highly influenced by their engagement with technology and multimedia. Taylor and Parsons (2011) argue how educators respond to this technological society is critical to student achievement. Some argue that students are leaving grade school without the necessary skills to live productively. "If we fail to change our pedagogy, curriculum, and assessment strategies, we fail our students and jeopardize our own futures" says Taylor and Parsons (2011, p. 6). Students of today have different needs and interests than learners of the past and educators must understand how these students learn in order to determine the best way to instruct them (Taylor and Parsons, 2011).

Teaching learners without a firm understanding of how they learn, and the skills needed to be successful in a global society can prove very difficult for educators in the twenty-first century. According to Prensky (2012) the shift in instructional strategies to address the skills needed for success is still going on but it is "taking far too long" (p. 1). In some schools up to date twenty-first century technology tools are simply not available. In places where technology is accessible, some teachers are reluctant to give up their old ways of teaching. Many rely on lecture and textbooks to engage students in learning. Finally, in instances where educators are willing to change their teaching style, they are sometimes unclear about how to use the tools effectively and incorporate them into their classrooms (Prensky, 2012).

A comprehensive understanding of learning and theories is central to effective teaching because theories help us to understand how learners acquire and construct new knowledge and apply that knowledge to new concepts and situations (Kivunja, 2014). Marck Prensky (2012), a well-known advocate for the use of Information and Communication Technologies (ICT), referred to 21st century learners as 'Digital

Natives.' These children are the product of a new digital technological culture. Prensky (2012) describes these twenty-first century learners as being native speakers of digital language, video games and the internet. Others in the field of technology have used different terms to refer to Digital Natives such as the "Net Generation" or "Net Geners" (Kivunja, 2014).

Net Generation

The Net Generation has grown up having access to technology. They are much more visual than previous generations. The Net Generation tends to express themselves using images, text and sound. Net Geners have the ability to transition from real to virtual wordls almost instantly says Oblinger and Oblinger (2005). Twenty-first century students are more likely to use the Internet for research than traditional reference books and resources. However, Net Geners are highly aware that the Internet does not meet all their information needs (Oblinger & Oblinger, 2005). Multitasking is also an essential characteristic of the Net Generation. Youth between ages 8 and 18 report using digital devices simultaneously. Because of this exposure to multiple stimuli, Net Geners report the traditional classroom as being boring (Barnes et al., 2007). Older generations and educators contribute this attitude to students' short attention spans. However, Net Geners, argue the attention span is not the issue. They believe, instead lack of time forces them to multitask. Educators must be aware that Net Geners may not always be expressing a lack of interest in their subject, rather activities not related to their chosen career often makes them a little impatient (Barnes, Marateo, & Ferris, 2007).

Teachers' Perceptions of Technology Integration

Teacher beliefs significantly influence certain classroom behaviors and pedagogical practices. These beliefs critically impact curriculum and instruction decisions. For example, teachers who believe that collaborative learning is more beneficial than independent learning would be more inclined to include group work than teachers who do not value collaboration as an effective learning strategy says Kim et al. (2013). Teacher perceptions and beliefs about teaching and pedagogy are considered very valuable aspects of teaching and education (Kim et al., 2013).

Cox (2013) studied the technology integration experiences of three veteran teachers. The main purpose of the study was to examine the technology integration experiences of teachers with more than ten years' experience. The researcher also sought to identify the factors that contributed to the success and challenges of integrating technology in the classroom by these veteran teachers (Cox, 2013). One on one interviews with participants were conducted and teachers also completed a questionnaire describing their technology experiences. The research findings suggested that tenured teachers who were not as technologically literate as their younger colleagues have still integrated technology in the classroom with varying amounts of success. All participants in the study communicated frustrations and challenges when integrating technology in the classroom (Cox, 2013).

Kim et al.(2013) conducted a mixed methods study to investigate teacher beliefs in relation to technology integration practices. The focus of the study was a four-year professional development project. The goal of the project was to increase the effective

use of technology of twenty-two teachers in poorly performing schools. The project sought to improve the use of technology by providing new technologies, professional development workshops, and technical and instructional assistance to teachers. Laptops, Smart Boards, digital cameras and recorders were among some the new technologies provided by the project. Teachers participated in workshops that included topics such as integrating web resources into daily lessons. Kim, Kim, Lee, Spector and DeMeester (2013) used a survey funded by the National Science Foundation and the U.S. Department of Education to measure teacher beliefs concerning technology integration. Classroom observations were conducted to measure the degree of technology integration among teachers. Results of the study concluded that there was a positive correlation between teachers' beliefs about knowledge and learning as well as effective ways of teaching and technology integration (Kim, Kim, Lee, Spector and DeMeester, 2013).

High Stakes Testing and Accountability

According to Au (2009), a standardized test is considered high-stakes when data is used to make informed decisions that affect students, teachers, schools, and districts. Decisions could potentially include graduation eligibility, grade promotion, or salary and tenure for teachers and administrators. These tests are also considered high stakes since results are publicized. This puts schools and districts in a vulnerable position as they are often scrutinized and criticized by the public (Au, 2009). The modern accountability movement began during the Reagan administration with the *A Nation At Risk* publication (1983). This particular publication criticized public education for failing to compete with foreign powers. The report argued more frequent standardized testing, especially at the high-school level, was imperative in improving the quality of public education in the

United States (Vogler & Virtue, 2007). While much of the rationale used in *A Nation At Risk* was later found to be false, it paved the way for a national accountability movement. This movement continued well into George H. Bush's 2000 Presidential campaign and his America 2000 plan and eventually became the *No Child Left Behind Act* in 2002 (Au, 2009).

High-stakes testing has become synonymous with public education in the United States. Teachers and administrators face significant pressures from high-stakes testing policies. A key concern for educators is the effect high-stakes testing has on content and teaching strategies. Research has found that high-stakes tests can have some adverse effects and control over the curriculum. One of the most significant findings is that high-stakes testing tends to narrow the curriculum to cater to the demands of the tests (Au, 2009).

Vogler (2008) compared the impact of Mississippi and Tennessee state accountability testing on Social Studies teachers' instructional practices. The study was conducted to determine how much of teachers' instructional choices were influenced by educational accountability based on end-of-course testing. Vogler (2008) quoted comments from one Mississippi high school United States history teacher who stated:

> While I agree with the principle of student/teacher/administrator accountability, … by making the goal of my United States history course the ability to pass the state test, I'm afraid that all meaningfulness and relevancy to history is being lost on my students. As a result, they have a better factual base but a worse conceptual understanding of the subject and what it is good for. (p. 1)

This comment represents the frustration that many teachers across the country face when it comes to balancing best practices with the pressures of high-stakes testing. Teachers seek to provide their students with meaningful, challenging, real world tasks that will foster relevant higher-level thinking skills. However, these teachers are also charged with the task of preparing students for state accountability testing. Failure to produce adequate results of progress on these tests can lead to extreme consequences. Some consequences include failure to graduate or promotion to the next grade level, publicized test results, and possible school takeover at the state level says Vogler (2008).

The purpose of Vogler's (2008) study was to compare the instructional practices of Mississippi social studies teachers in which high-stakes high school graduation examinations are used with the instructional practices of Tennessee social studies teachers in which lower stakes End-Of-Course examination are administered. A teacher survey was used to determine what instructional practices teachers used, how often teachers used certain instructional practices, what factors influenced certain practices and if the instructional practices and influencing factors differed by state. At the completion of the study, Vogler (2008) found that while both states' teachers reported using a combination of teacher-centered and student-centered instructional practices, Mississippi teachers used more teacher-centered strategies influenced by the demands of meeting accountability criteria on the high-stakes end-of-course exam. Tennessee teachers reported their instructional choices were mostly influenced by personal interests and the desire to employ best practices for the benefit of their students. Vogler (2008) also observed 61.9% of Mississippi teachers reported spending more than two months in preparation for their high-stakes accountability end-of course examination, while just

14.1% of Tennessee teachers spent more than two months in preparation for their lower stakes end-of course test.

Vogler (2008) mentioned several limitations to his study that could have affected the outcomes in his findings. For example, the survey administered to teachers asked what instructional practices were used, but not how these instructional strategies are used in the classroom. The researcher described how two teachers reported using role-playing in their instruction. One teacher provided students with a script in which they performed assigned parts in front of the class, while another teacher allowed students to work in groups to write their own script. The first teacher's approach to role-playing seems to be more teacher-centered while the second teacher's approach was more student-centered. Teachers were also provided with a list of strategies to choose from on the survey instrument, however, there may have been other instructional strategies used by the social studies teachers in their classroom instruction. Participants in the study were closely representative of the population of high school social studies teachers in Mississippi and Tennessee in respect to gender and teaching experience. However, there was no discussion of the racial demographics of participants, which could potentially affect the instructional practices used by these teachers. The researcher did not make mention of the results of the examinations in each state following the preparation period. Further research could be conducted to determine the impact of the instructional practices used by teachers in each state on students' test scores.

Dever and Carlston (2009) conducted an inquiry study to determine the perceptions and experiences of early elementary teachers since No Child Left Behind (NCLB) was implemented in 2002. Data collected in this study included focus group

interviews with 39 teachers ranging from grades K-3, from various school and districts in four states. Teacher interviews were conducted in order for teachers to share their understandings and perceptions of NCLB. Dever and Carlston (2009) found that many teachers perceived NCLB as a well-intentioned concept however, there were concerns about meeting the needs of all learners. Participants noted the availability of resources for teaching reading as a positive aspect of NCLB, but there were concerns about being able to appropriately address and assess English Language Learners and those with special needs. Overall, teachers recognized the importance of accountability, however, they viewed high stakes testing and NCLB as a way to restrict the control and teacher autonomy in the classroom (Dever & Carlston, 2009).

The Digital Divide

The term digital divide became widespread in education in the mid-1990's. The digital divide "describes a social inequity between individuals who have and do not have access to information and communication technology (ICT)" (Ritzhaupt et al., 2013, p. 291). Hohlfeld et al. (2008), outlines three distinct levels of the digital divide in education (Figure 2.2). Level one refers to the availability of technology within schools and communities, level two addresses the use of technology by teachers and students in the classroom, and level three describes the students' knowledge of ICT to increase their quality of life (Ritzhaupt et al., 2013).

While nearly 100 percent of public schools in the United States are equipped with internet access, studies show the disparities among students' technology use still exists (Ritzhaupt et al., 2013). In 2011, 95% of teens reported being connected to the

www.manaraa.com
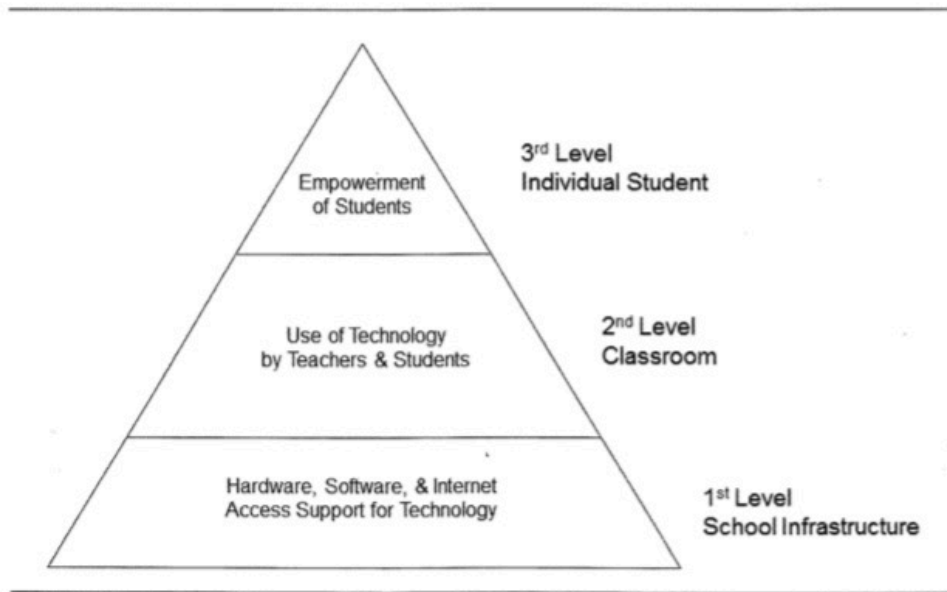
Figure 2.2 Levels of Digital Divide in Schools (Hohlfeld et al., 2008).

internet on a daily basis (Harlan, 2014). However, internet access tends to be inequitable, especially in rural areas. Despite their use of cellular phones and video games, students' access to high speed internet and personal computers is significantly lower in those homes and school populations with a low socioeconomic status says Braverman (2016). A 2005 study reported that the ratio of students to computers was higher in schools with a high poverty rate than schools with a significantly lower population of students affected by poverty. Additionally, schools with lower concentrations of poverty had computers and internet success available to students before and after school more often than schools with a high concentration of poverty. Concerning the ways in which students use technology, it was reported that students in economically disadvantaged schools tend to use technology for drill and practice, where students in economically advantaged schools are more likely to use advanced productivity software for educational purposes (Hohlfeld et al. 2008). The Obama administration established the ConnectED initiative which

www.manaraa.com

aimed to place wireless internet connections in 99% of public schools by 2018. However, in 2016, 40% of schools lacked Wi-Fi connections. Having reliable internet access is important to many teachers wishing to improve the digital literacy of their students. A 2013 survey by PBS Learning Media indicated that 75% of teachers in economically disadvantage schools requested more access to advanced educational technology (Braverman, 2016).

