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VIRTUALLY THERE: A PHENOMENOLOGICAL STUDY OF SECONDARY STUDENTS
AND THEIR ENGAGEMENT WITH VIRTUAL REALITY FIELD TRIPS

A dissertation submitted to
The University of Mississippi,
In partial fulfillment of the requirements for the degree
Doctor of Philosophy
Graduate Program in Curriculum and Instruction

By

MELISSA THOMAS

May 2019

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ABSTRACT

The study seeks to inform solution to the lack of student exposure to frequent, culturally enriching field trips in school. To address the concern of limited learning through school field trips, this phenomenological study seeks to explore the lived experiences of virtual reality field trips for secondary students. The study seeks to examine how students respond emotionally, physically, and cognitively to the use of virtual reality within the classroom. Data analysis consists of observing, interviewing, and assessing students as they engage in and complete a virtual reality field trip. The three research domains are transcribed and analyzed to better understand how students respond in a virtual field trip. The results will lead to further studies on the use of virtual reality field trips as a teaching strategy to improve student learning.

DEDICATION

This dissertation is dedicated to everyone who helped me and guided me through this entire process. My family and friends provided the support system needed to help me believe that my ideas were worth researching.

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CHAPTER I: INTRODUCTION

At the beginning of the school year, it never fails that teachers attempt a “get to know you” activity by asking students to share the places they visited over the summer and the adventures they experienced. Most students cannot wait to share; however, a select few cringe at the thought of this activity simply because trips of any kind are not included in their summer break. For some students, traveling 30 miles outside of their community rarely happens. There are no vacation stays at luxurious hotels or visits to theme parks and museums. The families simply cannot afford these types of trips. Therefore, some students rely heavily on school field trips to fill this void in travel and exposure to places they do not see on a daily basis (Anderson & Lucas, 2006; Ciuffetelli & Craig, 2017, DeWitt & Storksdieck, 2008; Greene, Kisida, & Bowen, 2014; Knight, 2017). Today, these once anticipated school field trips are “often limited by logistics, expense, safety/liability, time constraints, weather conditions, lack of transportation” in many districts all across the country (Kirchenth, 2011, p. 24).

Considering much advancement in transportation and availability, a person may find it difficult to believe that there are still children sitting in classrooms who have not traveled beyond their city limits. Greene, Kisida, and Bowen (2014) found that regardless of whether school provides opportunities for “culturally enriching” field trips, families from middle to high socioeconomic backgrounds may still schedule travels for their children at their own expense (p. 86). However, “disadvantaged students need their schools to take them on enriching field trips if they are likely to have these experiences at all” (Greene et al., 2014, p. 86). Socioeconomic

backgrounds deprive many from experiencing culture and environments that are different from where they live. For these students, field trips are the only hope of expanding their reality and learning about the world in which they live. Because of this dependence on field trips to explore more of the world around them, teachers are actively seeking ways to expose students to the same kinds of experiences field trips provide at a more cost-efficient way. For this very reason, the possibilities of infusing technology and the desire to see more of the world has yielded the need to study the effectiveness of Virtual Reality (VR) Field Trips on students in a K-12 setting.

Background of the Problem

Traditionally, during the springtime of the year, school buses keep the highway busy transporting students to and from various places like parks, museums, theaters and local historic attractions. Over the course of many years, field trips have served as an integral part of the social studies curriculum because of its ability to provide students with authentic engagement with the environment and things that make our world extraordinary (Xanthoudaki, 1998). Many students wait all school year for their turn to participate in an annual field trip. For some, this will be the only opportunity to venture outside the city limits and experience new cultures, arts, and environments.

“Schools gladly endured the expense and disruption because they saw these experiences as central to their mission: schools exist not only to provide economically useful skills in numeracy and literacy, but also to produce civilized young men and women who appreciate the arts and culture” (Greene et al., 2014, p. 4).

For students who do not experience travel through meaningful trips, acquiring the necessary geographic knowledge and skills that are essential for citizens to possess is difficult and limited to only their surroundings (Knight, 2017, DeWitt & Storksdieck, 2008, Greene,

Kisida, & Bowen, 2014). “There is a tendency for the children to discuss and think about geography in terms of people, familiar places that they have visited or cultural products,” (Lambrinos and Bibou, 2006, p. 250). During this day and age, teachers are finding it more difficult to propose “culturally enriching” field trips for their students that are both affordable and accessible for all their students (Greene et al., 2014, p. 79). Several changes in the education system over the past decade contribute to this decline.

Because of changes in the accountability models, high-stakes testing, decreased funding provided to each district, and the purpose for field trips, school districts are taking fewer field trips each year. First, the demands of high stakes testing have created an urgency to protect instructional time throughout the year in preparation of the end-of-year assessments that many teachers and administrators are reluctant to lose an entire day of instruction to take a field trip. The need to increase test scores has dominated the need to expose students to various arts, exhibits, and other unique, culturally rich places. Therefore, teachers are taking careful considerations when planning field trips to best maximize time spent away from school (Mehta, 2008, Anderson, Kisiel, & Storksdieck, 2006; Xanthoudaki, 1998; Puhsek, Perse, M., Perse, T.V., & Sorgo, 2013).

Second, the ever-so-increasing budget cuts have made it difficult for schools to afford to take students off campus. Inadequate funding, in part spurred by the recession of 2008-2009, has caused many schools to reduce or eliminate school-sponsored field trips (Greene et al., 2014; Knight, 2017; Leachman, Albares, Masterson, & Wallace, 2016). More than 10 years following the recession, budget cuts still pose problems for students from low socioeconomic families who cannot afford to provide their children with opportunities to travel and see places outside the school setting. Whereas many school once took three to four trips a year, most only take one

major field trip per grade each year. Each year, state departments of education issue mandatory budget cuts which sometimes come mid-year making it difficult for schools to maintain financial stability. Often these cuts are so large that administrators must make the decision of cutting important programs such as art and music versus losing employees. For example, a current debate exists between the Mississippi state legislature and numerous constituents within the state over Mississippi Adequate Education Program (MAEP), a formula developed in 1997 to ensure adequate funding for every child in Mississippi regardless of socioeconomic background (Martin, 2015). Mehta (2008) found that “sixty percent of teachers surveyed across the nation reported decreased funding for field trips in recent years” (p. 1). When faced with these kinds of financial pressures, school leaders tend to become more frugal in spending, especially for field trips.

Finally because changes in education field trips have developed from the culturally enriched experiences they once were to merely rewards for academic achievement, attendance, and other appropriate behaviors demonstrated by the student body. Field trips in the mid-nineties and prior were centered on the curriculum and designed to supplement classroom instruction (Flexer & Borun, 1984; Anderson & Lucas, 1997; Bamberger & Tal, 2007; Greene, Kisida, & Bowen, 2012). Many of the trips today have little to no educational merit and add little if any value to students’ ability to think critically or understand the value of their diverse cultures. Additionally, students do not gain an understanding of how their communities thrive and gain identity. According to Greene et, al. (2014), “schools take students to amusement parks, sporting events, and movie theaters instead of to museums and historical sites” (p. 80). Faced with many challenges, some teachers desire to provide field trips that are both academically beneficial and fun for their students.

After considering the effects of high-stakes testing, inadequate funding, and inappropriate use of school field trips, one may better understand the reluctance of school officials to use scarce resources and time for off-campus excursions (DeWitt & Storksdieck, 2008; Greene et al., 2014; Knight, 2017; Mehta, 2008). Regardless of the reason, a decline in school field trips for many students results in fewer opportunities to experience learning through interactions with authentic environments.

So, what prices are paid when students are unable to take meaningful field trips at school? Many geographers would argue that when schools deprive students of the exposure to their community and the world around them, their geographic knowledge and thinking skills suffer. Researchers have found only marginal positive effects on cognitive learning and improved critical thinking skills through field trips (Anderson, 1999; Anderson & Lucas, 1997; Bamberger & Tal, 2007; Beiers & McRobbie, 1992; Feher & Rice, 1985; Flexer & Borun, 1984; Knapp & Glenn, 1996; Mallon & Bruce, 1982; Mehta, 2008; Miglietta, Belmonte, & Boero, 2008; Orion & Hofstein, 1994; Stronck, 1983). Furthermore, any benefits to student learning resulting from field trips are astounding considering the limited number of trips planned within a given school term. Perhaps if students had more opportunities to engage in academically enriching field trips, the correlation between the learning and critical thinking skills would increase significantly.

Many teachers and geographers believe that to develop an understanding about a place one must physically experience life in that place. Other teachers think that learning minus physical experience does not equate to the development of higher geographic thinking skills about that area (Soria & Weiner, 2013). What if it was possible to know a city without having ever stepped foot in its city limits? However, is it really necessary to physically experience a

place or can a VR experience accomplish similar outcomes? Would more individuals have an increased ability to think geographically about the world that surrounds them? Because social studies education covers so many disciplines that all work together to develop competent, responsible citizens who are “informed and thoughtful, participate in their communities, act politically, and have moral and civic virtues” (McGuire, 2007, p. 620). When applied, these traits make a positive difference. Our society depends on individuals who are well informed of the essential principles of a democratic society and understand something about the world beyond simply where they live. Even in the age of technology and transportation, some students have not traveled more than 30 miles from their community and possess no knowledge of the world beyond their everyday observations.

With the use of modern technology and geographic innovation, teachers are finding new ways to introduce students to places in which they have never traveled to help them experience the lifestyle and culture of a place that they may never physically see. Educators of the 21st century believe that it is possible for students to learn about the world from one place, the classroom. The accessibility to computers, mobile devices, and interactive whiteboards has fueled the educators’ opportunities to engage students in the world beyond the school or community (Sidorko, 2009). Teachers are enthusiastic about “the potential to provide alternative forms of learning that can support diverse types of learners, such as visually oriented learners” as well as “to collaborate in a virtual class that transcends geographical boundaries as the major benefit” (Burdea & Coiffet, 2003, p. 1).

Statement of the Problem

Many museums and other historic sites previously busied by schools and church groups have experienced a significant decline in visitation over the past decade. Some researchers

report as much as a 30% decline in field trip participation among some of the most frequented places such as the Field Museum in Chicago, Illinois (Kisida, Bowen & Greene, 2014). Because of uncontrollable socioeconomic factors, some students may never physically visit a state capitol, a historic monument or museum, an old battleground, or a resort. Ciuffetelli, Parker, and Craig (2017) provided several accounts of students who have limited exposure, if any, to people and places outside their communities in their examination of poverty-stricken schools in Toronto, Canada and Houston, Texas. Through first-hand accounts from parents, students, teachers and school administrators, they tell vivid stories of the struggles students face when the resources or lack thereof “do not support children who come from large families and how household incomes do not allow participation in enrichment community activities” (Ciuffetelli, Parker & Craig, 2017, p. 3). The stories told by one of these students expressed the emotions felt when he attended a theatrical play for the first time. He explained how everyone in his house scraped up the \$10 for the pre-play meal because the opportunity for him to take the field trip and experience the culture was important to them all (Ciuffetelli, Parker & Craig, 2017).

At the dawn of the 21st century, virtual field trips (VFT) gained popularity as geography and geology researchers used systems such as information and communication technology (ICT) to allow students to observe places without physically being on site (Stainfield, Fisher, Ford, & Solem, 2000). While ICT provided a way for teachers to supplement classroom field studies with additional lectures and maps, the virtual component allowed students to physically interact with the environment that was missing.

Should these students remain geographically unaware of places because they do not have the financial resources to travel? Many geography teachers today say, “No!” Allowing students to intermingle with a virtual world could create the same first-hand experience. Winn (1993)

supported this claim by stating that VR provides an artificial means for students to gain sustainable knowledge of the world.

Purpose of the Study

The purpose of this proposed phenomenological study is to explore the lived experiences of a virtual reality field trip for seventh-grade students. The study seeks to examine how students respond emotionally, physically, and cognitively to the use of virtual reality field trips within the secondary social studies classroom.

Research Question

Considering the move toward teaching geography through interactive technology, virtual software, lecture and VR applications, the study will seek to answer the following question: What happens to secondary students during a virtual reality field trip? To answer this question, the study will explore the following specific questions as well: (1) Do the participants' terminology express a sense of immersion? (2) Do students explain their experiences as if they are actually there? (3) Do the students display any emotions during the virtual trip such as screaming and yelling? (4) Do students respond physically as if they are within the virtual environment? (5) Do they jump, duck, run, walk, to accommodate what they are viewing in the virtual world? (6) Can students recall detailed information concerning the virtual tour?

Significance of the Study

Spatial thinking, strategic navigating, and geographic knowledge are essential skills that contribute to the development of students who participate globally, politically, financially, and civically as citizens of the United States of America (Dabbs, Chang, Strong, & Milun, 1998); skills that VR may help promote. In a present-day society where terrorism threatens American democracy, increasing debt stifles the economy, and declining academic scores on national

exams push American students well below students in other countries; VR may help address the urgency to increase geography education and interest for secondary aged students. Geography provides students with powerful ideas that describe how societal structures operate “in the past and in other places, whether next-door or around the world” (McGuire, 2007, p. 621). This study serves as a test to see the extent to which VR can serve as a gateway to allowing students opportunities to experience a variety of societal structures that otherwise might not be attained.

Definition of Terms

The following terms associated with the discussion of VR field trips will be used for the purpose of this study and are, therefore, defined:

1. *Virtual Reality (VR)*: Before going deeper into the exploration on Virtual Reality (VR) devices, it is important to understand how this study will define the term VR. Due to the incredibly fast pace in which VR has transformed over the past decade, understanding exactly what it is has created confusion. For this study, VR is “a simulation in which computer graphics are used to create a realistic-looking world” (Burdea & Coiffet, 2003, p. 2). Finding text that introduces VR has proven difficult over the past decades; however, as the availability of VR devices expand, research on the topic has increased.
2. *Geospatial technology*: “The U.S. Department of Labor defines the geospatial industry as ‘an information technology field of practice that acquires, manages, interprets, integrates, displays, analyzes, or otherwise uses data focusing on the geographic, temporal, and spatial context,’ (DoL 2004)” says Klinkenberg (2007, p. 351).