One aspect of technology integration is to help students develop appropriate digital literacy skills. However, some students lack the digital foundations and skills needed to be fully immersed in digital learning experiences that foster critical thinking argues Braverman (2016). This discourages some teachers from using technology in the classroom. The second level of the digital divide addresses the frequency and purpose of the use of technology in the classroom by teachers and students. Researchers have found that the differences in how technology in schools is being used can be attributed to teachers' unwillingness to adapt, the time and effort it takes to implement technology-based instruction, school infrastructure, and obsolete technology resources. While schools today do provide internet access and technological resources, simply having access to the internet does not directly impact learning. The second level divide is a combination of adequate access to technology as well as the characteristics and attitudes of the teacher (Reinhart et al., 2011). With the pressures of high-stakes tests and increasing scores, especially in low-income schools, teachers tend to focus more on teaching to the test than they do digital literacy skills. Teachers in these schools are practicing a "drill and kill" approach with the technology instead of allowing students to engage in tasks that will activate their critical thinking and higher order skills. This presents an even bigger

43

challenge for economically challenged families. These families, who more than likely have the least amount of technology in their homes, are also limited at school where much of the focus has been placed on standardized tests (Braverman, 2016).

Limited use of advanced technology could have a negative impact on the development of digital literacy skills. Having adequate opportunities to engage in advanced technological tasks helps to foster skills such as creativity, collaboration, research skills, problem solving, and digital citizenship. These types of skills are very important when applying for jobs after high school or college (Harlan, 2014). This is where the second and third level of the digital divide must work together. Teachers' use of technology and attitudes toward technology can positively or negatively affect the way students view technology and how they use it to improve their lives. Mertler (2014) suggests teachers and other educators work within their classrooms to address problems that will lead to improvement in their school climate and culture. This research study intends to support educators in addressing the social inequalities related to the digital divide through implementation of technology in an authentic and meaningful way to impact student achievement.

Opposition to Technology Integration

While several studies and research offer some evidence for the positive effects of technology integration, it is important to note that there are arguments about the impact of technology use on student engagement and achievement. Teachers often integrate information and communication technologies in the classroom hoping to increase student achievement. At both the elementary and secondary levels, research has found some

44

positive results as well as limitations or barriers when these strategies are implemented in the classroom (Laferrière, Hamel & Searson, 2013).

Some studies have reported that too much screen time can provide detrimental effects on learners and achievement (Taylor and Parsons, 2011). Researchers believe the educational system may be failing to improve students' critical thinking and literacy skills by focusing too heavily on the technological needs and interests of twenty-first century learners Oblinger & Oblinger as cited in Barnes, Marateo & Ferris 2007). Furthermore, the need for immediacy by twenty-first century learners could also be due to the accessibility of information through personal devices and computers. Students' need for immediate answers and accessibility can limit their acceptance of delayed gratification in and outside the classroom (Barnes, Marateo & Ferris 2007).

Conclusion

The data collected during this action research study was used to determine if the integration of instructional technology through the use of a blended learning rotational model has any impact on student achievement in an eighth-grade, social studies class. The current state of public education and the pressures of highs stakes testing has led many teachers to steer away from a student-centered environment where the curriculum is based on student interests and learning styles to one that is narrowed to meet the demands of standardized testing (Vogler & Virtue, 2007). Research tells us that today's students rely heavily on technology as a means of communication or searching for information (Bennett, Maton & Kervin 2008). Integration of technology in the classroom provides students with a vast array of resources that can be used to take ownership of their learning (Taylor & Parsons, 2011). This review of literature has provided a

theoretical and historical foundation for my study. The related literature and theoretical ideals presented in this chapter provides further rationale for the importance of my research question and problem. By conducting this research study my goal is to improve my own instructional practices and professional development. Additionally, I plan to provide colleagues with pedagogical strategies to help increase academic achievement and ultimately drive instruction.

CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this action research study was to determine the impact of a technology-integrated, blended learning rotational model on the achievement of students in an eighth-grade, social studies classroom. Today's middle level students are part of what is known as the Net Generation. Learners in the present digital age are presumed to be highly social and interactive (Barnes, Marateo & Ferris 2007). Researchers argue changes in teaching strategies by implementing the use of technology as a supplement to traditional face-to-face teaching will provide improve learning (Lopez-Perez, Perez-Lopez, Rodŕıguez-Ariza, & Argente-Linares, 2013). As the teacher and researcher in this study, I gathered information concerning the effective use of technology and the impact it had on my students' scholarly achievement as measured by a teacher-made test. Upon completion of the study, an action plan was designed to enable middle level teachers to work more effectively with the Net Generation. This chapter reviews the quantitative approach used in this action research study. The chapter includes a review of action research and the role of the researcher, a description of the research site and study participants, ethical considerations, and the research design and instrumentation.

Role of the Researcher

While action research resembles traditional research in many ways, it is unique in that researchers are in fact participants in the study as well. Action research is inquiry based and is conducted by insiders within a particular classroom or organization (Herr &

Anderson, 2005). Teacher research is carried out by educators in a local context. Action research establishes the role of the researcher as one that is necessary in improving teaching (Helskog, 2014). As both the teacher and researcher in this study, I was totally immersed in the research process. Student participants received instruction and materials from me just as they would normally. There are many advantages to conducting action research. As an insider in this research study, I was able to develop more competence in my field. Action research enables me to identify problems and issues in order to improve my teaching practices. Lastly, by reflecting and sharing the results of this action research study, I will be able to foster a stronger sense of community and collaboration within my school (Fraenkel, Wallen & Hyun, 2015).

<div align="center">**Research Context**</div>

The primary goal of this action research study was to determine the impact a technology integrated blended learning rotational model has on the academic achievement of students in an eighth-grade, social studies classroom. The setting for this study is a highly diverse middle school located in a rural city in South Carolina. The school fosters a philosophy of helping all students develop life and career skills by sustaining a path toward meeting criteria for academic excellence, development responsiveness, organizational structure, and social justice. The school strives to make curriculum socially significant and relevant to the interests of young adolescents. The goal of this school is to educate the whole child ensuring they are college and career ready by the time they graduate. As the teacher-researcher I am one of forty certified teachers in the school that serves approximately 539 students in grades six through eight. The student population consists of 45% African American, 36% White, 15% Hispanic

and 4% of students classified as other (PowerSchool, 2016). Each grade level is divided into two teams of students with four core subject teachers. Academic teams range from seventy to one hundred students based on the specific grade level enrollment. Students also attend two elective classes each day such as art, band, Family and Consumer Sciences, keyboarding, chorus, or physical education. Considered a Title One facility, approximately eighty-five percent of students enrolled at this school were reported as recipients of Medicaid, the Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), homeless, in foster care, or migrant students.

As a result of Title One funding, my school became a 1:1 facility in 2013. Each student was issued a Chromebook for educational use during the school day. One hundred percent of classrooms are wired with high speed internet that provides roughly 25 megabits per second (Mbps) of bandwidth per student (South, 2015). Students have access to the computers during academic classes, but devices are not allowed to leave the school building for any reason. The readily available technology resources allow for teachers to provide students with opportunities to engage in self-directed learning. Additionally, students are able to engage in tasks that will help foster critical thinking and collaboration skills necessary in higher education or even the work force. While students may have home access to internet and personal devices such as video games and cell phones, their personal use may not always create the foundation needed to develop digital literacy. A secondary goal of this action research study was to collect and analyze data and establish an action plan that would not only increase student learning but also support teachers in maximizing their use of the student Chromebook in everyday instruction.

49

Research suggests that a second-level digital divide is present in our public schools. The second-level digital divide is defined as the difference in how technology is used and not whether technology is available. There seems to be a distinct difference in the extent to which teachers integrate technology into their pedagogical practice. This divide is attributed to a few factors, including lack of professional development and teacher buy-in (Reinhart, Thomas, & Toriskie, 2011). This research study sought to provide teachers with substantial data and support to assist them in integrating technology in a more authentic and meaningful way.

Participants

While action research is generally limited in generalizability, results of the study are intended to provide implications for my own teaching practices. Since the present action research takes place in a public school and classroom, convenience sampling is conducive to the setting and structure of the school (Fraenkel, Wallen & Hyun, 2015). This research study examined data from seventy-one students enrolled in an eighth-grade, social studies class. The course schedule is divided into four year-long classes that range from 15-20 students each. Students included in each of the four social studies sections served as the sample for this study. Student class period assignments were based on their academic schedule, which is randomly selected at the beginning of the school year by guidance personnel.

Action Research Design

Educators conduct action research to address a specific problem or gather information to make informed decisions about their practice. This action research study is driven by the desire to improve my personal growth and practice as well as achieving

50

positive student outcomes. Action research is comprised of four main phases: identifying a problem and research question rooted in theory and related literature, gathering important information to address the research question, analyzing and interpreting data, and developing an action plan based on the findings (Fraenkel, Wallen & Hyun, 2015).

Planning

The focus of this study stems from the conflict between the characteristics and interests of Net Generation students and current teaching practices influenced by high-stakes testing. Existing research suggests adolescents of today were born into a world of technology. Since the internet was introduced for personal use in the mid 1990's, social interaction has undergone a drastic change. Many young adolescents are highly skilled in the use of various technology and digital devices (Hannafin, Hannafin & Gabbitas, 2009). Furthermore, since 2000, Internet use among youths has increased dramatically (Madden, et al, 2013). The primary purpose of this action research study is to determine the impact a technology integrated, blended learning rotational model has on the academic achievement of students in an eighth-grade, social studies class.

A research design is the formal blueprint for an action research study. This quantitative study utilized a one-group pretest-posttest design to examine the impact of a technology integrated, blended learning rotational model on student performance. In this design, participants were administered a pretest followed by the implementation of an instructional unit integrating technology through a blended learning rotational model (Figure 3.1). The rotational model implementation required student participants to rotate at the teacher's discretion among classroom-based learning stations in which rotations included one online learning station (Staker & Horn, 2011).
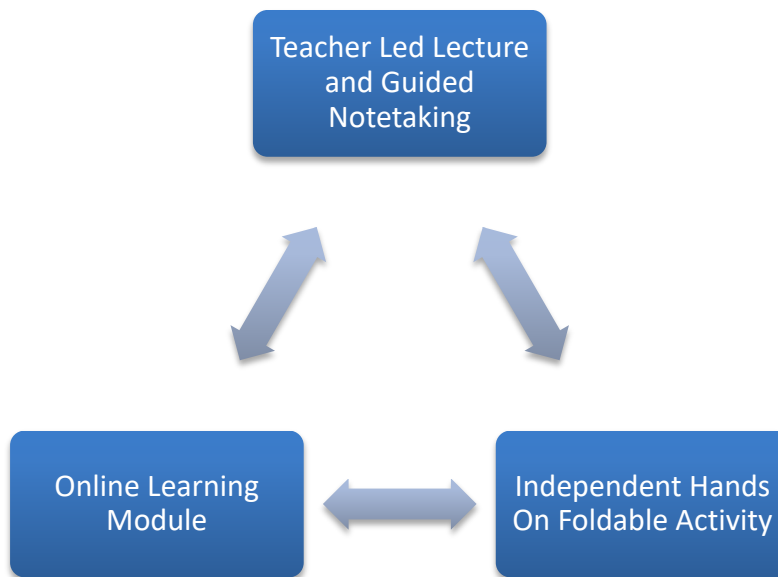
Figure 3.1 Rotational Model Learning Stations

The online learning module was created using the web application Wizerme (2015). Wizerme is an educational site that allows teachers to create interactive worksheet modules. The interactive features allow for the embedding of digital photos, videos, multimedia content, and websites into student performance tasks. Informal data was collected via the Wizerme site to gather immediate feedback concerning student understanding of the content. The immediate feedback was also helpful for students as a way to see their progress and accept ownership of their own learning.

Upon implementation of the unit, a posttest was administered to participants in order to determine the impact of the instructional method. The study took place over the course of a six-week unit of study on the Reconstruction Era. The South Carolina Eighth Grade Social Studies Curriculum Standards (Appendix H) outline the major events surrounding the Reconstruction Era and how these events transformed the Southern states

after the Civil War. The standards require students to understand the successes and failures of Reconstruction while focusing on South Carolina's pivotal role in those events and the effects Reconstruction had on the social classes (South, 2011). A teacher made pretest was administered to all student participants prior to any instruction from the unit of study. Treatment was applied in the form of instruction delivered using the blended learning rotational model. Upon completion of the instructional unit a posttest identical to the pretest was administered to assess student performance and mastery of the content.

The pretest-posttest was created using the USA Test Prep (2018) online assessment database. USA Test Prep is an online platform created by teachers that provides several assessment resources for educators. The resources, aligned with state and common core standards, include a bank of multiple choice test questions, technology enhanced performance tasks, various instructional resources, and student performance analysis tools. Questions for the pretest-posttest were chosen from the site's test question bank. Careful consideration was made to choose questions that closely aligned with the content standards. Questions for the pretest-posttest were chosen based on three indicators included in the state standard. Of the twenty questions, nine addressed the development of Reconstruction following the Civil War (Standard 8-5.1). These questions included items that addressed the Presidential and Congressional plans for Reconstruction as well as government agencies that were established to help freedmen. There were four questions related to the impact of Reconstruction (Standard 8-5.2) on the social classes of South Carolina and the rest of the United States. The last seven questions addressed the successes and failures of Reconstruction (Standard 8-5.3). Bloom's Taxonomy of Educational Objectives (Krathwohl, 2002) aided in the question selection.

Questions selected fell into categories such as: remember, understand, and apply which are all part of the cognitive process dimensions. In order to go beyond mere recall of facts and rote memorization, the questions ranged from simple to complex, requiring students to explore a deeper level of understanding. The questions allowed me to assess students' basic knowledge as well as their higher-order thinking skills.

This part of research design is described as pre-experimental since it includes characteristics of traditional experimental studies but dismisses others. In a one group pretest-posttest design, there is only one group of participants. The variable, or instructional strategy, does not vary and no group comparisons can be made (Mertler, 2014). This type of design is susceptible to threats to internal validity such as maturation, instrument decay, statistical regression, attitude of subjects, history and implementation (Fraenkel, Wallen, & Hyun, 2015). However, at the very least, there will be evidence if some change has occurred between the pretest and posttest (Mertler, 2014).

In order to triangulate the findings of the study, additional data was collected through the use of a Likert scale survey and informal observation notes. A Likert scale survey was administered to determine participants' overall experience during the instructional unit. The survey consisted of five statements pertaining to the students' perception of the instructional design, their level of engagement, and their attitude towards the use of instructional technology. The observation notes allowed me to record real time daily information concerning students' behavior and levels of engagement while participating in the instructional unit. I was able to observe student behaviors when participating in a traditional learning station as opposed to the learning station that utilized technology. The observation notes provided valuable information regarding the

use of technology and the impact it had on student behavior and engagement as well as academic achievement. Allowing for multiple sources of data helped to strengthen the findings and implications of the results. By utilizing the student survey and observation notes, I was able to gather more information pertaining to the research question that would ultimately aid in establishing a plan of action. During the next phase of the study I analyzed and reflected on the data and findings in order to gain insight on the impact of the study and its potential to support effective teaching practices.

Ethical Considerations

As teachers engage in professional development and analyze student data to improve their practice they must also consider any ethical issues that may affect the study (Dana & Hoppey, 2014). As both an education professional and a researcher, I have the responsibility as the teacher-researcher to ensure that ethical treatment of participants in my research study is maintained. Protecting the rights of students and colleagues served as a vital part of this action research study (Mertler (2014).

Engaging in teacher inquiry is reflective of moral and ethical teaching (Dana & Hoppey, 2014). In order to reassure students that their participation in the instructional unit would in no way negatively impact their progress in my class, a letter was sent home explaining the unit and their role as the student (Appendix D). Since making instructional choices and analyzing data with colleagues is a regular practice of teachers in the classroom, it was not necessary to obtain parental consent. A major goal of this research study was to maintain the privacy of all student participants involved. When sharing the results of my study during the reflection phase, it is imperative that any identifying information of participants are removed to maintain confidentiality and anonymity (Dana

& Hoppey, 2014). No names of individual students were used during the study or data findings. Mertler (2014) suggests using fictional names or assigning numbers to represent individual students. All data collected in the proposed study was used to make informed decisions for improvement in my classroom and school. Furthermore, the name of my school is not included in the description of the research site in order to create an additional level of privacy and confidentiality.

It was imperative that the actions taken during this research study created fairness for all students involved. All students involved in the research study received the same information and was instructed using the same strategies. As a regular classroom practice, students documented as needing special accommodations such as extended time or oral reading of the test questions were accommodated appropriately. At the university level, several steps were taken to ensure that protocol was followed in response to ethics in action research. I successfully completed the Collaborative Institutional Training Initiative (CITI) training module for human research (Appendix A). Approval to conduct my study was obtained from my building administrator (Appendix C) Additionally, the research proposal was approved with a status of exempt by the Institutional Review Board (Appendix B).

Acting

The second phase in the action research process is the acting stage. During this stage, the action researcher collects and analyzes data. This research utilized quantitative data and a statistical analysis to determine a significant change between the pretest and posttest scores after implementation of the blended learning, rotational model. Student participants completed a multiple-choice pretest on the Reconstruction Era. The pretest

consisted of multiple choice questions in line with the South Carolina Eighth Grade

Social Studies Curriculum Standards (2011). At the conclusion of the instructional unit, a

posttest was administered to students to measure growth and improvement. A Likert scale

survey was given to gauge students' perceptions and attitudes toward the instructional

model and their learning preferences. Additionally, informal observation was conducted

throughout the instructional phase to observe student behaviors and body language as

they engaged in the instructional tasks.

The next step in the acting phase is analyzing the data. Inferential statistics helps

researchers determine how likely their data results are for an entire population. Since

action research is primarily used by educators to examine their own teaching and

practice, generalizability is not a typical characteristic of action research. However,

inferential statistics enabled me to make implications for my own students. A paired t test

was used to compare the pretest mean with the posttest mean. This type of statistical test

was appropriate for a one group pretest-posttest design as it enabled me to determine if

the data results show significance in the pretest and posttest means (Mertler, 2014).

Developing

Action research is based on the idea that some type of action or plan is developed

at the conclusion of the study. The developing stage of the action research process

involves constructing a plan for the future based on the data results and interpretations

(Mertler, 2014). During this phase, data collected was used to make revisions or

improvements in my teaching strategies based on the findings. The assumption was if a

significant change took place between the pretest and posttest after the implementation of

57

the blended learning, rotational model I would alter my classroom instruction to incorporate this strategy in other units of study.

Reflecting

Most teachers engage in reflection of various aspects of their teaching such as individual lessons, student performance, instructional strategies, etc. This type of reflection is an essential part of effective teaching (Dana and Yendol-Hoppey, 2014). Unlike everyday reflection, however, action planning requires reflection that is intentional and purposeful. Teachers engage in action research to address a problem and to improve their own teaching (Fraenkel, Wallen & Hyun, 2015). During action planning, teachers ask meaningful questions about teaching and learning that provide more insight on the topic of interest and leads to professional growth and development (Dana & Yendol-Hoppey, 2014). Professional reflection is a critical part of action research and should be included in each step of the research process. Action planning allows teacher researchers to reflect on the research process thus far, assess what they have learned from the process and what steps to take moving forward (Mertler, 2014). It is imperative to recognize that no research study is perfect, and changes can be made to improve research design and implementation (Mertler, 2014). As I reflected on my action research study, there were a couple of questions that came to mind: Was my research question clear and consistent with the problem of practice? Was my research design was appropriate and if not, is there a more appropriate design to address my problem? These questions contributed to the development of the action plan and the suggestions for future research found in chapter five.

Sharing and communicating the results is also an important component of action research. While this research study was conducted to examine my own personal teaching practices, other educators may benefit from the results of my study. Based on the data results and my statistical analysis, findings will be shared with fellow educators to aid them in working more effectively with Net Generation students. Professional Learning Communities (PLCs) provide an environment for educators to connect and learn from one another. PLCs are structured to promote dialogue between classroom teachers concerning their students (Dana & Yendol-Hoppey, 2014). My school's monthly PLC meetings provide an appropriate platform to share the results of my study with colleagues. A more in-depth description of the action plan is found in chapter five of this research study.

Summary and Conclusion

Research methodology is a systematic process that researchers use to address the research problem. Within the methodology, various steps taken by the researcher to address the problem are described (Kothari, 2004). The methodology for this research study is grounded in action research. Action research is an inquiry process conducted by teachers and other stakeholders in education seeking to make improvements in their school or institution. This research methodology is appropriate for my study as it is a practical undertaking that will enable me to examine my own classroom and teaching practices. Action research is designed to address a particular problem by developing a plan of action for improving education (Mertler, 2014).

The purpose of this action research study was to determine the impact of a technology integrated, blended learning rotational model on the achievement of students

in an eighth-grade, social studies classroom. The related literature addresses the interests and needs of twenty-first century learners known as the Net Generation. Studies suggest today's learners were born into a technological society; therefore, changes in teaching strategies including the use of technology resources as a supplement to traditional face-to-face teaching will provide positive outcomes for student learning (Lopez-Perez et al., 2013). During this study, Mertler's (2014) four stages of the action research process were employed to address the problem of practice. By engaging in planning, acting, developing, and reflecting I was able to develop an action plan to improve my instructional practices and aid my colleagues in effectively using technology resources as a regular practice to ensure that students succeed in an everchanging world.

CHAPTER FOUR: FINDINGS

Introduction

This study examined the impact of a technology integrated, blended learning rotational model on the achievement of students in an eighth-grade social studies class. The participants included seventy-one eighth-grade students enrolled in a regular education setting. All data collection and research activities took place in the context of the regular classroom environment over the course of six weeks. During an instructional unit on the Reconstruction Era, students completed three learning tasks in the form of station rotations. One of the learning tasks was solely computer based. The problem of practice for this research study stemmed from the need to address the lack of student-centered instruction due to the pressures of standardized assessment. In *Experience and Education*, John Dewey (1938) argues that learning should appeal to the interests and individuality of students. It is "assumed the future would be much like the past, and yet it is used as educational food in a society where change is the rule, not the exception" says Dewey (p. 19). Our current educational system is embedded in a technological society where web media has become the new norm for communication, collaboration, research, and learning (Taylor & Parsons, 2011). As the demands of society change, so must our educational approach. Mertler (2014) suggests, teachers and other educators work actively in their classrooms to address problems concerning student achievement or improvement in their school climate and

www.manaraa.com

culture. This research study intended to address the issue of teacher-centered

learning as a common practice by implementing student-centered technology in authentic

and meaningful way to ultimately impact student achievement.

A quantitative action research approach was utilized for this research study. Since

this study took place within the normal school setting in an effort to improve instruction

and student achievement, a one group pretest/posttest design was appropriate. The

research study included administration of a pretest, an instructional unit on the

Reconstruction Era, a posttest, researcher field notes, and a Likert scale student attitude

survey. An action research design is used by classroom teachers and others in education

to address problems within their own classrooms and schools. This research study did not

seek to make generalizations for the general population. All data collected was used to

create an action plan for the school and instructional staff. This chapter presents a

summary of the findings and the analysis of data as it relates to the research question.

Research Questions

What is the possible impact of a technology integrated, blended learning

rotational model on student achievement in an eighth-grade, social studies classroom?