3. *Spatial thinking*: The thought process of identifying, analyzing and comprehending geographic relationships including but not limited to the location, position, size, shape and direction of objects, places, and things (Kerski, 2013).
4. *Experiential Learning*: Experiential learning is defined by Kolb (1984) as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience” (p. 41).
5. *Immersion*: Immersion regarding VR technology is defined as the ability of a student to “experience a computer-generated world as if it were real—producing a sense of presence, or ‘being there,’ in the user’s mind” (Bowman & McMahan, 2007, p. 36; Roussou, 2000).
6. *Informal Learning Environment*: An informal learning environment is one where students learn by participation and creation versus transferred knowledge from a classroom teacher (Sharples & Spikol, 2017).
7. *GIS*: Defining Geographical Information System (GIS) has proven to be a challenging task for many researchers. Due to the quickly expanding data on geographical phenomena, GIS has evolved to include any systems and applications used to measure, track and combine areas such as “agriculture, botany, computing, economics, mathematics, photogrammetry, surveying, zoology,” spatial data, databases, “and of course geography” (Maguire, 1991, p. 9).
8. *College, Career, and Civic Life (C3) Framework for Social Studies State Standards* (NCSS, 2013) was developed to serve two audiences: for “states to upgrade their state

social studies standards” and for practitioners — local school districts, schools, teachers and curriculum writers — to strengthen their social studies programs (p.6)

Assumptions

As young students grow up in impoverished communities in Mississippi, one can assume that students may perceive the entire world as broken bridges, old shack houses, small rundown churches and cotton fields. Many students see these items each day as they step out of their front door. According to the US Census Bureau-CSR Research Reports and Studies-Research Report Series-Statistics (RRS), the population of Mississippi hovered just over 2,900,000 people with a growth rate of 0.30%, which places the state among the bottom in the nation for people moving into the state (Emanuel, Monsell, & Russell, 2018). With only one city maintaining a population above 100,000 people, many families still live in rural areas. The 2010 Census reported that 51.2% of families in Mississippi still reside in rural communities and are spread out at a rate of 63.2 people per square mile (Emanuel, Monsell, & Russell, 2018). The average household income in 2010 was 40, 528 dollars with over 20% of families living at or below the poverty level. Without means to take yearly vacations or to see glimpses of city life, the American dream that many people speak of seems more like a nightmare for many students in North Mississippi. Mississippi is made up of many students who have never been to a museum, have never toured a historic landmark, or have ever realized these places exist. However, this study assumes that all it takes to expand students’ horizons is one encounter with a social studies teacher who is willing to introduce students to an America with diverse cultures that make it unique and nurturing for human life and multitudes of opportunity.

Social studies teachers can project an America founded on freedom and liberty by the blood of those who fought for it. Specifically, geography teachers can teach students how to

appreciate their local heritage as well as the history of this beautiful country. The introduction to geography through the virtual world may light a fire in the students' souls that fuels the desire to see more of the United States of America as well as the rest of the world, learn about unfamiliar cultures that make up the complex world of today, and to engage in civic duties daily to make their communities and the world better place.

Limitations

When asked, most teachers and administrators will say that technology is necessary in today's educational system (Doering, Hughes, & Huffman, 2003; Lewis, 1999; Niess, 2005). Finding reasons as to the advantages new advances in technology can bring our students and school districts may be an easy task, yet several aspects and limitations come into play when implementing effective technology. A major limitation can occur when school districts are not capable of supporting the technological needs such as, increased bandwidth, wireless Internet access ports, and devices, or do not have highly qualified teachers in areas of digital instruction to best implement virtual excursions within the curriculum.

With the transition of No Child Left Behind (NCLB enacted in 2002) to the Every Student Succeeds Act (ESSA enacted in 2015), several states have developed their own state curricula. Mississippi implemented the College and Career Readiness Standards (MS CCRS) for all public-school districts (Conforti, 2013; Meeder & Suddreth, 2012; Wimberly & Noeth, 2005). Students entering third grade during the 2017-2018 school years are among many that will have only studied under the MS CCRS for English language arts (ELA) and mathematics. With this increased focus on ELA and math, students are losing information in regards to social studies, specifically geography. Students as old as middle school struggle with basic geography skills such as knowing their state capital and local government officials (Rohli & Binford, 2016;

NCSS, 2013; McGuire, 2007; Evaniuck, 2014). Without fundamental geography knowledge, students may not gain the full understanding of the virtual reality field trip as it relates to expanding their horizons.

Although educators have established some aspects of the framework such as subject integration, open-ended questioning, and higher order thinking skills, educational leaders are concerned about the technological aspect. One component of MS CCRS addresses students' ability to create projects, interact meaningfully, and take assessments using technology. When pushing this measure into geography instruction, specifically virtual field trips, a huge limitation arises for many economically challenged districts across the United States.

Has anyone thought about equity—digital equity to be exact? What happens to those districts that use one computer lab to meet the needs of all students? What happens to those districts that rarely use technology beyond the basic Microsoft Word and PowerPoint because scarce funds have created limited technology? Educational leaders must address these questions before considering the implementation of virtual field trips within the academic program. Often, students served in these districts would benefit from the experience a field trip would provide. Therefore, it would be imperative to address all the above concerns prior to implementing VR.

Determining how digital connections through virtual field trips without compromising student safety and teacher integrity is another possible limitation. In most American schools, educators and administrators are diligently working to close digital gaps, to create rigorous curricula that maximize technological usage, to combat drop outs through more engaging, digital instruction, and to prove that technology education is a needed essential in life. However, a large number of school districts, administrators, and teachers are hesitant to fully implement

technology into the classroom. This change will not happen overnight, but teachers who do affect change will most likely ignite the heart and minds of these hardest-to-reach students.

Sue Waters (2013), a contributor to Wikispaces, defined personal learning networks in an online blog by stating,

“Personal Learning Networks (PLNs) are all about using web tools such as blogs, wiki, twitter, Facebook to create connections with others which extend our learning, increases our reflection while enabling us to learn together as part of a global community.”

After reading the many articles and watching the videos, I am better aware of how these sites operate and more willing to learn how to best incorporate these forms of technology into the classrooms. While preparing students for life in the 21st century means equipping them with certain digital skills, technology is still simply a resource and the ultimate learning relies on the teacher. David Warlick (2010), author of the Internet post [Technology for 21st Century Learning: Part 1](#), stated, “21st Century learning is about the experience, not about the tools you are using. The experience defines the tools, not the other way around” (p. 1). Regardless of the new, ever-changing, technology software, programs and devices that will show up in education over the next few years, we cannot lose sight of the ultimate goal, student learning.

Overview of the Research

The information above has provided an introduction and overview of the problem, purpose of the study and identified research questions. A summary of the remaining chapters follows.

Chapter II provides a review of the literature on virtual field trips and how it has evolved over the past decade to now include low-cost, hand-held devices such as Google Cardboard.

Chapter III focuses on the model of the conceptual framework including theories, conceptions, and processes necessary for this phenomenological study (Moustakas, 1994). This chapter also thoroughly explains the research design as it relates to the research questions. The purpose of the chapter is to inform the reader of the setting, the participants engaged during the study, and the method of data collection and analysis. The author will use bracketing as the best means of removing biases from the analysis of the data.

Chapter IV provides detailed descriptions of the findings from the study. With the small population used for the study, the author can take an in-depth look at exactly how and what students encountered while participating on a virtual reality field trip. This chapter provides a very scripted view of the author's implementation of the study in a way that could easily be emulated for further studies.

Chapter V presents the data. I analyzed the data and present the findings in a written summary. The analysis process includes "clustering of horizons into themes, individual textural descriptions, individual structural descriptions, the composite textural description, the composite structural description, and the synthesis of meanings and essences of the experience" (Moustakas, 1994, p. 183). Providing a summary of the implications and outcomes from the beginning to the end concludes the research study (Moustakas, 1994). At this time, I, as the researcher, address how the use of Google Daydream's VR software may have differed or shown similarities from the research presented in the literature review as well as possibilities for furthering the study. Through this phenomenological study on VR software and its use in the secondary classroom, future researchers may conduct studies to determine how effective the software may be in increasing academic performance.

CHAPTER II: LITERATURE REVIEW

This chapter reviews the related literature explaining the evolution of virtual reality over the course of the past decade. The first section of this chapter provides an overview of theory behind experiential learning as defined by John Dewey, Jean Piaget, William James, and David Kolb and its relevance to this type of field trip. Following the framework of learning through experience, the second section explains how field trips became significant to student learning and the academic process by providing students with a means of engaging with the place of which they study. Once the research established that learning can be enhanced through experience that field trips provide, it is equally important to understand how students make sense of place. Therefore, the third section provides a review of the research presented by Matthews (1992) on the process in which children began to make sense of their surroundings and develop ideas of place based on various systems in which they engage. Understanding place provides a great transition into the fourth section, applying experiential learning theory by means of field trips in which children can relate to geography education. This section presents the research on geography and its relationship to field trips. The concluding section seeks to provide research on the transition from traditional field trips to virtual field trips as a means of providing more students with an opportunity to experience life in more places.

Theoretical Framework

The old cliché “experience is the best teacher” can be heard across schools today. Regardless of whether students are dissecting a frog or learning to weld an iron rail, researchers agree that experiencing, reflecting, thinking critically and analyzing are all essential components of learning (Kolb & Kolb, 2010). Students growing up in this era of technology and instant information seek to know not only when things happened, but also why and where. They are entering the classrooms with varying levels of experience, thoughts, ideas and motivation to learn about the past as a means of creating innovative things in the future.

Educational philosophers such as John Dewey, Jean Piaget, William James, and David Kolb changed the way teachers facilitate instruction through the theoretical framework of experiential learning (Kolb, 2010; Dewey, 1897). Alice Kolb and David Kolb (2010) said, “In the 40 years of research on experiential learning theory (ELT; Kolb, 1984), play has been central to the practice of experiential learning; be it games, role plays, outdoor adventure training or ‘playing’ with ideas in the creative process” (p. 27). Educational theorists established learning through experience as an effective teaching strategy many years ago. Krista Soria and Brad Weiner (2013) stated:

According to Giles and Eyler [17], Dewey specified that four conditions must be present to maximize the potential for learning to be educative: a) it must generate interest in the learner; b) it must be intrinsically worthwhile to the learner; c) it must present problems that awaken new curiosity and create a demand for information; and d) it must cover a considerable time and foster development over time. (p. 184).

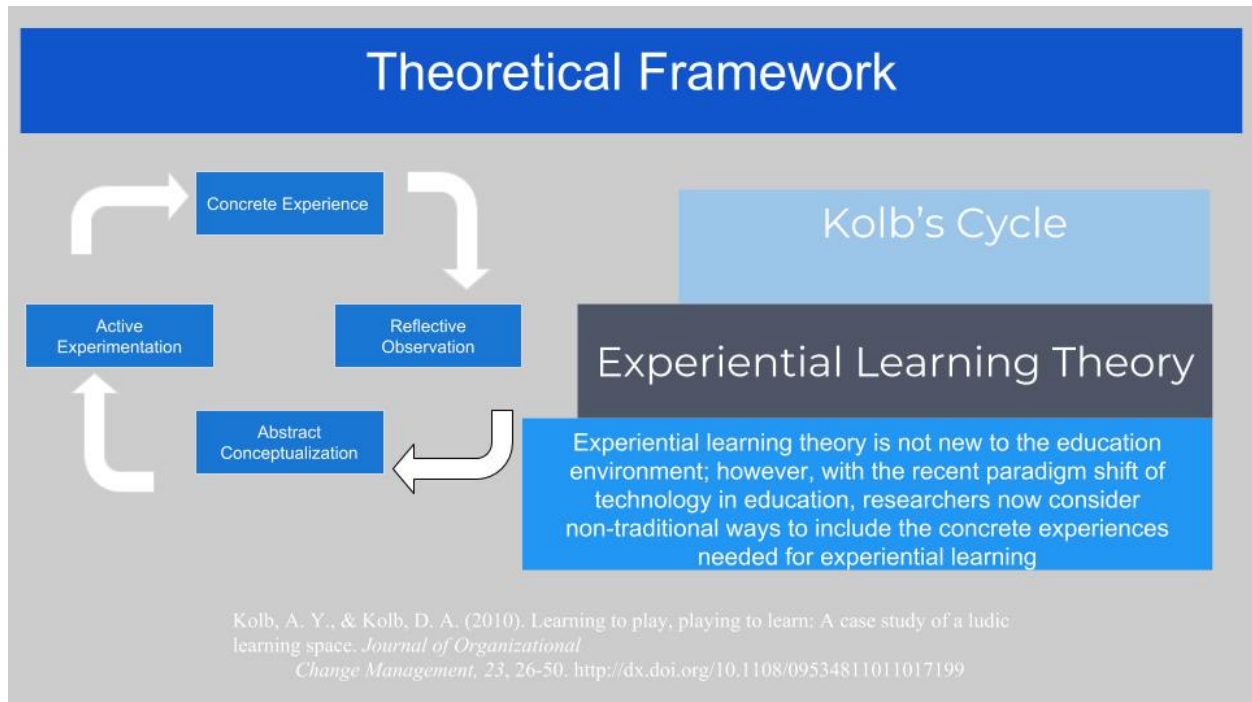


Figure 1. Theoretical Framework as adapted from Alice Kolb and David Kolb (2010).

Overwhelming research supports Dewey (1987) and Kolb's (2010) theory of learning through action regarding students directly involving their emotions and feelings in the experience to engage in a deeper connection with learning and application.