What impact does a blended learning rotational model have on the attitudes of

students in an eighth-grade social studies classroom?

Purpose of the Study

The primary purpose of this action research study was to determine the impact of

a technology integrated, blended learning rotational model on the achievement of

students in an eighth-grade, social studies classroom. The pressures of high-stakes tests and accountability has steered some teachers away from student-centered instructional practices. Many teachers are narrowing their instructional choices by teaching to the test (Vogler, 2008). The use of technology in classroom has the potential to increase student achievement and motivation. A digital divide is also present in many of our schools. Many students living in economically insecure families often have inadequate access to technology resources. Parents and families rely on schools to expose students to appropriate educational technology. However, researchers have identified a second level digital divide present in K-12 schools. The second level digital divide refers to the ways in which teachers and students use technology. It is not enough for technology to be available, teachers and students must utilize the technology in a way that will positively impact student learning and development. This study sought to establish a plan of action that will support my colleagues in integrating technology in their classrooms.

Findings of the Study

At the conclusion of the instructional portion of the study, a Likert scale survey was administered to gauge students' attitudes of the organizational structure and overall perception of the rotational model. The researcher wanted to gather information about the students' acceptance or rejection of the instructional choices and resources used within the unit. The survey was comprised of five statements that required students to respond by identifying how much they agreed or disagreed with each statement. The response categories were strongly disagree, disagree, neutral/undecided, agree, and strongly agree. The responses were coded using the following scale: strongly disagree = 1, disagree = 2, neutral/undecided = 3, agree = 4, and strongly agree = 5. The first statement shown in

63

Figure 4.1 deals with students' attitudes concerning the rotation among learning tasks. It appeared that 20 percent of students strongly agreed that rotating among learning stations was enjoyable, while 31 percent said they agreed and 37 percent were neutral or undecided on their level of enjoyment of the rotational model. Only a total of 9 students, or 11 percent, indicated that they disagreed or strongly disagreed with the statement.

The second and third statements in the survey measured specifically students' attitudes towards the technology-based learning tasks and their effect on content knowledge and understanding (Figures 4.2 and 4.3). According to the results for those particular survey items, more than half of the students agreed with the ease and user friendliness of the online learning module tasks; however, students appeared to be undecided on whether or not the web-based tasks really impacted their understanding of the content.
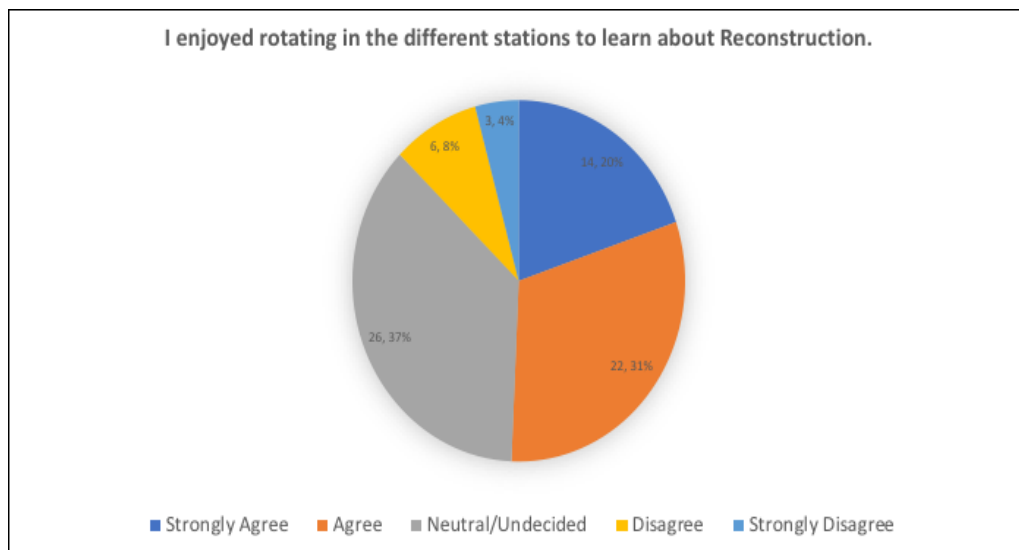
Figure 4.1 Likert Scale Survey Item No. 1.

The online learning module helped me understand the events of Reconstruction.

9, 13%
1, 1%
12, 17%
23, 32%
26, 37%

■ Strongly Agree ■ Agree ■ Neutral/Undecided ■ Disagree ■ Strongly Disagree
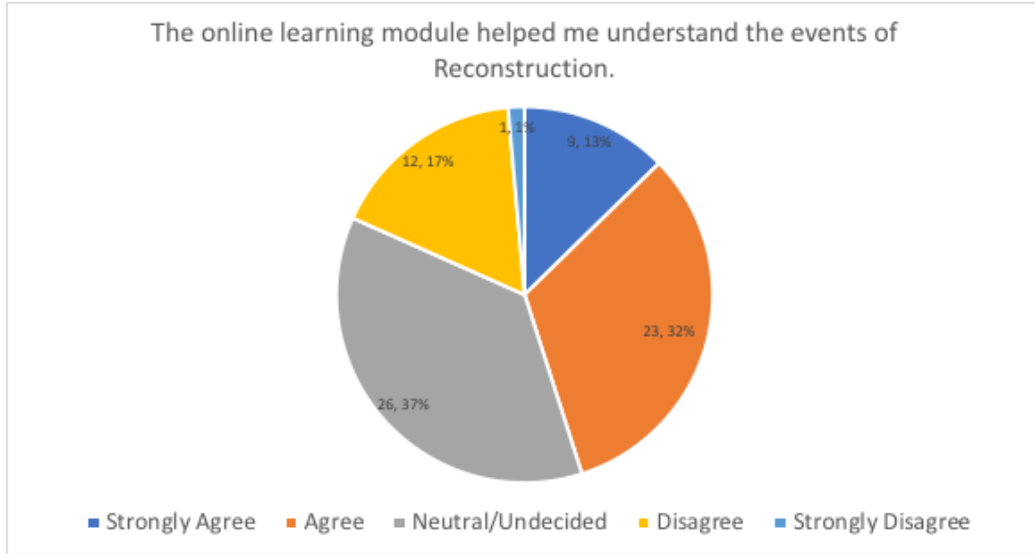
Figure 4.2 Likert Scale Survey Item No. 2.

The online learning module activities were designed in a way that kept my attention.

1, 2%
9, 13%
12, 18%
15, 22%
30, 45%

■ Strongly Agree ■ Agree ■ Neutral/Undecided ■ Disagree ■ Strongly Disagree
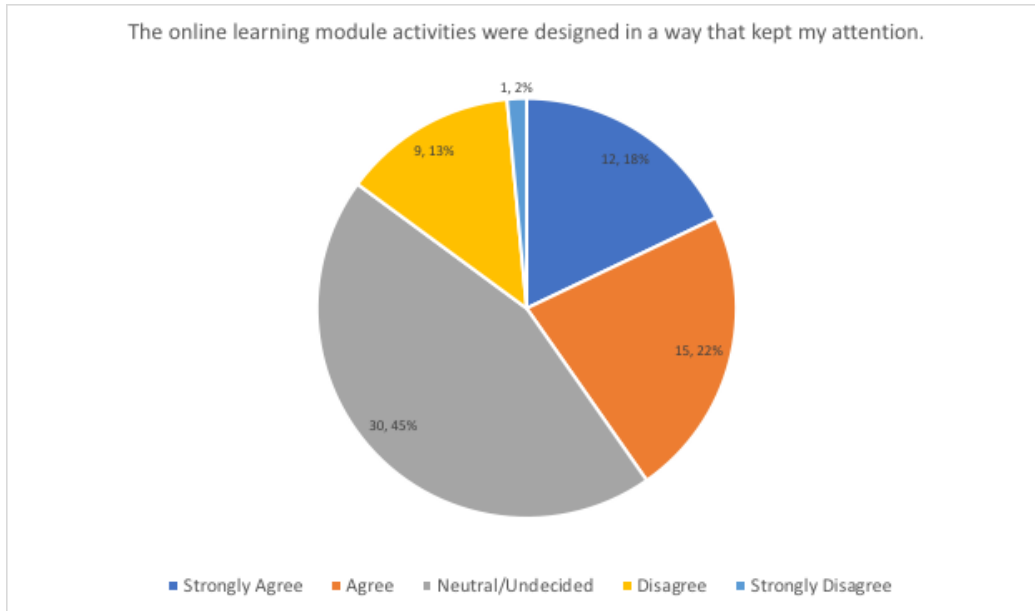
Figure 4.3 Likert Scale Survey Item No. 3.

Informal observation notes were also obtained throughout the study to record student reactions and verbal exchanges as observed throughout the instructional portion of the study.
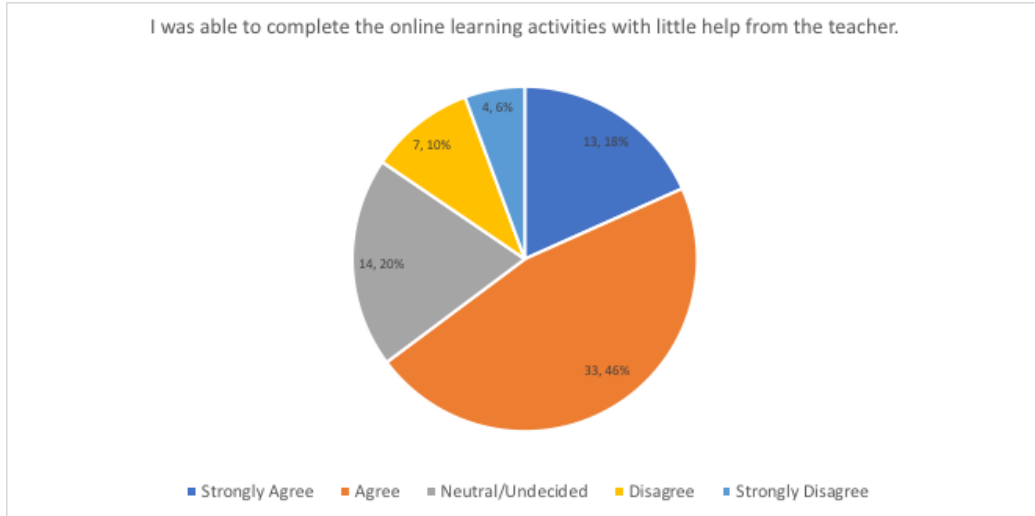
Figure 4.4 Likert Scale Survey Item No. 4.
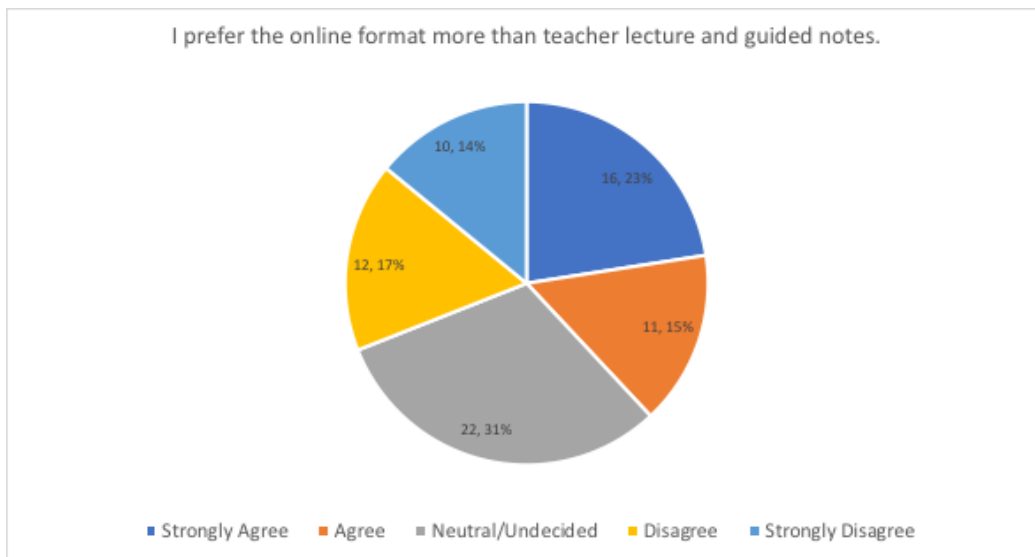
Figure 4.5 Likert Scale Survey Item No. 5.