Past research has found experiential learning to be greatly beneficial to the development of student learning through the connection of real-life practices. Experiential learning "has traditionally been accomplished in the K-16 education setting through the use of field trips" (Tutwiler, Lin, & Chang, 2013, p. 351). Most teachers would agree that across the curriculum, students display a deeper level of understanding of a concept when educators incorporate an action component in the lesson. "Learning opportunities that occur in the 'real world,' therefore, have the potential to encourage deeper, more meaningful learning experiences for students who engage in them..."(Soria & Weiner, 2013, p. 186). Experiential learning theory is not new to the education environment; however, with the recent paradigm shift of technology in education, researchers now consider non-traditional ways to include the concrete experiences needed for experiential learning.

Concrete experience is a person's physical involvement at the exact moment of occurrence. Teachers traditionally provide concrete experiences in natural or recreated environments in which students participate physically. For example, a concrete experience following an instructional unit taught on mammals may be to visit the local zoo. With the recent transition to the Common Core State Standards (C3 Framework, 2013), many teachers are seeking innovative ways to expose students to concrete experiences and experiential learning through field studies.

Administrators are requiring teachers who seek to request approval for a field trip to incorporate field trips into the unit of study through careful planning and projected learning

outcomes. Educators use field trips to provide students with enriched opportunities to learn in various forms of environments not readily available, including the natural environment (Bozodogan, 2012). However, taking physical field trips can be difficult for many schools due to funding, transportation, climate, and accessibility (Tutwiler et al., 2013). When field trips become unavailable, students lose a valuable learning experience. As a result, students no longer experience opportunities to actively engage with the learning environment in ways that build deeper content knowledge and critical thinking.

Historical Perspective

Even as far back as colonial America, geography in its broadest spectrum served as a means of preparing students to obtain the knowledge and skills needed to actively engage in every realm of society (Matthews, 1992; Beneker & van der Schee, 2015; Gallanger & Dwons, 2012; Grubbs & Grubbs, 2014; Lambrinos & Biobou, 2006; Maquire, 1991). Spatial thinking, strategic navigating and geographic knowledge are essential skills that contribute to the development of students who participate globally, politically, financially and civically as citizens of the United States of America (Dabbs et al., 1998). While prominent authors such as Robert Barr, James Barth, S. Samuel Shermis, Sheila J. Thornton, and E. Wayne Ross all held different ideologies of the role of social studies in education, they all concurred that social studies at its very core is citizenship education. A more simplified, content driven view of social studies' role in education took shape in the formal report, *The Social Studies in Secondary Education*, published in 1916 by the National Education Association (NEA) Committee on Social Studies. It was during this time that social studies took on a scope and sequence that would develop students' citizenship, patriotism, and values through an array of courses that included everything from United States history, world history, economics, civics, geography, and local history.

Educators designed the courses to inform students about the past and present histories concerning the world, the country as a separate entity and the state and community as the fundamental building ground for it all. While the contributors at the 1916 convention thought it important enough to set geography aside as a stand-alone subject, calling for the importance of its content essential to all students, geography has taken a backseat to many other academic disciplines in the K-12 curriculum.

Social catastrophes (Neumayer & Plumper, 2007) over the past century such as World War I and II, the Great Depression, the Korean War, the Vietnam War, the Gulf War, the War on Afghanistan, the September 11th terrorist attacks, and the Great Recession not only influenced the ways in which society lives but also the ways in which schools should teach social studies to all students. Social studies is not only the study of academic history but also the venue for social change.

In present-day society where terrorism threatens American democracy, increasing debt poses dangers, and declining academic scores on national exams push American students well below students in other countries; the urgency to increase geography education is more relevant today than ever (Hess, 2002; Burroughs, Groce, & Webeck, 2005). Social studies education covers many spectra that work together to develop competent, responsible citizens who are "informed and thoughtful, participate in their communities, act politically, and have moral and civic virtues" (McGuire, 2007, p. 620). Our society depends on individuals who are well informed of the essential principles of a democratic society and understands something about the world beyond simply where they live.

Geography provides students with powerful ideas that describe how societal structures operate "in the past and in other places, whether next-door or around the world" (McGuire, 2007,

p. 621). Not only do students learn how to improve their communities through local involvement with elected officials such as city council members, but they also learn how to voice their opinions of political platforms and exercise the right to vote at all levels of democracy. When talking about wanting to eliminate terrorism, rebuild morale and pride in our nation, and create a new generation of citizens who are financially responsible and contribute positively to the wealth of the country, it becomes evident that social studies education should be a top priority in American schools (Levstik & Barton, 2015; Hess, 2002).

With the implementation of the Mississippi College and Career Readiness Standards (MS CCRS), teacher education programs are focusing more on preparing teachers with extraordinarily strong content knowledge. Even within the elementary settings, more teachers are beginning to lean more towards becoming an expert in one content area. In the K-12 setting, one will find teachers who spent several years learning everything they could about English/language arts, mathematics, science or social studies. However, teachers are not taking the same initiatives for geography nor are the state agencies requiring such. Are geography teachers truly prepared to instruct students about the environmental changes and concerns of today as well as those in the future such as climate change and peak oil? *The College, Career, and Civic Life (C3) Framework* for Social Studies State Standards (NCSS, 2013) focuses on four core content areas: civics, economics, geography, and history. Regardless of its inclusion in the frameworks, educators often exclude geography when it comes to funding, instruction, and assessment (Burroughs, Groce, & Webeck, 2005; Lintner, 2006; Rock, Heafner, O'Connor, Passe, Oldendorf, Good, & Byrd, 2006). Geography can be the gateway for all other curricula when taught in a meaningful context beyond learning states and capitals (Gallagher & Downs, 2012). When teachers are professionally trained concerning geography concepts and theories, they are

more comfortable in teaching the materials, and students are more comfortable in learning geography (Cochran, DeRuiter, & King, 1993; Darling-Hammond, Chung, & Frelow, 2002; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005).

Most schools in America employ educators and administrators working hard to close gaps, create rigorous curricula, combat drop outs, and prove to all stakeholders that education is a needed essential in life. However, year after year, the only changes made are to the English, math, and science curricula, which do not ignite the geographical thoughts and ideas of the students of whom educators try so hard to reach. Curricular changes simply put a bandage over a festering wound that needs to be closed, the fact that geography is no longer a priority in many American schools (Béneker & van der Schee, 2015; Evaniuck, 2014; Rohli & Binford, 2016). In the many years of teaching and of being an administrator, many things were learned, but the one that has become apparent is that the struggle of the quest for geographic literacy has been lost and forgotten. Students either do not receive the opportunity to learn geography in a way that they can apply, or they simply do not understand the relevance of why geography is important.

Although the implementation of new curriculum standards has encouraged the integration of geography and other social studies strands into the core subjects, many elementary teachers do not have the adequate knowledge in geographic methods and content to effectively teach the curriculum. In most states, elementary teachers must teach all subjects. If elementary teachers could focus more on the appropriate way to integrate geography into English/language arts, mathematics, and arts, students' test scores and geographic knowledge and skills would improve (Darling-Hammond et al., 2002). The need for a smooth transition of elementary and middle school age students to receive purposeful and meaningful geography instruction is as critical today as 20 years ago. Disallowing students an opportunity to build a strong geographic

vocabulary and knowledge at an early age only hinders them from acquiring the ability to apply geographic skills to everyday life as young adults in 21st century America. “By grounding children in democratic principles and immersing them in age-appropriate democratic strategies, they will acquire the foundational skills that prepare them to participate respectfully and intelligently in a nation and world marked by globalization, interdependence, human diversity, and societal change” (Task Force on Early Childhood/Elementary Studies and members of the NCSS Board of Directors, 1988). Discovering what practices support and promote the development of geography knowledge and skills will assist teachers in understanding the best way to instruct students.

One way in which researchers suggest integrating geography into other content areas is the use of dual encoding. This cognitive psychology theory posits that students learn spoken and unspoken instruction differently because these types of instruction are processed along distinct paths in the mind, creating separate content knowledge for all information learned (Sadoski & Paivio 2004). Tabor and Harrington (2014) wrote, “Given this principle role of history in the K–12 social studies curriculum, the use of dual-encoding to integrate geography and history lessons is one approach to bring more geography into the classroom” (p. 47). Therefore, to combat the existing problem of not having an allocated time to teach geography as a stand-alone subject, teachers can now apply integrative teaching practices as mentioned above to establish cross-curricular instruction, which embeds geography into the other content areas.

Researchers are making a case to support the integration of geography into the STEM and technology curriculums since “technological developments related to manufacturing and housing provide an ideal context not only for Technology Education but also for World Geography” (Grubbs & Grubbs, 2014, p.18). Many believe that not only should technology and engineering

focus on mathematics and science but also social science disciplines such as geography (Berson, 1996; Diem, 2000, Keiper, Harwood, & Larson, 2000). The time to develop more knowledgeable citizens who can integrate technological developments in geography is now. What better way to develop these skills than to teach the concepts in collaboration with other subjects as well as to bring the advancements in technology and engineering into the classroom?

Individuals have gone back and forth over whether geospatial technologies truly contribute to building of higher order thinking and application skills of students. According to The U.S. Department of Labor (2004), the geospatial industry is defined as “an information technology field of practice that acquires, manages, interprets, integrates, displays, analyzes, or otherwise uses data focusing on the geographic, temporal, and spatial context” (Klinkenberg, 2007, p. 351). The following are considered geospatial technologies: “Global Positioning Systems (GPS), photogrammetry, remote sensing, cartography, surveying,” cellular phones, and video surveillance systems (Klinkenberg, 2007, p. 351).

Many students complain that geography is hard to grasp (Leat, 2016; Knos, 1977), because they learn isolated facts such as oceans, landforms, latitude and longitude, continents and volcanoes but teachers do not give them an opportunity to shape and connect those facts to form a holistic view of the world and how everything ties together. What if teachers taught a lesson in which students explore the geography concept of maps? Once the geography teacher explores with students the content of maps, the English teacher in turn could have students write about that content, expanding upon the information available and accessible to students.

Through personal experience as a 7th grade social studies teacher working in collaboration with an English/language arts teacher, I have seen personally how social studies can contribute to building higher order thinking skills for students. A colleague who teaches

English/language arts often makes the following statement, “If students can write about a given topic, they comprehend it fully and understand it without question” (P.Garth, personal communication, August 2005). Year after year, she challenges students to “think outside the box” (P.Garth, personal communication, August 2005). She uses language arts to teach math, science, and history-any subject in which her students struggle. Students admire her ability to make any subject seem less challenging.

One year, through a collaborative effort of both the English/language arts teacher and the history teacher, students had an opportunity to explore the geography content in greater depth because they wrote about geography in English class. Students soared in their abilities to comprehend the social studies concept as well as express their thinking through formulate writing. Thinking about that time, one cannot help but wonder why educators do not use language arts--a class of communication--to teach geography. Teaching geography context within the English class allows teachers the ability to push students to transition from not only being able “to recognize spatial distributions and spatial patterns,” but also “to explain them, and to reason how they might change in the future due to autonomous processes or as a result of human interventions in the system” (Favier & Van der Schee, 2014, p. 226).

Not only could this concept of cross-curricular teaching affect language and history, but it could also impact other subjects such as math (Vogler & Vitue, 2007). For instance, when teaching map skills, the teacher could also demonstrate and engage students with math skills such as measurement and basic math operations to determine the distance of one place from another. Students could use math reasoning, clustering, or proximity to develop the shortest route from one place to the next.

With the current trend in education returning to the cross-curriculum trend of teaching, I have reconsidered my friend's statement and agree that writing is the catalyst of learning. When teachers take the time to not only teach content but also help students shape their thoughts about given curriculum in writing, learning takes place. As such, "essays and related written work provide opportunities for students to demonstrate some of the most demanding learning outcomes" regardless of content and area of study (Elander, Harrington, Norton, Robinson, & Reddy, 2006, p. 72). Integrating writing into the assessment of geographic knowledge and skills reinforces students' use of critical thinking and argument to demonstrate complex learning of the world around them (Harrington, Elander, Norton, Robinson, & Reddy, 2003; Tynjala, Mason, & Lonka, 2012).

As research has shown the effectiveness of the cross-curriculum method of teaching for years, the question is asked why educators are not dedicating more time to this method in primary and elementary schools (Carter, 2007; Carter, Ferzli, & Wiebe, 2007; Mahala, 1991; Russell, 1990; Waldo, 1993). Because educators often deem math and language arts as core subjects, the instruction in social studies is overshadowed (Burroughs, Groce, & Webeck, 2005). Unfortunately, this leads to the trend of lessening the opportunities for students to expand their knowledge of history and science although students will be tested in these areas in middle and high school.

As a solution, the fine arts department could play a huge role in teaching geographic concepts and themes. Teachers could use film, music, physical education as well as art to convey geography objectives and life experiences and to increase student interactions with the world around them. According to Anderson (2013),

Rather than representing their experiences directly within the limits of a conventional academic repertoire, students could engage and seek to communicate them differently, not only through the visual images of embodied reactions but also through emotive commentary, background music and academic captions. (p. 393)

Regardless of the integration, there is no doubt that geography education needs more priority within the school curriculum. Educators all over the nation must step up and take active measures to incorporate geography concepts and skills into the secondary school instruction. The livelihood of these young students depends on the vital knowledge and skills learned in geography.

Understanding Place

Upon beginning the review of literature on the phenomenon of effects of VR field trips on students, it is important to understand the research behind a child's ability to make sense of place and the need to utilize field trips as an engaging strategy to promote learning within the geography classroom. Any objects, features, and characteristics that make up a particular place can be considered its geographical environment. The environments in which students live shape their experiences from birth to adulthood. Matthews (1992) explains, "Not only does the geographical environment condition and shape experience, but also how a child reacts, responds, and feels within a particular environmental setting" (p. 5). Educational researchers and leaders are considering these very concepts discussed in the late 20th Century for the virtual world. The purpose of this study is to explore how students will "react, respond, and feel" when engaged in a VR environment created to take them on a virtual field trip (Matthews, 1992, p. 5). Matthews identified four general environmental systems, categorized by their proximity and their effect on children's environmental experience. Figure 2 summarizes Matthews' research on environmental

systems and children's understanding of place as they interact with environmental systems.

Environmental Systems refer to both the physical and human environments that surround people.

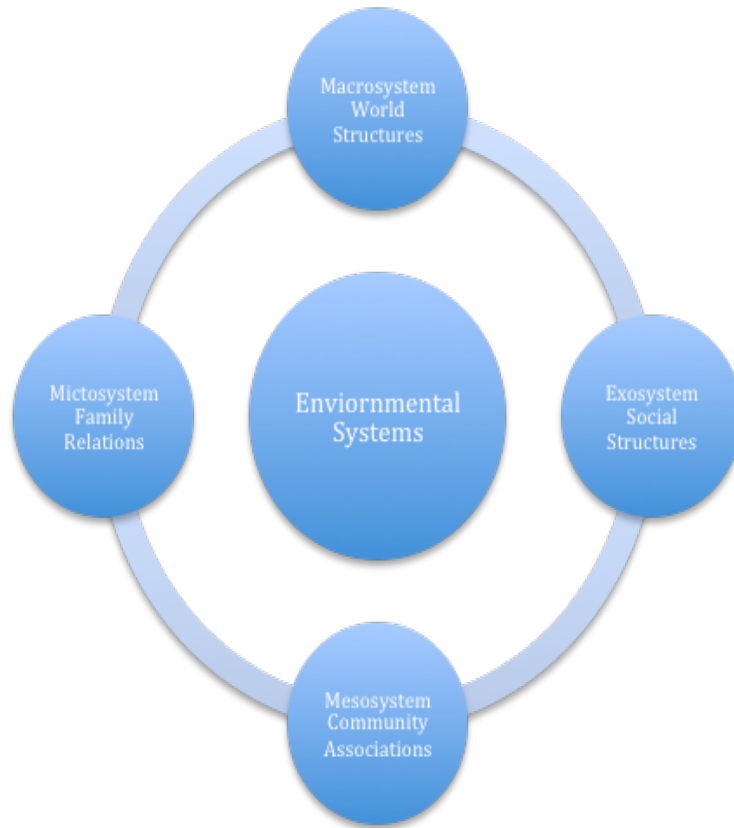


Figure 2. Environmental Systems as adapted from Matthews (1992) research on environmental systems and children's understanding of place.

Matthews (1992) believed that children of wealthier families are more likely to experience geographical settings well beyond their local communities such as national parks, museums, and monuments. He supports this belief by stating that families in poor neighborhoods “exist in social isolation” and lack involvement in activities beyond that of their immediate environmental background (Matthews, 1992, p. 9). Matthews’ research breaks the environment down into four different systems in which a child learns about place and the world around them.

First, he describes the microsystem as the place in which children reside and the people in which they interact daily. Children learn so much in this system by simply engaging and interacting with their parents, siblings, and grandparents. The home is truly the foundation of the development of essential social skills that will help students shape their thoughts and views about our world. The second environmental system, the mesosystem, provides an avenue for students to experience place and extends beyond the home to include places such as schools, grocery stores, post offices, and libraries. The more diverse the mesosystem for a child, the more beneficial the child’s opportunity to experience more places (Matthew, 1992). In contrast, “a poor set of mesosystems produces impaired opportunities” (Matthew, 1992, p. 8). The exosystem and macrosystems, the third and fourth environmental systems in Matthew’s model, consist of experiences of places and cultures that shape the way in which people live their lives daily. Interaction within these environmental systems allows students an opportunity to expand their knowledge and attach meaning to things they learn. When students are limited in experiences beyond the microsystem, field trips become essential means of gaining more first-hand experiences of places.

By creating and implementing field trips into the curriculum as another means of providing hands-on experiences of a place, teachers are equipping students with deeper learning through exploration. According to Matthews (1992), “exploration and play are essential experiences in childhood and since they take place within a spatial context they are means by which children become familiar with place” (p. 14).

The world of education is currently in the midst of a generational shift in educational theory and practice (Brown, 1999; Scheurman, 1998). Teachers have long viewed their roles as the scholar in the classroom, there to fill all the “empty vessels” (students) with knowledge. Today, students are entering the classroom with skills and knowledge in technology that extends well beyond what some teachers understand or know how to utilize effectively. Current leaders in education view teachers as the facilitator, there to guide students in the exploration and creation of information and skills that already exist and the creation of those that have yet to be discovered (Brown, 1999; Scheurman, 1998).

Review of Research

The literature suggests that innovative technology is readily available in most schools but is primarily used for “fun” rather than for engaging students to think critically and apply content knowledge to solve problems (Puhek, Perse, Perse, & Sorgo, 2013). Some schools participate in the one-to-one technology initiatives, which provide every student with access to a laptop computer or handheld device. There are many positive benefits to equipping students with technology in this form.

As the researcher, I reviewed several studies on various learning strategies to determine how students who learn about a place through active learning in a classroom can acquire the same or more geographic knowledge through applied thinking skills as students who have

physically visited the place. Research indicated that the majority of what children think about geography is not closely related to what educators teach through the curriculum (Lambrinos & Bibou, 2006, p. 241). Through technological devices such as digital maps, navigators, and geographic information systems (GIS), students can not discover information about a place faster than textbook companies can keep publishing the new materials (Maquire, 1991; Klinkenberg, 2007; Diem, 2000). Thus, the assumption is that a student can understand and know everything geographically that makes for example, New Orleans, Louisiana, a pivotal city in the south from its location on the Mississippi River to its historic landmarks like the French Quarters and Mardi Gras World, in the past as well as today, without ever crossing the state line.

In 2008, Scheyvens, Griffin, Jocoy, Liu, and Bradford conducted a study on a geography course taught by Yan Lieu at the National Institute of Education, Singapore. With a class of about 20 to 30 students, Yan Liu sought to teach students to encounter a real-world geography problem using problem-based learning (Scheyvens et al., 2008). The students addressed the first problem in that the campus map was old and outdated, providing new students on campus with an inadequate and incorrect guide to campus navigation (Scheyvens et al., 2008). The students were placed into groups to critique the existing map and create a new campus map using GPS and GIS technology systems (Scheyvens et al., 2008). Scheyvens et al. (2008) explained,

They [the students] then drew up an ‘action plan’ to decide what they need to do, how they would like to do it, what data source they required, where and how to collect the data, how to integrate data from different sources and present the data effectively in digital map form. (p. 56)

The instructor assessed the students through hands-on-activities, fieldwork, and project presentation. Scheyvens et al. reported the findings of the study by stating,

Thus, confirming the results of earlier studies, our classroom experiences revealed a wide range of benefits to students from engaging in active learning including the development of critical thinking skills, deep as opposed to surface learning, and generic skills such as collaboration and teamwork. (p. 67)

Another study focused on virtual worlds and its ability to recreate real or imaginary physical spaces and events. Sidorko (2009) said, “Opportunities for ‘increased realism and interactivity’ will blur the distinction between virtual world learning and that of the face to face environment” (p. 408). The researcher saw a need for new teaching methods geared toward creativity and innovation using virtual worlds. Findings from the study encouraged geography instructors to move towards fully implementing a teaching style that promotes active, technology-based learning in combination with traditional lecturing methods (Sidorko, 2009).

Similarly, Yukiko Inoue (1999) discussed the similarities and differences of VR and video instruction as well as their impacts on teaching high-school world geography (p. 95). Inoue provided a detailed explanation of the geography instructional transition from using traditional teaching tools such as textbooks, pencils and globes to one that promoted a technical environment that provides artificially simulated experience. Inoue (1999) stated that:

Sophisticated VR can simulate sight, sound, and touch and combine these senses with computer-generated input to people’s eyes, ears, and skin. Many people can share and interact in the same environment. VR is thus a powerful medium for learning and training (p. 95).

With this type of advanced VR technology, the opportunities to introduce students to new environments, places, and cultures become as simple as a click of the mouse (Roussou, 2000; Kirchen, 2011; Minocha, 2015; Burdea, 2006; Burdea & Coiffet, 2003; Bowman & McMahan,

2007; Inoue, 1999). Many accomplishments result from using VR across many different disciplines. Researchers in the medical field use VR to create training centers with real life scenarios and life-like training dummies with human characteristics and functions like bleeding, coughing, and crying. Filmmakers have excelled with VR movies as well as three-dimensional movies such as *Avatar*.

Yukiko Inoue (1999) conducted a study in which VR was used to help approximately 59 students experience a virtual world. According to Inoue, “Students who entered the virtual world could find themselves touring any city in the world” (p. 98). Students could visit historic sites such as the Washington Monument, the Smithsonian Institution, the Capitol or any other destination according to their interests and desires (Inoue, 1999). Connecting these experiences to benefits in education, the author stated, “These scenarios indicate the potentialities of VR to revolutionize the learning and teaching process,” (Inoue, 1999, p. 98). The incorporation of VR in K-12 education could open new doors to geography and expose every student to places and things in this world that they have never seen. It is almost equivalent to handing each student a key to unlock the door to any city, state, country, and region of which they have ever thought, read, or dreamed. Students in rural Mississippi or urban New York City could benefit from VR within the classroom.

To gather data in the study, Inoue (1999) recorded the students’ experiences within the virtual world, and the students responded to questionnaires and assessments about the experiences. The researchers analyzed the social behaviors and broad patterns of the students’ responses to VR (Inoue, 1999).

Researchers discovered that students formed mental images to facilitate problem solving with VR experiences. Inoue (1999) explained, “The results showed that the students were

fascinated by VR and expressed strong satisfaction with it” (p. 97). Inoue (1999) concluded that VR offers a “significantly compelling creative environment for learning and teaching” (p. 97). In response to technology demands and possible educational benefits, Google developed a software allowing individuals to watch 360-degree videos with a low-cost cardboard device. Google is only responsible for the software and endorses other companies who make the low-cost cardboard devices. This is not to say that physical experience is not the best teacher. Recent studies in instructional strategies say that students learn best when they are actively involved with building the required knowledge through learning activities that require the learning-by-doing methods (Burdea & Coiffet, 2003). Teachers are finding ways “to allow students to visualize abstract concepts, to observe events at atomic or planetary scales, and to visit environments and interact with events that distance, time, or safety factors make unavailable” (Burdea, 2006, p. ES-1). The newness of virtual field trips within the classroom has caused some gaps in the literature where virtual field trips are concerned.

Winn (1993) discussed ways in which VR exemplifies the constructivist-learning model in that students can adjust their learning environment to meet their individual learning needs. Through a study on the value of VR in education, Winn stated, “The psychological processes that become active in immersive VR are very similar to the psychological processes that operate when people construct knowledge through interaction with objects and events in the real world”. The components of constructivist learning through VR are shown in the Figure 3.

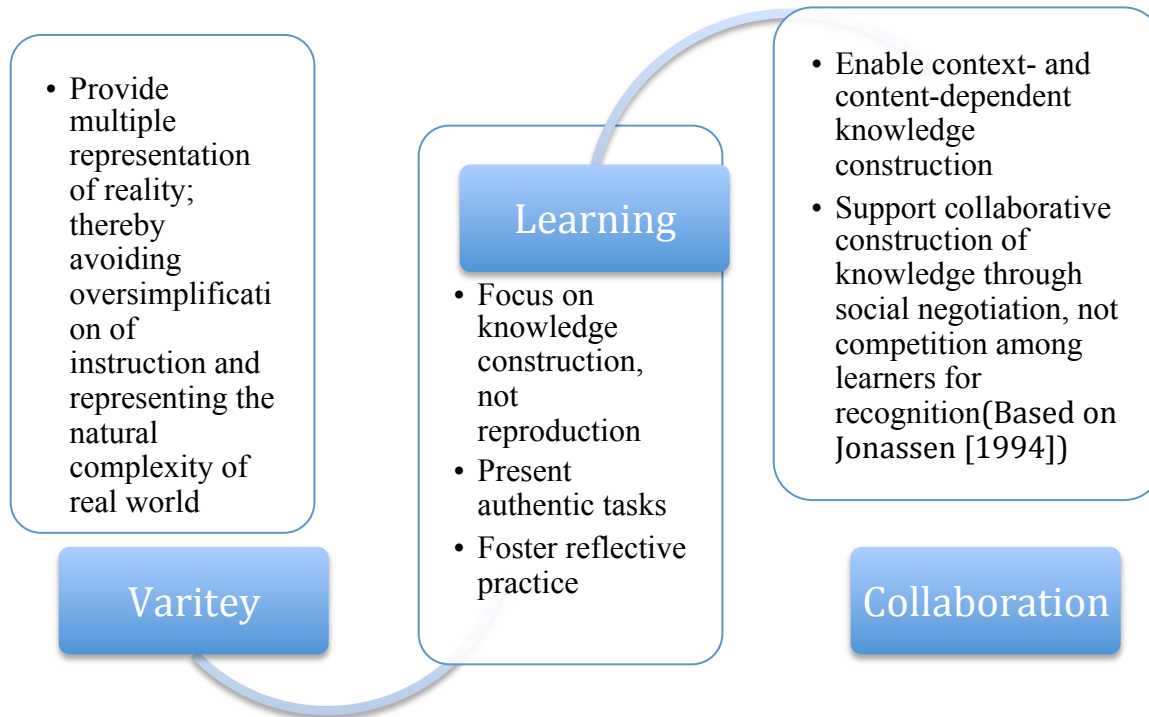


Figure 3. Constructivist Learning Environments as adapted from Burdea (2006)

The majority of VR uses in education are those that allow students to immerse themselves in a virtual world to learn concepts and to engage with a different historical place, time period, or thing (Burdea, 2006). As newly developed virtual tours are being created daily, the scope of potential learning is expanding beyond historical places and museums. The following table provides some insight as to how VR has previously been used in the academic classrooms.