It was noted that students appeared to be unsure about the organizational structure of the instructional model as it was introduced at the beginning of the unit. However, as timed progress and students began to complete learning tasks, their attitudes seemed to become more positive. Students who were not at the computer-based station at the start of

66

the unit appeared to be excited about moving to that particular station when it was their group's turn. Students also seemed to be more open and communicated more with their peers in the same group as time progressed. Those students who did not communicate as much or collaborate with group members on day one seemed to be more expressive and willing to work together on day two.

Student participants were administered a 20 question Pre-test and Post-test (Appendix E). The pretest was created using the online software USA Test Prep. The site houses a bank of state and Common Core standards-based test questions for several academic subjects. The bank of test questions includes items created by the USA Test Prep staff and teacher created items as well. Descriptive statistics are appropriate for comparing and summarizing the pretest and posttest data. A paired *t*-test was used to determine the statistical difference of the mean scores for the pretest and posttest.

All students' pretest and posttest scores are found in Appendix F. Based on the test results, 93 percent (66 students) improved their scores from the pre-test to the post-test. The mean score on the pre-test was 38.66 (SD=18.85) and the mean score on the post-test was 80.65 (SD=14.52). The average difference between the pretest score and the posttest score was 41.99. A paired two-sample t-test was used to determine any statistical difference in the pretest and posttest data. The t-test results found in Table 4.1 indicate a significant difference in the means of the pretest and posttest (t= 15.97, critical value= 1.99, $p < 0.05$).

Table 4.1 *t-Test: Paired Two Sample for Means*

	Posttest Score	Pretest Score
Mean	80.65	38.66
Observations	71	71
T Stat	15.97	
P(T<=t)two-tail	4.81E-25	
T Critical two-tail	1.994437112	

Interpretation of Results

After carefully analyzing the data there were two themes that emerged from the study. The first theme deals with the affective domain as describe in Bloom's Taxonomy. The affective domain applies to the feeling, tone, or acceptance or rejection learners may have for a particular learning objective or task. Affective learning basically refers to our attitudes toward learning and the tasks presented to us (Pierre & Oughton, 2007). Since certain attitudes and feeling are not directly observable, a Likert scale survey (Appendix G) was administered to participants to gather information concerning their perception of the instructional model. The Likert survey was used to gauge students' attitudes and preferences for online learning. The survey results revealed that the majority of students were either satisfied or did not have an opinion either way when it came to their preference for online learning versus traditional teacher led instruction. The result was the same for students' comprehension of the instructional content and whether or not the online format was solely responsible for their understanding and retention. The

68

combination of the student survey and the researcher field notes indicate a positive attitude and perception of the instructional model. Students' verbal communication with one another and their body language showed they generally enjoyed, or at the very least, were not hindered by the instructional strategies being utilized throughout the study.

The second theme that emerged from the data analysis was the impact of instruction on students' scholarly achievement as found in the posttest results. The research referenced in the literature review of this study suggests that technology integration can have a positive impact on students' scholarly achievement. The primary purpose of the study was to determine the impact the technology integrated blended learning model had on student achievement as measured by a teacher-made test. Based on the average pretest score of 38.66 and posttest score of 80.65, I can conclude that students, as a whole, showed achievement from the beginning of the instructional unit to the end of the unit. However, it should be noted that seven percent (five students) showed negative, or no gains in the posttest scores. Students not improving their posttest score could be attributed to a number of extraneous factors including chronic student absences, time of day, motivation, etc. The statistical t-test results did show a significant difference in the mean pretest and posttest scores. An assumption can be made that instructional choices affected the overall achievement of students.

Since the study included only one group in the design, no control group was utilized to compare the posttest data with students receiving only teacher-led, lecture-based instruction. I can't be totally sure if the instructional model itself impacted student learning. Other factors such as the enthusiasm of the teacher, interest in subject matter, prior knowledge, and overall classroom environment could have contributed to the

69

growth in test scores. The test item analysis also revealed that students were less successful in their mastery of questions related to the impact of Reconstruction. The scores for these set of questions only increased 26 percentage points. Question items dealing with the development of Reconstruction and the success and failures of Reconstruction were showed an increase of 37 and 46 percentage points. The disparities present in the item analysis can also be attributed to a couple of factors. There were more nearly twice as many questions that covered standards 8-5.1 and 8-5.3 than there were for standard 8-5.2. Moreover, standard 8-5.2 question items did not include any simple recall questions. However, based on the improvement in student test scores from the pretest to the posttest, I can assume most students had a general understanding of the Reconstruction Era. Chapter five will discuss suggestions for future research that will allow for the collection of additional data to help determine whether the blended learning model had a significant impact on the test results.

Conclusion

A great deal of research supports the integration of technology into teaching and learning and the impact it can have on student achievement and addressing the needs of the 21st Century and the Net Generation. However, little research has been done to narrow down the idea of technology integration to a specific instructional strategy in a middle school classroom. This study sought to investigate the impact of a blended learning rotational model on the achievement of students in a middle level social studies class. The 71 participants in the study represented the general demographic make-up of the research site. The study included 32 females and 39 males. Of those participants, 31 were African American, 26 were White, 11 were Hispanic Americans, and three students

identified as being Biracial. The study participants also included students with varying academic abilities. The study was conducted by administering a pre-test addressing the South Carolina Eighth Grade Curriculum Standards centered around the Reconstruction Era in the United States. Students were divided into group of four or five and rotated among three different learning stations over the course of three weeks. The learning stations included a teacher led informational session, an independent student activity, and an online learning module.

To examine the effects of the technology integrated, blended learning rotational model, descriptive statistics were used to summarize the pre- and post-test results. The mean scores on both tests and the mean difference between the two scores were used to gauge the overall success of the instructional unit and determine students' understanding of the content. Inferential statistics were utilized in the form of a paired t-test to determine any statistical difference in the pretest and posttest means. Additional quantitative data was gathered through the administering of a Likert Scale survey. The survey was used to obtain information regarding students' overall attitudes and perception of the instructional model. Field notes were also utilized to record informal observations made by the researcher concerning the students' verbal communication and body language. Overall, the data showed significant improvement in students' scores from the pretest to the posttest. The Likert Survey and the informal notes indicated and overall positive attitude toward the blended learning instructional model.

CHAPTER FIVE: ACTION PLAN

Introduction

"Preparing students to succeed in an ever-changing world" is the mission statement of the school in which this research study takes place. The world is indeed changing, and the use of information technology has become a staple in our society. As a result of new and innovative technological tools, educators can now provide students with authentic and engaging learning experiences. Web-based learning tasks provide students with opportunities to engage in experiences that might not otherwise be available in a simple textbook or teacher-led lecture (Lombardi, 2007). The problem of practice for this research study derived from the teach-to-the-test mentality that has resulted from the demands of state testing, teacher accountability, and the potential risks associated with low performing schools. Many teachers, feeling pressured by state testing, are focusing their attention to only tested content and narrowing their instructional methods (Pedulla et al., 2003).

This research study intended to assist teachers in finding a balance between teaching tested content while providing opportunities for communication, collaboration, and the critical thinking skills necessary to succeed in a technological society. This action research study utilized a one-group pretest and posttest design to determine the impact of a blended learning model on student achievement. Upon collection of the research data, an action plan was developed to support teachers in implementing the use of technology

as a regular classroom practice. This chapter provides a detailed summary of the action plan and recommendations for further research.

Research Questions

What is the impact of a technology integrated, blended learning rotational model on student achievement in an eighth-grade, social studies classroom?

What impact does a blended learning rotational model have on the attitudes of students in an eighth-grade social studies classroom?

Purpose of the Study

This action research study examined the impact of a technology integrated, blended learning rotational model on the achievement of students in an eighth-grade, social studies classroom. The purpose of this study was to develop an action plan that would improve student achievement by effectively implementing instructional technology to guide and support classroom instruction and student learning. With the passage of the No Child Left Behind Act in 2001 and the more recent educational reforms, there continues to be a large amount of focus on teacher accountability, college readiness, and standardized testing. Educators are encouraged to evaluate and reflect on their instructional strategies in order to meet the needs of their students. However, in some cases, the need to meet accountability demands and avoid consequences has caused many teachers to teach to the test. "With regard to teachers, researchers have cautioned that placing a premium on student test performance has led to instruction which is focused primarily on test preparation, thus limiting the range of educational experiences and reducing the instructional skills of teachers" says Pedulla et al. (2003, p. 24). This

action research study was developed to address the perceived limitations associated with standardized testing that has been placed on teachers' instructional practices.

Overview of the Study

The pretest, posttest, and student survey data was used to determine the impact of a blended learning rotational model on the achievement of students in an eighth-grade, social studies class. During the classroom instruction phase of the study, students rotated among learning stations of which one was comprised of an independent web-based learning module. The original pretest was administered as a posttest to assess students' learning of the instructional content. After analyzing the data, it was revealed that students' test scores increased by an average of 41.99. The paired 2 sample t-test revealed that there was a statistically significant difference in the pretest and posttest means (t= 15.97, critical value= 1.99, p < 0.05).

Implications of the Findings

This action research study examined the impact of technology integration as a pedagogical practice for an eighth-grade, social studies class. This study can provide implications for change in education and the instructional choices made by teachers. As a primary problem of practice, this study sought to help teachers find ways to address accountability and teach curriculum standards while still making learning engaging, collaborative, and innovative for students. After careful analysis of the data, an action plan was developed in order to provide ongoing professional development that will assist school staff in implementing regular use of classroom technology. The action plan also provides ongoing professional development and support during the school year to help teachers plan and teach lessons utilizing the blended-learning format. The literature has

suggested that integrating instructional technology can have a positive impact on student achievement and learning. Additionally, providing students with more opportunities to engage in appropriate technology-based activities will help foster their communication, collaboration, and critical thinking skills. Maximizing the use of instructional technology will also help to narrow the educational digital divide that may often occur among high poverty students. While these students may have access to instant messaging, social media, and the like, digital literacy skills that are necessary to be successful in higher education and even the workforce may be lacking (Harlan, 2014). Educators are challenged with providing authentic digital learning tasks that will meet the needs of our students and provide opportunity for success.

Action Plan Development

As educators, it is imperative that we regularly reflect on our instructional choices and seek ways to improve student learning. Our students' home environment and foundations may not always present the best scenario for learning and academic success. However, it is the job of educators to recognize that all students deserve the best opportunity for learning possible. Teaching standards and teaching to the test should not be our main focus says Katz and Porath (2011). Clayton (2011) suggested that teachers and administrators need to focus on the things they can control, such as instruction and the classroom environment. Focusing on things out of our control, such as poverty, does not yield positive results. In order for improvement to happen, the diverse needs of our students must be addressed in the classroom.

Action research is an appropriate method for addressing the problems of a classroom and school. Teachers acting as researchers seek to improve their own teaching

and improve the success of their students. The development of the action plan is a major component of action research. The action plan involves extensive reflection and the planning of new action to influence teaching and learning. The action plan for this study seeks to provide the necessary support and resources needed to ensure teachers are knowledgeable and well equipped to meet the technological needs of their students.

Action Plan Implementation

The action plan for this research study developed from the need to maximize the effective use of technology while still addressing the curriculum standards and expectations set forth by the state's Student Learning Objectives (SLO) mandate. As both the teacher and the researcher in this study, I have complete access to teachers, staff, students, and the resources to implement a plan of action. As a 13-year veteran to education and my school I have gained the respect of my colleagues and administrators that will allow me to present my research findings and action plan with confidence. Our regular grade level meetings and monthly PLC meetings will provide me with the appropriate platform to share my data and work with teachers to establish goals and a vision for our school. The first step in the action plan is to collaborate with teachers, administrators, coaches, and other support staff to establish a clear vision for the use of technology by classroom teachers. Professional development will be provided to examine the school's current mission statement and the overall expectations for student learning. The staff will develop a document that comprises a list of roles and responsibilities of various staff members in relation to technology integration. The staff will create a vision statement that expresses the intended outcome for student learning as it relates to technology.