Table 1
Characteristics and Usage of Pre-Developed VR Applications 1

Application	Description	Display	Audience	Date
Virtual Egyptian Temple	Walking tour through the Egyptian temple with an avatar guide.	Desktop	Middle-High School	1998
Virtual Bicycle	Using a mounted bicycle, the user cycles at their own speed through different terrains encountering several accident scenarios.	Projection Screen	5-15 years	2000
Virtual Pompeii	Walking tour of the Theatre Complex of Pompeii. A re-enactment of typical theatrical performances is provided.	Exhibition	All Ages	Fall 1995
Classical Buildings	Walking tour of a depiction of ancient Greek and Roman buildings along with other large-scale artifacts.	Practical	High School/ College	Mid-1997 onward
Virtual Gorilla Exhibit	Exploration of the Gorilla Exhibit at Zoo Atlanta by assuming the role of a member of a virtual gorilla family.	HMD Mono	k-12	1996
Conceptual Design Space (CDS)	Allows a student to create, walkthrough, and modify architectural designs while getting immediate feedback on the impact of changes to the space.	HMD Mono	College Students/ Architects	1995

Note. As adapted from Burdea (2006)

Teachers believe that there can be ways for students to experience everything about a place-from its lifestyle to its culture- without having the means to visit. Minocha (2015) reported that in years to come, VR will enhance instruction by meeting many different learning styles of individual students. Because many of the virtual field trips are designed to recreate a real environment that allows the participant to interact with the environment in ways that otherwise would not be possible without physically visiting, the visual, hearing and kinesthetic components may prove beneficial to students who learn best by seeing, listening and doing (Minocha, 2015). “Students, instead of listening to lectures, can get real experience through virtual immersive environment” (Minocha, 2015, p. 2). .

CHAPTER III: METHODOLOGY

The use of virtual reality devices within a classroom is considered a new phenomenon, only understood as a possible academic means of bringing field trips to the classroom as students experience it. Before one can know how useful Google Daydream can be as a resource for the social studies curriculum, researchers must explore the lived experiences of students using the device (Creswell, 2013). The phenomenology research design will aid in analyzing the VR device by entering the classroom to develop a better understanding of how the students perceive the new technology.

The goal of phenomenology research is to provide detailed descriptions of an event, relying solely on the first-hand accounts of individuals who experience the phenomena. This research design provides answers to questions about a phenomenon with intent to provide meaning and understanding of the total experience as it relates to human life. Phenomenology allows the researcher to discover meaning and whatever essential quality the phenomenon may have according to the lived experiences of the participants. In the proposed study on the use of VR software in the classroom, applying the phenomenology design would allow me, as the researcher, to understand students' perception of interacting in the virtual world and use of the technology and later, how it may be used to aid in the learning of geographic knowledge and skills in the classroom. When determining if phenomenology was the appropriate research design for this study, I studied phenomenology from its origin, methodologies, and data analysis to its current applications in modern-day research.

The origins of phenomenology can be traced as far back as the late nineteenth-century to the German philosopher Edmond Husserl, one of the leading developers of phenomenology as a research method of inquiry. Through his desire for scientific research to appropriately identify truths of "lived experience" through the eyes of the individuals who were directly impacted by the phenomenon, the phenomenological approach to research was developed (Mapp, 2008). After Husserl's initial use of phenomenology, other philosophers took his approach and reshaped it in efforts to apply the research design to other social science areas of interest. Martin Heidegger later developed Hermeneutics, a phenomenological study that allows the researcher to include personal experiences and understanding to interpret the meaning and essence of the phenomena. This approach differs from Husserl's approach in that the researcher utilizes "bracketing" to suspend any personal beliefs or experiences of the researcher to focus strictly on the experiences of the participants (Mapp, 2008). Bracketing is when "the everyday understandings, judgments, and knowings are set aside, and phenomena are revisited, freshly, naively, in a wide-open sense, from the vantage point of a pure or transcendental ego" (Moustakas, 1994, p. 33). Based on the approaches to phenomenology by Husserl and Heidegger along with other notable researchers such as Van Kaam, Colaizzi and Giorgi, unique structures in regard to studying the single phenomenon, bracketing preconceptions, identifying the sample, collecting data, analyzing data, and reporting results were formed.

Rationale for Phenomenology in this Study

Previous studies which focus on virtual worlds and the ability to recreate real or imaginary physical spaces and events provides a reason for the topic of interest as well as the use of phenomenology research design (Sidorko, 2009). Sidorko (2009) saw a need for new teaching methods geared toward creativity and innovation using virtual worlds. According to Sidorko,

“opportunities for ‘increased realism and interactivity’ will blur the distinction between virtual world learning and that of the face to face environment” (p. 408). The research encouraged geography instructors to move towards fully implementing a teaching style that promotes active, technology-based learning in combination with traditional lecturing methods.

Educators and researchers use VR in a plethora of ways and across a variety of disciplines in academia and K12 education. Researchers in the medical field use VR to create training centers with real life scenarios and life-like training dummies with human characteristics and functions like bleeding, coughing, and crying. Filmmakers have excelled with VR movies as well as three-dimensional movies such as *Avatar*. Now Google and other technology powerhouses such as Samsung have recently unveiled hand-held devices that support VR tours and field trips with the aid of smartphone devices.

Research indicates the several possible benefits of VR technology. Yukiko Inoue (1999) shared the similarities and differences of VR and video instruction as well as the impacts on teaching high-school world geography. Inoue provided a detailed explanation of transitioning geography instruction from the use of traditional teaching tools such as textbooks, pencils, and globes to instruction that promotes a technical environment using an artificially simulated experience. Inoue (1999) concluded,

Sophisticated VR can stimulate sight, sound, and touch and combine these senses with computer-generated input to people’s eyes, ears, and skin. Many people can share and interact in the same environment. VR is thus a powerful medium for learning and training. (p. 95)

With this type of advanced VR technology, the opportunities to introduce students to new environments, places, and cultures have become as simple as a click of the mouse.

Yukiko Inoue (1999) conducted a study in which VR was used to help approximately 59 students experience a virtual world. Students could visit historical sites such as the Washington Monument, the Smithsonian Institution, the Capitol or any other destination according to their interests and desires (Inoue, 1999). The author stated, "These scenarios indicate the potentialities of VR to revolutionize the learning and teaching process" (Inoue, 1999, p. 98). The incorporation of VR in K-12 education could open new doors to geography and expose every student to places and things in this world that they have never seen. It is almost equivalent to handing each student a key to unlock the door to any city, state, country, and region they have ever thought, read, or dreamed. The researchers recorded the students' experience within the virtual world for seven days. The students were then asked to respond to questionnaires and assessments about their experiences. The researchers analyzed the social behaviors and broad patterns of student responses to VR (Inoue, 1999) and found that students were able to form mental images to facilitate problem solving with VR experiences. Inoue explained the results by saying that the students were "fascinated by VR and expressed strong satisfaction with it" (p. 97).

Educators can better understand the role VR field trips can have on school-age students' geographic knowledge and skills by examining virtual versus real field trips, using qualitative approaches and engaging students as active participants. Administrators and teachers can utilize this new method of teaching geography to increase students' awareness of the world around them; thus, creating more informed citizens of tomorrow (Edelson, Shavelson, Wertheim, Bednarz, Heffron, & Huynh, 2013; NCSS 2013). The personalized information gathered directly from the participants through qualitative approaches makes phenomenology a better method for this study.

The goal of phenomenology research in this study was to provide detailed descriptions of a virtual reality field trip, relying solely on the first-hand accounts of the participants who experience the phenomena. This research design revealed answers to questions about what the participants experienced with intent to provide meaning and understanding of the total VR field trip experience as it relates to human life. Phenomenology allows the researcher to discover meaning and whatever essential quality the phenomenon may have according to the lived experiences of the participants.

Sample

Selecting the sample is a crucial part of phenomenological research in that the participants chosen for the study must have experienced the phenomenon and can express their experiences in a way that allows the researcher to make sense of their sayings. In phenomenology research, the sample size is typically small, consisting of as many as 15 to 20 participants to as little as one. The sample for this study derived from a population of middle school students with the target population being students in grade seven. In this study, I explored the lived experience of eight, seventh-grade students while using VR software to take a field trip. I used the random sampling method to identify the best students to participate because a VR field trip, particularly Google Daydream, is so unfamiliar in its implementation into the K-12 classroom (Creswell, 2015). To get a sample from a pool of 90 seventh grade students at a local middle school in Northeast Mississippi, I will issue a letter of invitation and permission to participate to all students.

The school district is a public, rural school district that serves 1,329 students in grades K-12. The chosen school for this study is the junior high school, and it consists of seventh and eighth grade students. For this study, the pseudonym Rockford Junior High will be used to

identify the school. Rockford is located in a lower middle class community centered around the railway that divide the two counties that make up the city. The school is predominantly white with a sizeable African American population. Sixty-three percent of the students at Rockford Junior High receive subsidized lunch based on their family income, which is slightly lower than the state average of 68.9%.

Table 2
School Demographic Breakdown for Rockford Junior High School 2

	Number	Percentage
Student Enrollment	331	
6th Grade	109	32.9%
7th Grade	98	29.6%
8th Grade	118	35.6%
Students Identified		
Ethnicity		
White	243	73.4%
Black	84	25.4%
Hispanic	4	1.2%
Free/Reduced Lunch	209	63.4%
Eligibility		

One teacher per grade teaches core subjects of math, language arts, science, social studies, and technology, creating a teacher student ratio of 1:18. Though the district has not met federal requirements for all students to receive free lunch, the percentage of students receiving free or reduced lunch at the junior high is 75%. According to accountability score, the junior high has not received an accountability rating above C; however, the district has maintained a C rating the last three years.

Implementation Process

On December 6, 2018, I dropped off 120 packets to be distributed to every seventh grade student at the school. The principal distributed the packets that afternoon. Each packet included the flyer for parents, an invitation letter for parents of participants under 18 signed by the researcher, a parental consent form, and a release form. The students were all presented equal time to receive and return with the signed permission slips. After 48 hours, the sample pool was created with the first 18 completed packets returned. The demographic percentage of the sample profile are broken down by age, gender, ethnicity, socio-economic status, and education identification as general education student or IEP student. These five factors were extracted simply as a means to better know the participants and to possibly provide enlightenment as the data is analyzed and results are determined. Sixty-two percent of the participants are age 12 while 32.5% of the participants are age 13. Half of the students are identified as white ethnicity while the other half is identified as African American. Female students make up 75% of the participants while 25% are male. Seventy-five percent of the participants are classified as low socio-economic based on their free/reduced lunch status while only twenty-five percent have an IEP on file.

On Friday, December 7, 2018, 18-signed packets were picked up from the school secretary. The packets were numbered 1 to 18 in the order they were turned in to the office. A new document was opened in Microsoft Excel, and all 18 participate packets were listed in column A. In column B, the RANDBETWEEN function was used to generate 8 random numbers ranging from numbers 1 to 18 equally representing each signed packet submitted. The packets numbered 8, 16, 5, 14, 12, 2, 4, and 8 were selected. Because one packet was generated twice, the packet with the next available number prior to the repeated number was selected as the final packet. Therefore, packet number 9 was included in the participant pool.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Signed Packets	Random Number Generated																
2	Packet 1		8															
3	Packet 2		16															
4	Packet 3		5															
5	Packet 4		14															
6	Packet 5		12															
7	Packet 6		2															
8	Packet 7		4															
9	Packet 8		8															
10	Packet 9																	
11	Packet 10																	
12	Packet 11																	
13	Packet 12																	
14	Packet 13																	
15	Packet 14																	
16	Packet 15																	
17	Packet 16																	
18	Packet 17																	
19	Packet 18																	
20																		
21																		

Figure 4. Microsoft Excel Data Sheet using RANDBETWEEN function for Random Number Generation

Following the random selection of eight participants for the study, signed permission forms were verified and filed. The researcher was now ready to begin the study. Day 1 of the study was implemented as follows:

1. After arriving on campus and signing in at the office, the researcher presented the list of the eight participants to the school secretary and requested for her to call each student to the office.
2. Introductions were made welcoming each of the participants to the study.
3. The researcher escorted the students down to the STEM lab that was reserved for the study.
4. Upon arrival, the researcher asked students to sit down in front of the blue folder with their name on the front.
5. Once all students were seated, the researcher provided the students with information regarding her background and education credentials.
6. The researcher read aloud the child assent form to the eight participants. After reading, students were given an opportunity to ask any questions or share any concerns. There were none.
7. The participants were then asked to check the box yes if they agree to help with the research project and no if they did not want to help. All eight participants marked yes. They were then instructed to sign their name and date the assent form. The researcher verified all assent forms were properly signed before proceeding.
8. The researcher followed the lesson plan for Day 1 as shown in Table 3 by reviewing students on the unique features of ancient Egyptian pyramids of Giza. Important vocabulary words such as Giza, limestone, cardinal directions, tomb and burial

chambers were reviewed. Students were allowed to discuss things they had learned in their social studies class on Egyptian pyramids during that unit.

Table 3

Lesson Plan on The Giza Pyramids of Egypt 3

LESSON TITLE: The Giza Pyramids of Egypt
In this lesson, the students will be introduced to the Giza Pyramids of Egypt. After which the students will go on an expedition to the pyramids at Giza.
LESSON BACKGROUND Day 1
MS College and Career-Readiness Standards for the Social Studies (2018) Strand- World History 7.1. Demonstrate and understanding of the unique features of ancient Egyptian culture. Main question: When and where were the pyramids built? Guiding questions: <ol style="list-style-type: none">1. When were the pyramids built?2. Where were they built?3. What shape are they?4. What were the main reasons for building the pyramids? Vocabulary: Giza, limestone, cardinal directions, tomb, burial chamber Grouping: small group
EXPEDITION
Selected expedition: Sites in Virtual Reality: Giza Pyramids Selected scenes and points of interest: <ul style="list-style-type: none">• Pyramids at Giza: Pyramid of Menkaure; Pyramid of Khufu; Small Pyramids; Pyramid of Khafre. Directions for the expedition: <ul style="list-style-type: none">• Place the smart phone in the VR device• Connect both devices to wireless internet and turn on the Bluetooth setting• Select the application “Sites in VR”• Click on the tab “Ancient”• Click on the tab “The Pyramids”• Choose GIZA Pyramids of Giza

- Allow the students to take the VR field trip, assisting with the device when needed

Additional resources:

- Virtual Reality Device
- Smart Phone
- Sites in VR Application
- Squared paper
- Hand-Held Video Camera

BEFORE THE EXPEDITION (Prior to VR Field Trip)

Student activity: The students locate Egypt on a map and consider the location of Giza in relation to Cairo, Egypt's capital city, and the River Nile.

Ask the students to use an atlas or Google Maps to locate Egypt. Point out Giza, and explain that it will be useful in their study of Egypt to consider its proximity to Cairo, Egypt's capital city, and also to the River Nile.

Ask the class to estimate how long ago the Great Pyramids were built in Egypt. Tell them that the date is around 2500 BC.

Ask the class to calculate how long ago the pyramids were built.
Around 4500 years ago (it is not appropriate to be more precise here).

Ask students if they wanted to visit the Great Pyramid of Giza.
Show students the Virtual Reality Device, pointing out all of the features for using the device.

9. In four groups of two students, the researcher trained the participants on the controls and features of the Dream Vision virtual reality device. They were allowed to practice with the device on standard operations. Students were only allowed to manipulate the device inside the classroom while seated.
10. Because additional time was available, students began to participate individually in the virtual expedition of the Giza pyramids.
11. Participant numbers 5, 2, and 4 took the virtual field trip on day one in that order.
12. On day two, the study was completed as follows: Participant numbers 14, 12, 16, 8, and 7 completed their expeditions on day two. Detailed notes were taken using the Observation Protocol form created in Google Forms of each participant and can be viewed in APPENDIX D.
13. Following the participants' expedition, the researcher interviewed each student using the Student Interview questions in APPENDIX F and was recorded using a Sony handheld recording device.

Data Analysis & Coding

Ciphering through the data in a qualitative study can be a tedious task. When analyzing the above data, the van Kamm's "phenomenological reflection" method as modified by Moustakas (1994) was used as a guide (p.120-121). The gist of van Kamm's model is to "grasp the essential meaning of something" (Moustakas, 1994, p. 121). Figure 5 describes van Kamm's approach to analyzing and coding data for a phenomenological reflection.

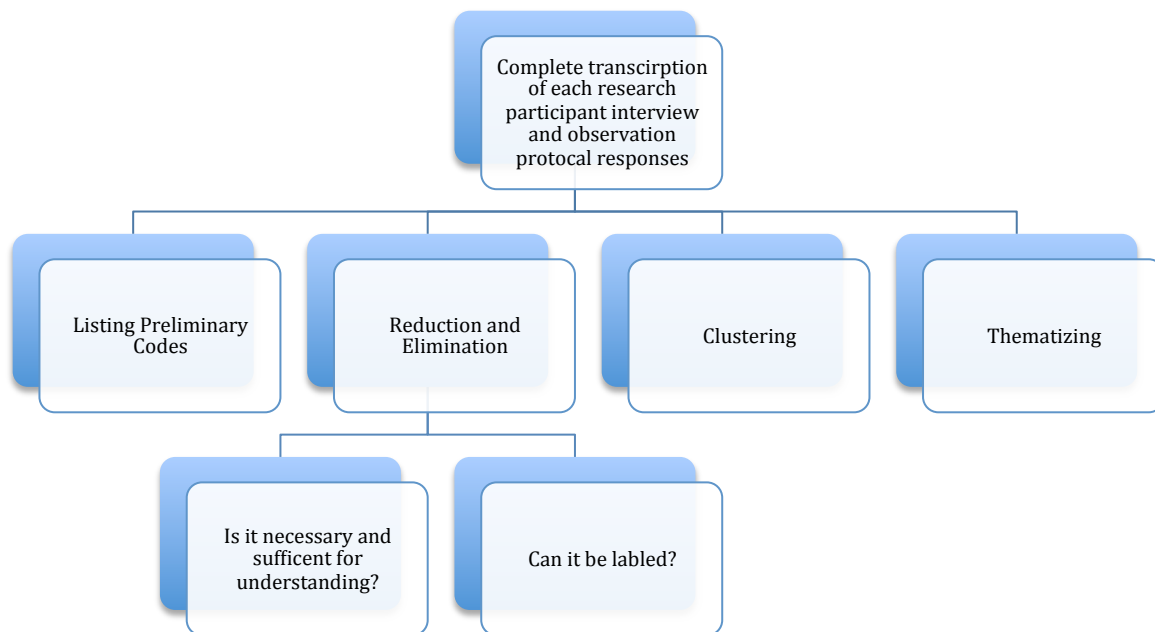


Figure 5. Adapted from the Van Kamm method of analysis of phenomenological data as modified by Moustakas (1994).

First, the student expressions during the lesson, the observation protocols, and the transcribed student interviews were decoded to identify, by circling, key words or phrases that related to the participants' experience. The researcher noted these words and phrases in the margins as an informal way to scribe notes. Next, the researcher charted these words and phrases based on repetition, meaning, and importance to understanding. Once charted, the researcher determined which codes could be grouped together to form a common cluster. Finally, the researcher pulled overarching theme from the final clusters.

Conclusion

As the researcher, I was interested to see if the students talked about the VR field trip as if they were physically there. Additionally, I wanted to determine whether the students displayed any physical reactions to the VR software. I used one-on-one interviews with the participants, as this data collection method is the most common approach to gathering data in a phenomenology. As a result of this study, educators will have research-based evidence to determine if the push for technology-based instruction is worthwhile and meaningful to learning; or should the focus of geography teaching remain on simply introducing students to a theory with hopes that they may someday experience it for themselves. Other areas of disciplines have embraced the notions of the twenty-first century as the digital age and found ways to incorporate the same into the classroom (Béneker & van der Schee, 2015; DeWitt & Storksdieck, 2008). The time is now for geography education to follow suit.

Personal expectations lead me to believe that the students who participate in this study will indeed demonstrate many characteristics physically, verbally and emotionally as if they were in that location. I expect the participants to experience immersion into the Egyptian

pyramids in a way that is evident in how that talk about their experience and respond during the virtual field trip.

CHAPTER IV: FINDINGS

The purpose of this phenomenological study was to explore the lived experiences of virtual reality (VR) field trip for seventh-grade students. The study examined how students responded during a VR field trip within the secondary social studies classroom. The research centered on eight, seventh-grade social studies students using a class lesson, an observation protocol, and student interviews. These interactions provided the opportunity for me to examine how students respond emotionally, physically, and cognitively to VF within a secondary classroom.

This chapter is comprised of five sections: The participants' profile, category discussion, findings before, during and after the virtual field trips, codes and clusters and the theme. The first section introduces the participants and provides insights into their various personalities and demographics. Participants are identified according to the packet number assigned at the beginning of the study along with pseudonyms to ensure privacy. The second section describes the categories and how they relate to the research question and sub-questions. The third section provides details of what happened during the class lesson, the virtual field trip, and the student interviews.

The fourth and fifth sections provide information regarding the identified codes and clusters of the data, which in turn determine the themes of the phenomenology. The conclusion will complete the chapter.

Participants’ Profiles

The student general information sheet from the district’s online student management system was used to develop the sample profile. The age of the participants ranges from age 12 to age 13. Five of the participants are female in gender and three are male. Three of the students are identified as white while the other five students are identified as African American (Black). Six of the students receive free or reduced lunch, which categorizes them in the lower socio-economic classification. Only one student has an individualized education plan (IEP).

Table 4
Sample Profile 4

Students	Age	Gender	Race	Free/Reduced Lunch	IEP
Eric	12	M	B	N/A	N
Molly	13	F	W	F/R	N
Kate	13	F	W	N/A	Y
Keisha	12	F	B	F/R	N
Daniel	12	M	B	F/R	N
Emily	13	F	W	F/R	N
Amanda	12	F	B	F/R	N
Mark	12	M	B	F/R	N

The eight participants were diverse in ethnicity, gender, exposure to virtual reality and interests. The paragraphs below provide insight into each participant's personality as well as specific examples of his or her expressions, engagement, and explanations.

Eric is a very likable student. He admits that he does not like school and only truly enjoys his football period. He told me that he was not having the best of days but did want to still participate in the study. Later it was discovered that his father had been arrested the night before and he was taking it really hard. Eric has used a virtual reality device while playing a video game but has not taken a virtual reality field trip.

Molly is a mature young lady. She is very articulate and asks lots of questions on topics of which she is interested. Molly tells of the many places her family has visited over the years. She has used a virtual reality device for gaming purposes but has not taken a virtual field trip. She is very eager to participate.

Kate is very soft-spoken and gets along great with her peers. She enjoys school and participates in the band. She has not used a virtual reality device and is curious about how the device functions and what the field trip will look like.

Keisha is very social and loves to talk. She enjoys being a class helper and was eager to assist in the study. She participates in various athletic activities in school and enjoys learning through movement. She does not like a class when the teacher lectures the entire time. She has seen virtual reality devices on television commercials but has never used one.

Daniel is an outgoing and popular student. While most days he enjoys coming to school, he admits that there are days when he feels bored. He is athletic and really enjoys working outside and with technology. He has not taken a virtual reality field trip but was familiar with the Daydream device for gaming purposes.

Emily enjoys school. She loves all of her classes and teachers. She enjoys socializing with her peers and does not mind leading the group. She has not used a virtual reality device before and had lots of questions before getting started.

Amanda is a very smart young lady who likes school and making good grades. She does not like to be out front in a group but does a great job participating and blending in with group activities and participants. Amanda says that she loves to travel and was extremely excited when she received the flyer and invitation for this study. She has not used any virtual reality devices and really looks forward to trying this one.

Mark is a very quiet and somewhat withdrawn student who is currently being taken care of by his aunt. He spoke very little throughout the study but did display moments of visible enjoyment through his smiles and isolated comments. Mark has no prior experience with virtual reality or the use of virtual reality devices.

Category Discussion

Based on the observation protocol and the student interviews, three categories emerged from the data to address the research question: What happens to secondary students during a virtual reality field trip? The first two categories derived mainly from the observation protocol and sought to answer the following more specific questions: (1) Do the participants' terminology express a sense of immersion? (2) Do students explain their experiences as if they are actually there? (3) Do the students display any emotions during the virtual trip such as screaming and yelling? (4) Do students respond physically as if they are within the virtual environment? (5) Do they jump, duck, run, walk, to accommodate what they are viewing in the virtual world?

- Category one: *Expressions*, organizes the participants' verbal expressions to determine if they express a sense of immersion by speaking as if they are actually there.

- Category two: *Engagement* describes the evidence of physical interaction with the virtual environment including the display of any emotions during the virtual trip such as screaming and yelling or reactions such as jumping, ducking, running and walking. While both categories entail expressions and engagement, they differ in that category one focuses on the verbal interaction while category two describes the physical interaction.
- Category three: *Explanations* emerged from the student interview responses and collectively describes the information students were able to recall from their virtual field trip. This section answers the last specific research question: (1) Can students recall detailed information concerning the virtual tour?

Information gathered from these three categories ties into the theoretical framework, experiential learning, discussed in Chapter Three. According to the research of Kolb (2010) and Dewey (1897) experiential learning is beneficial to the enhancement of student learning through the connection of real-life practices. In the past, the majority of “real-life” connections in the K-12 setting have come through field trips (Tutwiler, Lin, & Chang, 2013, p. 351). “Learning opportunities that occur in the ‘real world,’ therefore, have the potential to encourage deeper, more meaningful learning experiences for students who engage in them...”(Soria & Weiner, 2013, p. 186). Experiential learning theory is not new to the education environment; however, with the recent paradigm shift of technology in education, researchers now consider non-traditional ways to include the concrete experiences needed for experiential learning. Virtual reality serves as that technological paradigm shift in this study. Participant experiences organized in each category will guide future discussions on whether or not VF can take the place of real field trips and still allow students to successfully engage in experiential learning.

Expressions in Virtual Field Trip

What follows will describe the participants' emotional expressions during the virtual reality field trip. Determining if students experienced immersion during the virtual field trip, the researcher used familiarization with the observation protocol responses to identify common verbal expressions. Bowman and McMahan (2007) define the goal of immersion into virtual reality environments as, "to let the user experience a computer-generated world as if it were real—producing a sense of presence, or "being there," in the user's mind" (p.36). The observation protocol allowed the research to document direct quotes from the students during the virtual field trip that, when analyzed, helped to determine if students were actually talking as if they were actually at the Pyramid of Giza and within the various excursions provided. During the burial chambers excursion, the students were placed in a virtual world located in a dark tunnel of a pyramid. The rails of a track or trail were visible as well as the light of what appeared to be an oncoming train in the distance. Molly was quick to shout out, "I am in a tunnel," in a very excited tone. Keisha was just as fast in responding, "I don't want to be in this train," as she did not like the darkness nor that feeling of being on what she thought was a train track in a tunnel. Table 5 lists quotes from each participant during their virtual field trip.

Observation Protocol Analysis and Student Quotes 5

Daniel:
<ul style="list-style-type: none">• I am in a tunnel• Ok, I'm here• I am in some kind of room
Amanda:
<ul style="list-style-type: none">• I see rocks and wood• I am outside of the pyramid• I am in the desert• I am inside the tunnel with the train• What's this right here?
Emily:
<ul style="list-style-type: none">• I see walls right here• I see the camel• I am on a Cliff
Eric:
<ul style="list-style-type: none">• Things seem close by me• I don't know what this is• There's a doorway here
Mark:
<ul style="list-style-type: none">• I'm in the inside• I'm in the desert• It's dark where I am
Keisha:
<ul style="list-style-type: none">• I don't want to be in this train• I am walking through the rocks• Here go a pyramid right here
Kate:
<ul style="list-style-type: none">• I am going downstairs in the pyramid
Molly:
<ul style="list-style-type: none">• I am in a desert• I see two pyramids They are big• I am walking on rocks

All of the participants spoke as if they were actually in there at the Giza Pyramids, speaking in the present tense. The researcher asked the participants questions during their field trip to help the students verbalize their experiences. The participants below provided detailed expressions of what they were seeing and feeling.