The second component of the action plan includes ongoing professional development sessions in which teachers will be presented with various online resources and strategies that can be used to establish an appropriate blended learning classroom environment. Strategies will be modeled by the Technology Coach to provide teachers opportunities to see these resources and strategies in action. These sessions will take place twice a month for thirty minutes. Evidence that the professional development has been beneficial will be determined based on examining teachers' weekly lesson plans. We will be able to see what strategies are bring used and how frequently teachers are incorporating these strategies into their daily lessons. This information will aid in the implementation of the next phase of the action plan. In the third phase of the action plan, the Technology Coach would meet with teachers to help plan technology integrated lessons. The planning would take place during the teachers' regular planning periods which vary depending on the grade level. A discussion of the teachers' and students' needs would be necessary in order to effectively plan an appropriate lesson that utilizes one or more of the strategies or resources presented during the professional development sessions. A post-conference would take place at the conclusion of the lesson to discuss potential strengths and weakness of the lesson. A plan for re-teaching or enrichment will be developed if necessary.

The last phase of the action plan would take place during the staff's monthly Professional Learning Community (PLC) meeting. During these monthly meetings, teachers will be asked by departments (Math, English, Science, Social Studies) to bring student work samples or assessment data that will be analyzed by colleagues to help make informed decisions about future instruction. The intent is that staff members will be

able to display examples of positive student achievement as a result of integrating technology into their classroom instruction. This will provide a platform for teachers to gather ideas and information that can be utilized in their own classrooms.

The entire action plan will take place over the course of the 2018-2019 school year. The action plan would begin in August 2018 during the week before students return. During this week, teachers participate in various beginning of the year activities and informational sessions. Beginning the professional development immediately would allow teachers to include the vision and technology goals into their long-term planning. A brief overview of the action plan timeline and initiatives can be found in the Action Plan Implementation Matrix (Table 5.1).

Table 5.1 *Action Plan Implementation Matrix*

Initiative	Action Plan	Evidence	Timeline (2018-2019 SY)	Participants
Establish a common vision for the integration of technology across the school that embodies the goals of the school mission statement.	Collaborate with teachers, technology coach, administrators, and support staff to establish clear expectations for technology integration.	Teachers will have a better understanding of their roles and responsibilities in the effective use of technology.	August-Teachers and staff will participate in two 30-minute professional development sessions during the staff welcome back week of school.	Researcher/Technology Coach/Core Academic Teachers/Elective Teachers/Administrators/Support Staff (ie. Guidance, Special Ed, Media Specialists)
Staff will participate in ongoing professional development to support their efforts to integrate technology more effectively.	Provide professional development opportunities for teachers to learn about new and innovative technological resources and web applications that can be used in their classrooms.	Teachers will utilize the resources presented during professional development sessions in their planning and instruction.	Every other Thursday of each month for 30 minutes during teachers' designated planning period	Researcher/Technology Coach/Classroom Teachers/Elective Teachers
Support and collaborate with teachers in creating and maintaining an authentic blended-learning	Collaborate with classroom teachers to plan and co-teach technology-integrated lessons.	Meet with teachers to discuss their areas of needs. Meet with teachers after collaboration to discuss student data and strengths and	Collaborate with each classroom teacher during their planning period at least twice throughout the year	Researcher/Technology Coach/Classroom Teachers/Elective Teachers

environment in their classrooms.		weaknesses of the lesson. Keep a log of meetings with teachers.		
Utilize student data to make informed decisions about instruction.	Support staff in analyzing student data and work samples to determine the effectiveness of technology use. Model strategies for instruction.	Teachers will maintain a data notebook that will be used to aid in their planning or interventions as needed.	Once a month for one hour during the staff PLC meetings.	Researcher/Technology Coach/Core Teachers/Elective Teachers/Support Staff/Administrators

Suggestions for Future Research

Based on the results of this study, there are suggestions for future research that may further aid educators seeking to increase student achievement through the use of technology and blended learning. Recommendations for additional research are as follows:

1. Analyze student data from year to year to determine any significant difference in the achievement of two groups of students in a blended learning environment.

2. Survey teachers to gather their perceptions and attitudes towards technology use in their instruction.

3. Survey teachers to gather information concerning their level of technology competency and cross examine with the impact on student achievement.

4. Use a variety of qualitative data (student reflective journals, open ended questionnaires, observation record, etc.) to determine the impact of the blended-learning model on the affective domain.

5. Repeat the current study in other grade levels or subject areas.

6. Modify the current study by dividing students into two instructional groups (traditional teacher-led instruction and blended learning rotational model). Analyze the data to determine a significant difference in the achievement of students receiving traditional teacher-led instruction and those engaged in the blended learning model.

Conclusion

The purpose of this one-group pretest posttest action research study was to examine the impact of a blended learning rotational model on the achievement of students in an eighth-grade, social studies class. A pretest was administered in the form of a multiple-choice test. During the instructional component of the data collection phase, students rotated among learning stations for a particular unit of study. One of the learning stations was solely computer-based. The same pretest was administered as a posttest at the end of the unit to assess student learning. A Likert scale student survey was also administered to gather information concerning students' attitudes toward the instructional model. The research data showed a significant difference in the pretest and posttest scores upon completion the blended-learning instructional unit. The findings suggest that the use of technology as a learning strategy could potentially yield positive student results. The action plan was developed to communicate the findings with faculty and staff in order to establish a clear vision and goal for the school. Further research suggestions may provide more data to be used in the ongoing professional development outlined in the action plan.

REFERENCES

Amrein, A. L., & Berliner, D. C. (2003). The effects of high-stakes testing on student motivation and learning. *Educational leadership*, *60*(5), 32-38.

Applefield, J. M., Huber, R., & Moallem, M. (2000). Constructivism in theory and practice: Toward a better understanding. *The High School Journal*, *84*(2), 35-53.

Au, W. (2009). Social studies, social justice: W(h)ither the social studies in high-stakes testing. *Teacher Education Quarterly, 36*(1), 43-58.

Bargagliotti, A., Botelho, F., Gleason, J., Haddock, J., & Windsor, A. (2012). The effectiveness of blended instruction in core postsecondary mathematics courses. *International Journal for Technology in Mathematics Education*, *19*(3), 83-94.

Barnes, K., Marateo, R. C., & Ferris, S. P. (2007). Teaching and learning with the net generation. *Innovate: Journal of Online Education, 3*(4).

Bennett, S., Maton, K., & Kervin, L. (2008), The 'digital natives' debate: A critical review of the evidence. *British Journal of Educational Technology, 39*, 775–786.

Blair, N. (2012). Technology integration for the new 21st century learner. *Principal*, *91*(3), 8-13.

Bonk, C. J., & Graham, C. R. (2012). *The handbook of blended learning: Global perspectives, local designs*. John Wiley & Sons.

Braverman, B. (2016). The digital divide. *Literacy Today, 33*(4), 16-20.

Brydon-Miller, M., Greenwood, D., & Maguire, P. (2003). Why action research? *Action research*, *1*(1), 9-28.

Camahalan, F. M. G., & Ruley, A. G. (2014). Blended learning and teaching writing: A teacher action research project. *Journal of Instructional Pedagogies, 15*, 1-13.

Casey, G. (2013). Interdisciplinary literacy through social media in the mathematics classroom: An action research study. *Journal of Adolescent & Adult Literacy*, *57*(1), 60-71.

Clayton, J. K. (2011). Changing diversity in U.S. schools: The impact on elementary

student performance and achievement. *Education and Urban Society*, *43*(6), 671-695.

Cox, J. (2013). Tenured teachers & technology integration in the classroom. *Contemporary Issues in Education Research, 6*(2), 209-218.

Cremin, L. A. (1959). John Dewey and the progressive-education movement, 1915-

Dana, N. F., & Hoppey, D. (2014). The reflective educator's guide to classroom research: Learning to teach and teaching to learn through practitioner inquiry (3rd ed.) Thousand Oaks, CA: Corwin.

Davies, S., & West, R. E. (2014). Technology integration in schools. In *Handbook of research on educational communications and technology* (pp. 841-853). Springer New York.

Denney, A.S. & Tewksbury, R. (2013). How to write a literature review. *Journal of Criminal Justice Education, 24*(2), 218-234

Dever, M.T., & Carlston, G. (2009). No child left behind: Giving voice to teachers of young children. *Journal of Educational Research & Policy Studies, 9*(1), 61-79.

Devlin, T. J., Feldhaus, C. R., & Bentrem, K. M. (2013). The evolving classroom: A study of traditional and technology-based instruction in a STEM classroom. *Journal of Technology Education, 25*(1), 34-54.

Dewey, J. (1938). *Experience and education.* New York, NY: Macmillan.

Eryilmaz, M. (2015). The effectiveness of blended learning environments. *Contemporary Issues in Education Research, 8*(4), 251-256.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in education* (9th ed.). New York, NY: McGraw-Hill Education.

Glenn, J. M. 2000. Teaching the net generation. *Business Education Forum 54* (3): 6-14.

Grant, C., & Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your "house." *Administrative Issues Journal: Connecting Education, Practice, and Research*. *14*(2), 12- 26.

Hannafin, M., Hannafin, K., & Gabbitas, B. (2009). Re-examining cognition during student- centered, Web-based learning. *Educational Technology Research and Development, 57*(6), 767-785.

Hargittai, E. (2010). Digital na (t) ives? Variation in internet skills and uses among members of the "net generation". *Sociological inquiry*, *80*(1), 92-113.

Harlan, M. A. (2014). Standing on a corner. *Teacher Librarian*, *42*(1), 38-42.

Harwell, S. H., Gunter, S., Montgomery, S., Shelton, C., & West, D. (2001). Technology integration and the classroom learning environment: Research for action. *Learning Environments Research*, *4*(3), 259-286.

Helskog, G. H. (2014). Justifying action research. *Educational Action Research, 22*(1), 4-20.

Herr, K., & Anderson, G. L. (2005). *The action research dissertation*. Thousand Oaks, CA: Sage Publications, Inc.

Hohlfeld, T. N., Ritzhaupt, A. D., Barron, A. E., & Kemker, K. (2008). Examining the digital divide in K-12 public schools: Four-year trends for supporting ICT literacy in Florida. *Computers & Education, 51*(4), 1648-1663

Imig, D. G., & Imig, S. R. (2006). The teacher effectiveness movement How 80 years of essentialist control have shaped the teacher education profession. *Journal of Teacher Education*, *57*(2), 167-180.

Jones, C., Ramanau, R., Cross, S., & Healing, G. (2010). Net generation or digital natives: Is there a distinct new generation entering university? *Computers & Education*, *54*(3), 722-732.

Juvova, A., Chudy, S., Neumeister, P., Plischke, J., & Kvintova, J. (2015). Reflection of constructivist theories in current educational practice. *Universal Journal of Educational Research*, *3*(5), 345-349.

Katz, J., Porath, M. (2011). Teaching to diversity: Creating compassionate learning communities for diverse elementary school students. *International Journal of Special Education. 26*(2), 29-41.

Kennedy, G., Judd, T., Dalgarno, B., & Waycott, J. (2010). Beyond natives and immigrants: Exploring types of net generation students. *Journal of Computer Assisted Learning*, *26*(5), 332-343.

Kenney, J., & Newcombe, E. (2011). Adopting a blended learning approach: Challenges encountered and lessons learned in an action research study. *Journal of Asynchronous Learning Networks*, *15*(1), 45-57.

Kessinger, T. A. (2011). Efforts toward educational reform in the United States since 1958: A review of seven major initiatives. *American Educational History Journal*, *38*(1/2), 263.

Kim, J. S., Capotosto, L., Hartry, A., & Fitzgerald, R. (2011). Can a mixed-method

literacy intervention improve the reading achievement of low-performing elementary school students in an after-school program? Results from a randomized controlled trial of READ 180 Enterprise. *Educational Evaluation and Policy Analysis*, *33*(2), 183-201.

Kim, C., Kim, M. K., Lee, C., Spector, J. M., & DeMeester, K. (2013). Teacher beliefs and technology integration. *Teaching and Teacher Education*, *29*, 76-85.

Kivunja, C. (2014). Theoretical perspectives of how digital natives learn. I*nternational Journal of Higher Education, 3*(1), 94-109.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice*, *41*(4), 212-218.

Labaree, D. F., Hirsch, E. D., & Beatty, B. (2004). The ed school's romance with progressivism. *Brookings papers on education policy*, *7*, 89-129.

Laferrière, T., Hamel, C., & Searson, M. (2013). Barriers to successful implementation of technology integration in educational settings: A case study. *Journal of computer assisted learning*, *29*(5), 463-473.

Lombardi, M. M. (2007). Authentic learning for the 21st century: An overview. *Educause learning initiative*, *1*(2007), 1-12.

Lopez-Perez, M.V., Perez-Lopez, M.C., Rodrıguez-Ariza, L. & Argente-Linares, E. (2013). The influence of the use of technology on student outcomes in a blended learning context. *Education Technology Research Development, 61*, 625–638.

Madden, M., Lenhart, A., Duggan, M., Cortesi, S., & Gasser, U. (2013) *Teens and Technology 2013.* Washington: Pew Internet & American Life Project.

McCoog, I. J. (2007). Integrated instruction: Multiple intelligences and technology. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *81*(1), 25-28.

Mertler, C. A. (2014). Action research: Improving schools and empowering educators (4th ed.) Thousand Oaks, CA: Sage Publications, Inc.

Mindes, G. (2005). Social studies in today's early childhood curricula. *YC Young Children*, *60*(5), 12.

Mosier, R. D. (1952). Progressivism in education. *Peabody Journal of Education*, *29*(5), 274-281.

Oblinger, D. G. & J. L. Oblinger, eds. 2005. *Educating the net generation.* Washington, D.C.: EDUCAUSE.

Pedulla, J. J., Abrams, L. M., Madaus, G. F., Russell, M. K., Ramos, M. A., & Miao, J. (2003). Perceived effects of state-mandated testing programs on teaching and learning: Findings from a national survey of teachers. Chestnut Hill, MA: National Board on Educational Testing and Public Policy.

PowerSchool [Computer software]. (2016). Retrieved from https://lancastercsd.powerschool.com/admin/reports/ethnicitybreakdown.html

Prensky, M. (2012). Teaching the right stuff. *Educational Technology*, 1-3.

Randolph, J. J. (2009). A guide to writing the dissertation literature review. *Practical Assessment, Research & Evaluation*, *14*(13), 1-13.

Reinhart, J. M., Thomas, E., & Toriskie, J. M. (2011). K-12 teachers: Technology use and the second level digital divide. *Journal of Instructional Psychology*, *38*(3/4), 181.

Ritzhaupt, A. D., Liu, F., Dawson, K., & Barron, A. E. (2013). Differences in student information and communication technology literacy based on socio-economic status, ethnicity, and gender: Evidence of a digital divide in Florida schools. *Journal of Research on Technology in Education*, *45*(4), 291-307.

Saavedra, A. R., & Opfer, V. D. (2012). Learning 21st-century skills requires 21st-century teaching. *Phi Delta Kappan*, *94*(2), 8-13.

Schramm-Pate, S. (2015). *Basic Theories of Curriculum* [PDF]. Retrieved from University of South Carolina Principles of Curriculum and Instruction. Blackboard: http://blackboard.sc.edu.

Simon, M.K. & Goes, J. (2011). Developing a theoretical framework. Dissertation and scholarly research: Recipes for success. Seattle, WA: Dissertation Success LLC

Smith, J. G., & Suzuki, S. (2015). Embedded blended learning within an Algebra classroom: a multimedia capture experiment. *Journal of Computer Assisted Learning*, *31*(2), 133-147.

South Carolina Department of Education. (2011). *South Carolina Social Studies Academic Standards* [Data File]. Retrieved from http://artsandsciences.sc.edu/cege/resources/dailygeog/2011socialstudiesstandards .pdf.

South Carolina Department of Education. (2015). *District report card* [Data File].

Retrieved from http://ed.sc.gov/assets/reportCards/2015/middle/c/m2901010.pdf

Staker, H., & Horn, M. B. (2011). The rise of K-12 blended learning: Profiles of emerging models. *Innosight Institute.*

Strasburger V.C., Jordan A.B., & Donnerstein E. (2010). Health effects of media on children and adolescents. Pediatrics.; *125*(4), 756–767.

Takaya, K. (2008). Jerome Bruner's theory of education: From early Bruner to later Bruner. *Interchange*, *39*(1), 1-19.

Taylor, L. & Parsons, J. (2011). Improving student engagement. *Current Issues in Education*, *14*(1).

United States Department of Education. (2008). *Organization of U.S. Education* [Data file]. Retrieved from http://www2.ed.gov/about/offices/list/ous/international/usnei/us/edlite-org-us.html

USATestprep, LLC (2018). https://www.usatestprep.com/home.

Vogler, K. E., & Virtue, D. (2007). "Just the facts, ma'am": Teaching social studies in the era of standards and high-stakes testing. *Social Studies, 98*(2), 54-58.

Vogler, K. (2008). Comparing the impact of accountability examinations on Mississippi and Tennessee social studies teachers' instructional practices. *Educational Assessment, 13*, 1–32.

Wang, S. K., Hsu, H. Y., Campbell, T., Coster, D. C., & Longhurst, M. (2014). An investigation of middle school science teachers and students use of technology inside and outside of classrooms: considering whether digital natives are more technology savvy than their teachers. *Educational Technology Research and Development*, *62*(6), 637-662.

Werth, E., Werth, L., & Kellerer, E. (2013). Transforming K-12rRural education through blended learning: Barriers and promising practices. *International Association for K-12 Online Learning*.

Wisker, G. (2015). Developing doctoral authors: engaging with theoretical perspectives through the literature review. *Innovations in Education and Teaching International, 52*(1), 64-74.

Wizerme (2015). https://app.wizer.me.

Yapici, I. & Akbayin, H. (2012). The effect of blended learning model on high school students' biology achievement and on their attitudes towards the internet. *Turkish Online Journal of Educational Technology - TOJET, 11*(2), 228-237.

APPENDIX A

CITI MODULE COMPLETION CERTIFICATE

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COMPLETION REPORT - PART 1 OF 2
COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Amanda Mings (ID: 6408141)
- **Institution Affiliation:** University of South Carolina (ID: 830)
- **Institution Email:** amings25@gmail.com
- **Institution Unit:** education
- **Phone:** 8645901637

- **Curriculum Group:** Human Research
- **Course Learner Group:** Social & Behavioral Researchers
- **Stage:** Stage 1 - Basic Course

- **Record ID:** 23604884
- **Completion Date:** 08-Jul-2017
- **Expiration Date:** 07-Jul-2020
- **Minimum Passing:** 80
- **Reported Score*:** 93

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)	18-Jun-2017	5/5 (100%)
Belmont Report and CITI Course Introduction (ID: 1127)	06-Jul-2017	3/3 (100%)
History and Ethical Principles - SBE (ID: 490)	06-Jul-2017	4/5 (80%)
Defining Research with Human Subjects - SBE (ID: 491)	06-Jul-2017	5/5 (100%)
The Federal Regulations - SBE (ID: 502)	06-Jul-2017	4/5 (80%)
Assessing Risk - SBE (ID: 503)	06-Jul-2017	5/5 (100%)
Informed Consent - SBE (ID: 504)	06-Jul-2017	4/5 (80%)
Privacy and Confidentiality - SBE (ID: 505)	06-Jul-2017	5/5 (100%)
Vulnerable Subjects - Research Involving Workers/Employees (ID: 483)	08-Jul-2017	4/4 (100%)
Conflicts of Interest in Research Involving Human Subjects (ID: 488)	08-Jul-2017	4/5 (80%)
Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)	08-Jul-2017	5/5 (100%)
Records-Based Research (ID: 5)	08-Jul-2017	3/3 (100%)
The University of South Carolina (ID: 1549)	08-Jul-2017	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: www.citiprogram.org/verify/?k4502af13-ac31-45b0-a855-1916e26b0143-23604884

Collaborative Institutional Training Initiative (CITI Program)
Email: support@citiprogram.org
Phone: 888-529-5929
Web: https://www.citiprogram.org

APPENDIX B

IRB APPROVAL

UNIVERSITY OF
SOUTH CAROLINA

**INSTITUTIONAL REVIEW BOARD FOR HUMAN RESEARCH
APPROVAL LETTER for EXEMPT REVIEW**

Amanda Mings
College of Education
Department of Instruction & Teacher Education / Curriculum & Instruction
Wardlaw
Columbia, SC 29208

Re: **Pro00069661**

This is to certify that the research study, "***The Impact of a Blended-Learning Rotational Model on
Student Achievement in an Eighth Grade Social Studies Class***," was reviewed in accordance with
45 CFR 46.101(b)(**1**), the study received an exemption from Human Research Subject Regulations on
7/26/2017. No further action or Institutional Review Board (IRB) oversight is required, as long as the
study remains the same. However, the Principal Investigator must inform the Office of Research
Compliance of any changes in procedures involving human subjects. Changes to the current research
study could result in a reclassification of the study and further review by the IRB.

Because this study was determined to be exempt from further IRB oversight, consent document(s), if
applicable, are not stamped with an expiration date.

All research related records are to be retained for at least three (3) years after termination of the study.

The Office of Research Compliance is an administrative office that supports the University of South
Carolina Institutional Review Board (USC IRB). If you have questions, contact Arlene McWhorter at
arlenem@sc.edu or (803) 777-7095.

Sincerely,

Lisa M. Johnson
IRB Assistant Director

APPENDIX C

ADMINISTRATOR APPROVAL

Research Proposal

Joyce Crimminger
Sent: Saturday, July 08, 2017 9:21 AM
To: Amanda Mings

July 8, 2017

Dear Amanda Mings,
I have reviewed your action research proposal, and I am pleased to inform you that you
have been granted approval to conduct your research project at South Middle School during
the 2017-2018 school year. Please let me know if we can assist you in any way. I'm excited
for you as you begin this research project.

Joyce Crimminger
Principal
South Middle School
803-283-8416
National Schools to Watch

Sent from my iPad

APPENDIX D

STUDENT LETTER

Dear Students,

It is my goal to ensure that each of you have a pleasurable and successful learning experience. One way to ensure that you do well is for me to try different things in the classroom to see what works best for you.

Over the next few weeks we will begin studying the Reconstruction Era. I want to try a new way of teaching this content to see if it helps you understand it better. You will be asked to take a pretest. Don't worry, the pretest will not be graded and it will not affect your class average. The pretest allows me to see how much you learn over the course of the unit.

During the unit on Reconstruction, you will be divided into groups to complete a few activities. We will rotate around the room to different stations. At the end you will take a unit test to see how much you've learned. No need to worry about the unit test either. I promise you will not be penalized for not doing well on this test. I will share our results with other teachers in the school to help them plan lessons for their students too. I will make sure your names are kept anonymous.

I hope you have fun getting to work with your peers as we learn about Reconstruction. Please do not hesitate to ask me questions.

Sincerely,
Ms. Mings

92

APPENDIX E

PRETEST-POSTTEST

USATestprep, LLC

Reconstruction Test

Student Name: _____ Date: _____

Teacher Name: Amanda Mings Score: _____

1) Northerners who relocated to the South after the Civil War were called

A)	Carpetbaggers.	C)	Interlopers.
B)	Copperheads.	D)	Scalawags.

2) The Amendment which abolished slavery and involuntary servitude was the

A)	13th Amendment.	C)	15th Amendment.
B)	14th Amendment.	D)	16th Amendment.

3) The MAIN purpose of the Freedmen's Bureau was to

A)	help slaves adjust to their newfound freedom.	C)	serve as a voice for freed slaves in Congress.
B)	battle terrorist groups like the Ku Klux Klan.	D)	establish black codes to limit freed slaves' rights.

4) Which of these people in South Carolina history would be considered a *carpetbagger*?

A)	John C. Calhoun	C)	Governor Edward Rutledge
B)	Wade Hampton III	D)	Governor Daniel H. Chamberlain

5) Which of these would have been a goal of the Ku Klux Klan in the south during Reconstruction?

A)	making sure Reconstruction went smoothly	C)	ensuring that freedmen had the right to vote
B)	assisting the scalawags and carpetbaggers	D)	restoring southern Democrats to political power

6) During the late 1800s, falling crop prices and indebtedness to money lenders meant that many South Carolina farmers

A)	began mining for gold.	C)	became indentured servants.
B)	were forced into slavery.	D)	lost ownership of their land.

93

7) Which statement BEST describes the impact of the Freedmen's Bureau?

A) It failed to attract former slaves to northern states.

C) It failed because it did not offer education opportunities to former southern slaves.

B) It was not successful in sparking trade between the North and the South.

D) It was unsuccessful in bringing about unity and understanding of the races after the Civil War.