Emily: I see some kind of brick wall thing. Right here there are three big columns. There is a pile of rocks over here. I see these big trees. I don't even know what they are called. I am outside of the pyramid. I see all these different pyramids. Let me go in this dark one. I see the pyramids. Oh, crap. I am like in this big tunnel. I am stepping on something. I don't know what it's called. It is some kind of concrete stuff. No, it's wood. There is a door. There is a hideaway thing right here. I think the pyramid was built to bury those people.

Keisha: It's wood. I am outside and I see the sky. This looks like a big pile of dirt. There is a big hole near the ground. I see a door. Oh my god, it's a train. Oh, it's going nowhere. I see like a little railway. Oh, what's this right there? It's like a tunnel leading up to the lights. It looks like a whole bunch of insects crawling. Ok, I am walking besides the building. Oh, there is a camel. It's so nice.

Actions in Virtual Field Trip

During the virtual reality field trip, the researcher watched for any observable physical actions. Physical responses during virtual reality are considered examples of students demonstrating the “being there” part of immersion. Figure 5 shows the analysis of physical actions observed and documented using the observation protocol.

The following actions were observed:



8 responses

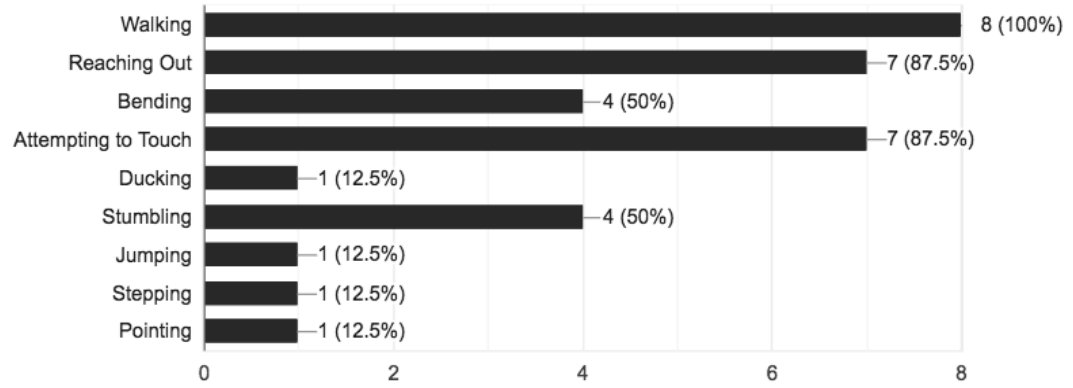


Figure 6. Observation Protocol Analysis of Physical Actions Observed During The Study

All of the participants moved about by walking during the virtual field trip. Each participant moved from his or her original location during the field trip. Eighty-seven percent of the participants reached out and attempted to touch things that they saw in the virtual environment. Half of the participants stumbled over “rubbish” as they explained and were seen bending throughout their virtual trip. One participant ducked as if he or she was walking underneath a low ceiling or dodging something. Another participant jumped and while attempting to step forward off of what he or she explained as a “cliff” on the pyramid.

Participants also showed several emotions during the virtual field trip. Eighty-seven percent of the participants displayed visible excitement and verbally used adjectives such as “wow”, “oh my goodness”, and “amazing” to describe their experiences during the virtual field trip. One participant was not as vocal. When asked why he was so quiet, he responded by saying, "I am just taking it all in." Although he did not shout out displays of excitement like his counterparts, his statement still led the researcher to believe that he felt a strong sense of positive emotions at what he viewed in the virtual environment. This particular participant along with one other made up 25% of participants who were somewhat reluctant at first. Each moved very slowly and said they were unsure of how to proceed in the virtual world. The excitement of 37.5% of the participants was shown through laughter. One participant yelled out when feeling as if she would step right off the cliff near the pyramid. All of the participants asked questions during the virtual field trip that pertained directly to what they saw and their thoughts about the excursion. Figure 6 displays the observation protocol analysis of emotions observed during the study.

The following actions were observed:



8 responses

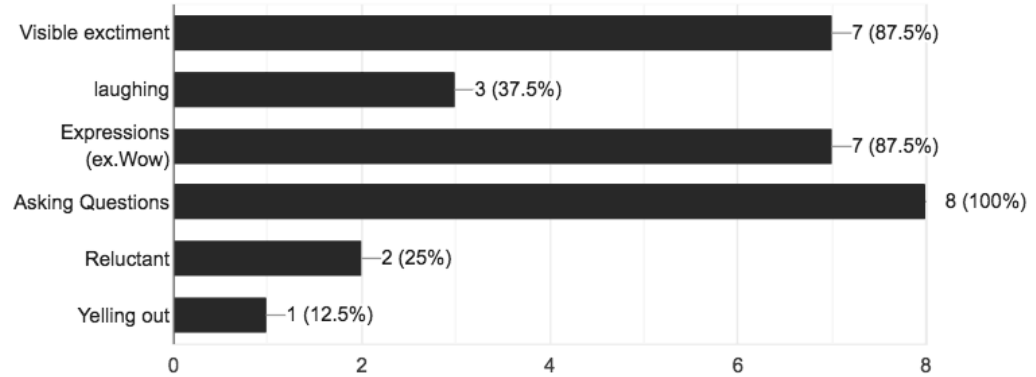


Figure 7. Observation Protocol Analysis of Emotions Observed During The Study

Explanations about Virtual Field Trip

Following the virtual field trips, students were interviewed using the Student Interview Questions found in Appendix F. Emily, Molly, and Keisha requested to do their interview together rather than an individually. This was allowed because there were no changes in the questions and everyone had the same opportunity to participate. Amanda and Eric also requested to do their interview together rather than an independently. The remaining participants completed their interviews individually. When asked about the last real field trip the participants could recall taking, only half of the participants could recall the trip their class took to see a play two months earlier at a nearby university campus. No one could really describe what the play was about. Two participants spoke about the long bus ride there.

When asked to share their thoughts about their experiences in the virtual reality field trip, participants responded in different ways that collectively amounted to the fact that they enjoyed the experience. Every participant said that the virtual field trip was “fun.” Keisha said, “It was fun. It had a lot of different places you could go. You could go inside the building. It felt so real.” Amanda added, “It’s like you in there for real.” When asked if the virtual field trip made them feel weird or different physically, all of the participants except Amanda responded no. Emily said, “ It didn’t make me dizzy but I felt like I wasn’t moving though.” Molly agreed.

Instruction Before Virtual Reality Field Trip

What follows is a narrative describing what happened during the classroom instruction prior to actually taking the virtual field trip. This section is discussed in the findings section and not in the implementation section of chapter III because the classroom instruction played a part in setting the stage (hook) for the virtual reality field trip. The results of the students’ virtual experience may have been different without the classroom lesson and engagement. The class

began with the researcher asking the students to locate Egypt on the map. Because this is a classroom lesson, we will refer to the researcher as the teacher throughout this section for clarity and possible replication. The teacher pulled up the map shown in Figure 7 on the classroom promethium board. Students were asked to tell anything they knew about Egypt and or the Egyptian pyramids. Molly said, “I know that Egypt is in Africa. I think the pyramids were built to keep the bodies of kings and queens.” Daniel added to the discussion by sharing his thoughts that pyramids housed mummies and entertained the class with his reference to the movie The Mummy. Amanda rounded out the discussion by saying that she remembered from their prior lesson in socials studies classes that “pyramids were shaped like a triangle.”

AFRICA



Figure 8. Map of Africa as shown on <http://www.amsterdamcg.nl/current-map-of-africa/as-class-yet-noticeably-attach-specifically-light-not-once-effect-provisions-wider-current-map-of-africa/>

The teacher then pulled up the map shown in Figure 8 and asked the participants to consider the location of Giza in relation to Cairo, Egypt's capital city, and the Nile River.



Figure 9. Map of Africa as shown on <https://www.tes.com/lessons/nwrC5oPhDt1yvww/ancient-egypt>

The teacher explained some important facts about the Egyptian Pyramids. The students learned that the pyramids were often constructed as tombs for the royal families. The teacher told the students that the Great Pyramid of Giza was the oldest and largest pyramid in Egypt. For many years, this pyramid was the largest structure in the world to ever be built by humans. Mark was amazed at how big the pyramid was and wanted to know "how the people were able to build it without the tools and equipment we have today." The teacher responded to the question by having the students to read the passage from the textbook explain how logs and rope were used to carry blocks when building the pyramids. The teacher explained to the class that the pyramids were often built with many chambers and passageways. This was done for many reasons, one being to ward off tomb robbers and thieves hunting for royal treasures. References were made to the picture shown in Figure 9. The students took turns asking questions and identifying things about the picture that stood out to them.

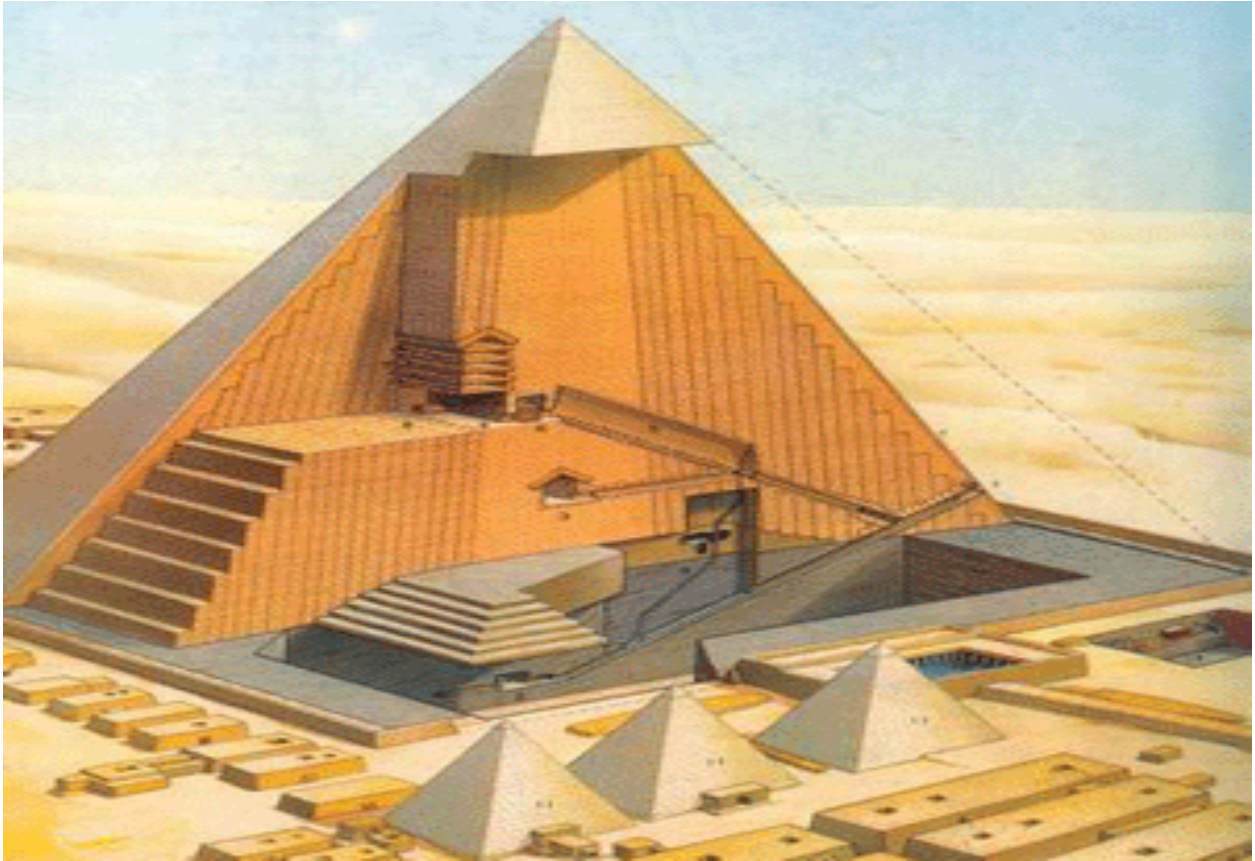


Figure 10. Map of Great Pyramid of Giza as shown on <https://www.pinterest.com/pin/558727897497489842/>

During the discussion of the Great Pyramid of Giza, all of the students were engaged and participating meaningfully in the conversation. The students' engagement was evident by the questions they asked, the responses they provided to the teacher's questions and their reactions to various information during the lesson. Some of the participants recalled the information they learned from their previous social studies classes. Following the discussion, the teacher then asked the participants if they would like to visit the pyramids. Mark said that he would be afraid to go into the pyramids. Amanda, Molly, and Emily agreed that they would really enjoy seeing the pyramids and even touring the inside. Kate, Keisha, and Daniel simply said yes. Eric didn't respond initially. When asked if he thought he would enjoy visiting the pyramids, he said, "I guess it would be cool." The teacher explained to the students that while it is not possible for her to physically take the students to tour the Egyptian Pyramids, she would take them on a virtual tour. Following a hands-on lesson on how to manipulate the virtual reality device, the students took the virtual field trip.

Findings from Virtual Field Trip

What follows is a narrative describing what happened during the virtual reality field trip. All of the participants were taken to a large, clear, grassy area in the front of the school for the virtual field trip. One at a time, the students were allowed to place the virtual headset on and wait for instructions to begin their field trip. The waiting participants were instructed to stand off to the side of the grassy area out of the way. As each student took a turn, he or she was asked to speak about what he or she was seeing and feeling out loud so that his or her thoughts could be known and documented.

The participants' engagement was clear and evident by their conversation and body language. The waiting students were laughing and asking questions; inquiring about what the student was seeing.