8) Which is the BEST description of the purpose and motivation of groups like the Ku Klux Klan and the White League during the Reconstruction era?

A) Groups like the Ku Klux Klan and the White League worked to help the newly freed slaves adjust to life after slavery.

C) Groups like the Ku Klux Klan and the White League worked to restore white supremacy in the South through threats and violence against free blacks and white Republicans.

B) Groups like the Ku Klux Klan and the White League worked to provide financial assistance for retired Confederate veterans and their families.

D) Groups like the Ku Klux Klan and the White League worked to ensure that white southerners cooperated with the Reconstruction policies put into effect by the federal government.

9) Which Reconstruction plan called for harsh punishments for the former rebellious states and emphasized civil and voting rights for freedmen following the Civil War?

A) the Square Deal

C) the Louisiana Plan

B) Lincoln's 10% Plan

D) the Radical Republican Plan

10) In what way were small farmers in the South impacted by Reconstruction?

A) They were having to hire former slaves to work their small farms.

C) They had lost their entire labor force because of the Thirteenth Amendment.

B) They were now having to compete with sharecroppers when selling goods.

D) They had to take an oath promising not to take part in any future rebellion.

11) What was a MAIN goal of Reconstruction in South Carolina?

A) to help restore the state's economy

C) to help people find employment after the war

B) to protect the rights of freed slaves

D) to rebuild cities that were destroyed in the war

94

12)

Cause	→	Effect

African Americans gained rights.	→	?
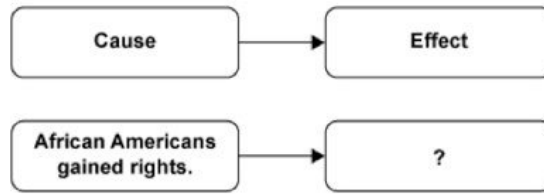
> Look at the cause-and-effect chart. During Reconstruction, African Americans in the South gained many rights.

Which of these should replace the question mark?

A) Plantations thrived.

B) Racial tensions increased.

C) The economy quickly improved.

D) Many whites moved to the North.

13) In the years immediately following the Civil War, the economy of the South

A) never fully recovered.

B) returned to its agricultural roots.

C) quickly became dominated by industry.

D) depended more and more on immigrant labor.

14) Which is the BEST description of the goals of the Ku Klux Klan during Reconstruction?

A) The Ku Klux Klan worked in communities to help rebuild churches, libraries, and schools.

B) The Ku Klux Klan worked with the "carpetbaggers" and the "scalawags" to end segregation.

C) The Ku Klux Klan worked to help Civil War veterans adjust to life after the war by helping them find jobs and housing.

D) The Ku Klux Klan worked to prevent African Americans from exercising their newly found rights and wanted whites to regain control of local governments.

15)

- The Ku Klux Klan
- The White League
- The "Red Shirts"
- The Redeemers

With which era are these groups MOST closely associated?

A) the Gilded Age

B) the Civil War era

C) the Antebellum era

D) the Reconstruction era

16) Which Reconstruction era organization worked to improve conditions for the newly-freed African-Americans?

A) the Redeemers

B) the Ku Klux Klan

C) the White League

D) the Freedman's Bureau

95

17) Which is the BEST example of how Reconstruction affected *politics* in the South in the late 1800's?

A) Many African-Americans moved to cities in search of work in factories.

C) Many African-Americans turned to a life of sharecropping to provide for their families after slavery was abolished.

B) The Freedman's Bureau was created to provide clothing, food, water, health care, education, and jobs for ex-slaves.

D) Passage of the Fifteenth Amendment guaranteed voting rights for African-Americans and gave them a greater voice in government.

18) Which is the BEST description of the southern economy during Reconstruction?

A) The southern economy was stabilized because of trade relationships with Great Britain and France.

C) The southern economy was transformed from being based on agriculture to being completely dependent on industry and manufacturing.

B) The southern economy was still based on agriculture and cotton, but now depended on sharecropping rather than slave labor.

D) The southern economy was completely restored by 1866 and was actually more productive and profitable than the pre- Civil War economy.

19) Which of these was mainly a NEGATIVE effect of Reconstruction for people in South Carolina?

A) the shortage of labor on plantations

C) the development of a public school system

B) the destruction of roads and railroads

D) the development of a sharecropping system

20) Which MOST LIKELY caused an increase in racial tension during Reconstruction in South Carolina?

A) Whites did not want blacks to work on farms.

C) Whites wanted blacks to go to school and get an education.

B) Freed slaves were forced to adhere to Jim Crow laws.

D) Freed slaves were allowed to own land, vote, and serve on juries.

APPENDIX F

STUDENT TEST SCORES

Student Number	Pretest Score	Posttest Score	Growth Points
Student 1	45	90	45
Student 2	65	100	35
Student 3	30	75	45
Student 4	60	95	35
Student 5	70	95	25
Student 6	10	70	60
Student 7	65	90	25
Student 8	70	80	10
Student 9	25	70	45
Student 10	45	45	0
Student 11	40	100	60
Student 12	25	90	65
Student 13	30	76	46
Student 14	20	65	45
Student 15	80	75	-5
Student 16	70	95	25
Student 17	20	95	75
Student 18	30	50	20
Student 19	65	100	35
Student 20	35	90	55

Student 21	80	90	10
Student 22	30	90	60
Student 23	15	65	50
Student 24	35	70	35
Student 25	50	85	35
Student 26	65	95	30
Student 27	20	100	80
Student 28	25	80	55
Student 29	70	60	-10
Student 30	25	90	65
Student 31	30	80	50
Student 32	40	90	50
Student 33	35	65	30
Student 34	50	80	30
Student 35	25	85	60
Student 36	55	70	15
Student 37	35	95	60
Student 38	10	80	70
Student 39	25	80	55
Student 40	20	80	60
Student 41	30	100	70
Student 42	55	70	15

Student 43	55	95	40
Student 45	10	80	70
Student 44	50	65	15
Student 46	50	75	25
Student 47	25	80	55
Student 48	20	90	70
Student 49	25	65	40
Student 50	10	95	85
Student 51	55	55	0
Student 52	15	65	50
Student 53	40	100	60
Student 54	30	80	50
Student 56	15	90	75
Student 55	45	80	35
Student 57	55	70	15
Student 58	25	75	50
Student 59	25	65	40
Student 60	35	75	40
Student 61	70	100	30
Student 62	20	70	50
Student 63	55	85	30
Student 65	25	80	55

99

Student 64	30	80	50
Student 66	25	30	5
Student 67	30	95	65
Student 68	60	60	0
Student 69	30	100	70
Student 70	65	95	30
Student 71	25	85	60

APPENDIX G

STUDENT SURVEY

I enjoyed rotating in the different stations to learn about Reconstruction.
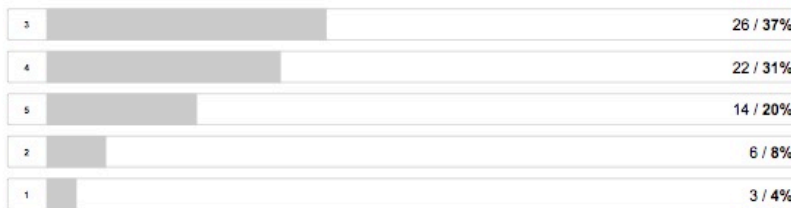
71 out of 71 people answered this question

Average: 3.54

1	2	3	4	5

Stronlgy Disagree   Neutral   Strongly Agree

3	26 / 37%
4	22 / 31%
5	14 / 20%
2	6 / 8%
1	3 / 4%

The online learning module helped me understand the events of Reconstruction.

71 out of 71 people answered this question

Average: 3.38

1	2	3	4	5

Stronlgy Disagree   Neutral   Strongly Agree

3	26 / 37%
4	23 / 32%
2	12 / 17%
5	9 / 13%
1	1 / 1%

The online learning module activities were designed in a way that kept my attention.

71 out of 71 people answered this question
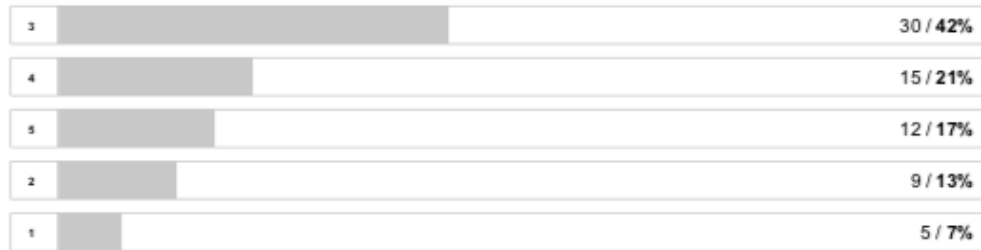
Average: 3.28

1	2	3	4	5

Stronlgy Disagree   Neutral   Strongly Agree

3		30 / **42%**
4		15 / **21%**
5		12 / **17%**
2		9 / **13%**
1		5 / **7%**

I was able to complete the online learning activities with little help from the teacher.

71 out of 71 people answered this question

Average: 3.62
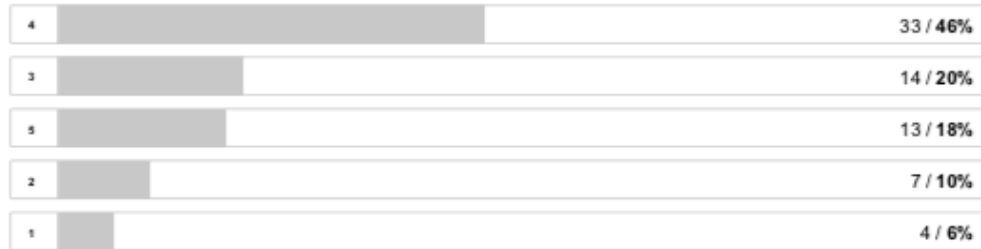
1	2	3	4	5

Stronlgy Disagree   Neutral   Strongly Agree

4		33 / **46%**
3		14 / **20%**
5		13 / **18%**
2		7 / **10%**
1		4 / **6%**

I prefer the online format more than teacher lecture and guided notes.

71 out of 71 people answered this question

Average: 3.15

1	2	3	4	5

Stronlgy Disagree   Neutral   Strongly Agree

3		22 / **31%**
5		16 / **23%**
2		12 / **17%**

www.manaraa.com

| 4 | 11 / **15%** |
| 1 | 10 / **14%** |

103

APPENDIX H

SOUTH CAROLINA SOCIAL STUDIES CURRICULUM STANDARD

GRADE 8

South Carolina: One of the United States

Standard 8-5:   The student will understand the impact of Reconstruction, industrialization, and Progressivism on society and politics in South Carolina in the late nineteenth and early twentieth centuries.

Enduring Understanding

During the periods of Reconstruction, industrial expansion, and the Progressive movement, South Carolina searched for ways to revitalize its economy while maintaining its traditional society. To understand South Carolina's experience as representative of its region and the United States as a whole during these periods, the student will utilize the knowledge and skills set forth in the following indicators:

Indicators

8.5.1   Analyze the development of Reconstruction policy and its impact in South Carolina, including the presidential and the congressional reconstruction plans, the role of **black codes**, and the Freedmen's Bureau.

8-5.2   Describe the economic impact of Reconstruction on South Carolinians in each of the various social classes.

8-5.3   Summarize the successes and failures of Reconstruction in South Carolina, including the creation of political, educational, and social opportunities for African Americans; the rise of discriminatory groups; and the withdrawal of federal protection.

8-5.4   Summarize the policies and actions of South Carolina's political leadership in implementing discriminatory laws that established a system of racial segregation, intimidation, and violence.

8-5.5   Compare industrial development in South Carolina to industrialization in the rest of the United States, including the expansion of railroads, the development of the phosphate and textile industries, and immigration.

8-5.6   Compare the plight of farmers in South Carolina with that of farmers throughout the United States, including the problems of overproduction, natural disasters, and sharecropping and encompassing the roles of Ben Tillman, the Populists, and land-grant colleges.

8-5.7   Compare migration patterns of South Carolinians to such patterns throughout the United States, including the movement from rural to urban areas and the migration of African Americans from the South to the North, Midwest, and West.

8-5.8   Compare the Progressive movement in South Carolina with the national Progressive movement, including the impact on temperance; women's **suffrage**; labor laws; and educational, agricultural, health, and governmental reform.

65