Codes and Clusters

The preceding information is provided to give insight on what happened during and after the study. What follows are the codes, clusters, and theme that emerged from the data collected during the study. Three clusters emerged for this study using the coding method described in the methodology section above.

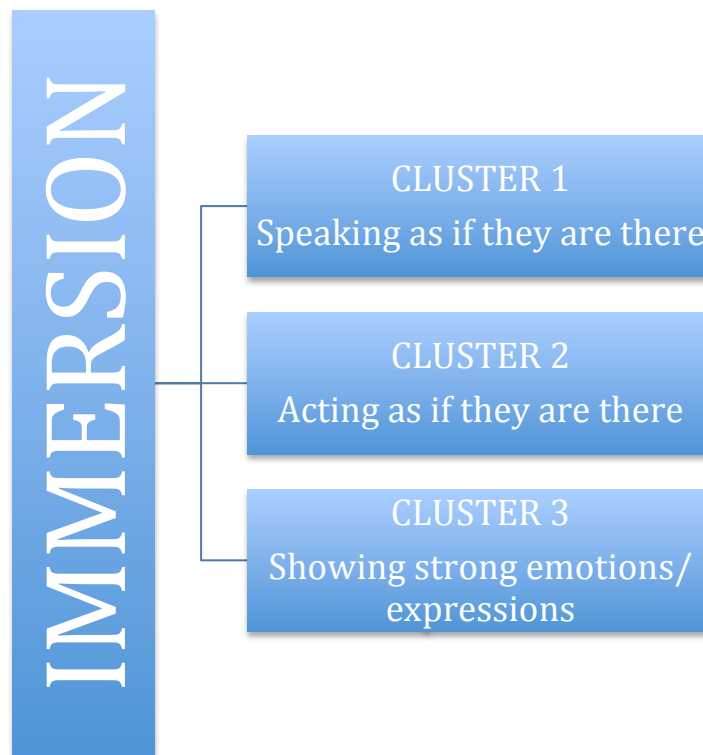


Figure 11. Summary of clusters and a theme

Speaking as if they are there is defined as the participants describing the virtual reality field trip as if they are actually at the pyramids. During the virtual field trip, students consistently spoke in present verb tense as if they were actually at the Pyramids of Giza. Emily spoke as if she was standing outside the pyramid by saying, “I am standing on lots of stones and bricks. The pyramid is right in front of me and it is huge.” Daniel also spoke as if he was there by saying, “I can see writing on the walls. I want to read what it says.” When describing where they were and what they were seeing, all of the participants spoke as if they were there. They used simple present tense verbs to explain where they were in the virtual world as if it was real. The participants were able to provide specific details about the pyramids during the virtual field trip. Eric was able to describe the inside of one of the pyramids, including the doorways and the visibility. Mark shared that the pyramid was “dark and gloomy”. The participants used several descriptive words and phrases to explain exactly what they were seeing.

During the time that students were interacting in the virtual world, the participants began to have an impromptu discussion about the experience. While one student was taking the virtual field trip, other students began to ask them, “where are you now?” “Can you open the door that you just mentioned?” “Are you afraid inside the tunnel?” This cooperative dialogue between the participants was not particularly apart of the study but did help the participating student verbalize more about the virtual reality experience.

Acting as if they are there is defined as students’ physical reactions to the VR field trip. During the observation protocol, participants were witnessed showing many physical reactions. When Keisha shared aloud that she saw a camel and a large pile of dirt outside the pyramid, at the exact same moment she was reaching out and raising her legs as if to touch the animal and step over the pile of dirt. While maneuvering through the pyramids, Daniel entered a room

through what he described as a “small door”, at the same time, he could be seen ducking and stepping aside to place himself in position to enter the room. Keisha and Molly stumbled slightly as they walked around during the virtual field trip. Amanda, Mark, and Keisha flinched when entering the pyramid’s tunnel, which displayed an oncoming headlight (assumed to be a train). Throughout the virtual field trips, students interacted with each other by doing things such as walking with the participating student and making certain the student was not walking in harms way. The peer interaction during the virtual field trip was encouraging to watch.

Showing strong emotions/expressions is defined as students’ affective response to the VR field trip. This cluster differs from the first two in that “speaking as if they are there” and “acting as if they are there” focuses on what the participants did to react during the virtual field trip. “Showing strong emotions/expressions” focuses on how and to what extent the participants reacted that would represent how they felt at the time. The participants used interjections that expressed their excitement with words such as ‘Wow, Oh, and My Goodness.’ Emily said, “Oh, crap! I am like in this big tunnel.” Amanda screamed when she first entered the tunnel in one of the pyramids. There were several participants who shouted-out because of something they were encountering in the virtual world. Listening to the tone of their voice, it was evident that the participants were visibly eager and enthused about taking the virtual reality field trip. Table 6 shows a summary of the three clusters with defined codes. When considering the big-picture that the combined clusters show, the theme became apparent.

Table 6
Summary of codes with definitions 6

<i>Speaking as if they are there</i>	<i>Acting as if they are there</i>	<i>Showing strong emotions/expression</i>
Verb Tense: tells when the person did something that is currently happening	Reaching out: moving hands in an attempt to touch	Interjection: an expression of excitement with words such as 'Wow, Oh, and Ouch'
Describing Place: using district details to describe a specific place	Ducking: lowering the body in an attempt to avoid an object	Shouting Out: Talking abruptly in a very loud voice
Providing Details: the ability to tell specific things about what they see	Stumbling: tripping while walking but not falling to the ground	Tone: speaking with distinct pitch
Cooperative Dialogue: conversation in groups about the lesson or activity taught	Flinching: reacting instinctively to something seen or heard	Excitement: visible enthusiasm and eagerness
	Peer Interaction: participating or becoming involved in the activity	Screaming: loud, high-pitched cry

Immersion

Emerging from the information gathered through the three clusters is one theme that explains what students' experienced during the virtual reality field trip. The information in table 6 shows a summary of clusters and a theme. The emergent theme of the data to answer the question "What is the lived experience of secondary students during a virtual reality field trip?" is immersion, which consists of 3 required components: Speaking as if they are there, Acting as if they are there, and Showing strong emotions/expressions.

Studying the phenomena of using virtual reality field trips in the classroom provided evidence that students can "experience immersion." Through verbal, physical, and emotional reactions during the VR field trips, students felt a sense of place within the virtual world. Students were able to be in the moment. This is important when exploring the realms of learning that VR field trips could have in the classroom. If students are able to "be in the moment" within the virtual environment, there can be possibilities of students gaining the same level of engagement and knowledge learned from taking a real field trip.

The study involved students with various personalities, learning styles and academic abilities. One student had an Individuated Education Plan (IEP). While the teacher had to make accommodations for him during the lesson, he did not require any additional help during the virtual reality field trip. He quickly learned how to manipulate the device and was able to verbalize his experience during the field trip. The majority of the participants said they like school and they participate in class. All of the participants said they enjoyed class when they were actually doing something such as hands-on activities.

Regardless of the instructional need for any student, virtual reality field trips can be individualized to meet the academic needs. All students were able to participant in the virtual

field trip and engage in the virtual world. Even participant 2, who admitted that he really does not like school, found visible enjoyment in taking the virtual reality field trip. Based on the evidence found in the observation protocol and the student interview, virtual reality field trips can "individualize learning" and provide a meaningful experience for all students.

Power of Immersion

One facet of this study came from Eric. Within the study emerged a situation that suggests immersion might have power to promote resilience or grit. When interviewed by Perkins-Gough (2013), Dr. Angela Lee Duckworth said that resilience could be defined as “kids who come from at-risk environments who thrive nevertheless” (p. 14). Dr. Duckworth went on to say that “grit is related because part of what it means to be gritty is to be resilient in the face of failure or adversity” (Perkins-Gough, 2013, p. 14). Below is a brief description surrounding Eric’s experience the day of the virtual field trip. He showed up to school the day of the study after having a traumatic experience that morning involving his parent.

Upon arrival, the principal suggested that he was not in a great mood. Eric was disruptive in class that day and was somewhat disrespectful to his teachers. Today was one of those days that he simply did not want to be at school. Although the principal insisted that I should choose another participant, I wanted to give Eric an opportunity to participate.

Once we began the lesson in the classroom, Eric began to perk up. He started asking questions and his curiosity about virtual reality was evident. He wanted to look at the device and touch the controls. Eric soon began volunteering to answer questions and participate during the lesson. He wanted to know how the videos were done to create a virtual field trip. He asked about other places he could go with a virtual device. Eric wanted to know where he could get a Daydream device and would he be able to use it at home. When he took his virtual field trip, the

excitement through his facial expressions and conversation was contagious. If only for a short time, he was able to immerse himself in the virtual environment and escape the terrible things he had witnessed just a few hours prior. Eric’s experience demonstrates fully the “Power of Immersion.”

Research can be found to support the reality that for some students, school is a safe place from the traumatic things they experience at home (Ciuffetelli Parker & Craig, 2017; Mabie, 2003; Kurtz, Gaudin, Wodarski, & Howing, 1993). What if immersion in a virtual reality field trip could become a coping mechanism to help students escape, even if briefly, the terrible things they experience outside of the classroom? What if, for a brief moment, the “Power of Immersion” helped Eric transfer some positive energy where he once felt anger and aggression (according to his principal)? While Eric is only one part to this study and one experience, I do believe that his experience is enough to open the door to the conversation of virtual reality field trips and the power of immersion.

Considering the amount of evidence from the observation protocol and the participants’ abilities to recall their experience during the interview process, a conclusion can be made that students can experience “immersion” when taking a virtual reality field trip.

Conclusion

In conclusion, this chapter explained the data gathered from the class lesson, observation protocol, and student interviews. Based on information pulled from these three sections of the study, three categories were identified. Each category elaborated, using the words and actions from the participants, to show the many ways the participants engaged verbally, physically and emotionally with the virtual reality field trip. Chapter Five will provide a final discussion on the research question: What happens to secondary students during a virtual reality field trip? The

chapter will conclude with recommendations to further this study using a quantitative research method.

CHAPTER V: DISCUSSION, LIMITATIONS, IMPLICATIONS

Discussion

The purpose of this phenomenological study was to explore the lived experiences of a virtual reality field trip for seventh-grade students. The study examined how students respond emotionally, physically, and cognitively to the use of virtual reality field trips within the secondary social studies classroom.

After teaching a one-day lesson on The Giza Pyramids of Egypt, the researcher observed the participants taking a virtual field trip of two pyramids and interviewed each following the virtual experience. The information learned regarding what students experience during the virtual field trip could lead to expanding the use of virtual technology in the geography classroom.

The goal of phenomenology research in this study was to provide detailed descriptions of a virtual reality field trip, relying solely on the first-hand accounts of the participants who experience the phenomena. This research design revealed answers to questions about what the participants experienced with intent to provide meaning and understanding of the total VR field trip experience as it relates to human life. Phenomenology allows the researcher to discover meaning and whatever essential quality the phenomenon may have according to the lived experiences of the participants.

Chapter five will present a discussion on the findings, limitations, and implications for the study. One section will also discuss possibilities for expanding this qualitative study to a quantitative study with a direct focus on the study of geography learning. Following the analysis of the observation protocol and the student interviews, the study produced one clear finding: Students can experience immersion when taking a virtual reality field trip and are able to retain and recall detailed information from the virtual trip. While taking virtual field trips, the participants spoke as if they were there. They made references to objects, surroundings, and the actual pyramids as if they were standing among the Egyptian pyramids.

The participants also responded physically as if they were fully immersed in the virtual environment. The students jumped, ducked, pointed, and reached out while engaging in the virtual field trip. The data gathered from the observation protocol supports the finding of the participants being fully immersed in the virtual world.

During the student interview, the participants were able to remember many details from the virtual field trip. Each participant was able to speak about his or her trip in a meaningful way while recalling specific events that would aid in the teaching of place in geography class.

Immersion can create many benefits to teaching geography through special understanding. Bowman and McMhan (2007) suggest:

“Immersive VR provides many depth cues that other technologies do not; in particular, stereo images and head tracking let users exercise their built-in capacity for understanding stereopsis and motion parallax. It should not be surprising, then, that a higher level of immersion can lead to greater spatial understanding...” (p. 39).

If immersion can lead to spatial understandings, then the use of virtual reality in the geography classroom is worth including into the curriculum.

Limitations

Limitations of this study evolved from the generalizability of the results because they cannot be generalized to another 7th-grade classroom or research environment. The study was designed to explore the lived experience of secondary students during virtual reality field trips. The personalization of the study confines the claims that can be made about students' overall VR experience when the participant and the virtual environment change.

Implications

When implementing virtual reality in the classroom, teachers can experience some limitations, the strongest of which will be the availability of technological supports such as VR devices, wireless Internet, and time. For this study, one Google Daydream device was used between the eight participants. The virtual trips seemed a little rushed due to the time constraints of the class period. The classes were scheduled for 55 minutes. Some students wanted to go first so that they would still be able to make it to their afternoon athletic period. Ideally, a teacher would need multiple devices in order to allow the average class of 22 students an opportunity to take the virtual field trip without being rushed or taking a long time to teach one lesson.

Not only does purchasing multiple virtual devices cost money that some school districts may not have, but also using several devices at once will require access to the wireless Internet with sufficient bandwidth to support the technology. This is a limitation for many rural schools in the state of Mississippi where high-speed Internet is not available.

Along with the availability of technological supports, the prioritization of major classes in regards to social studies limits a study such as this. Many schools continue to focus on core subjects such as English language arts and math. Social studies often get overshadowed or overlooked until high school when students are required to take the state U.S. History

assessment. When social studies is not a priority in a school, implementing instruction such as virtual reality field trips can become tedious for lack of support.

The findings of this phenomenology have implications for current and future social studies teachers. Because students in this study experienced immersion, social studies teachers (specifically geography teachers) have the ability to expand lessons in virtual reality to:

1. Incorporate multiple learning styles into the geography lessons to increase engagement for visual, auditory, and kinesthetic learners.
2. Allow students an opportunity to expand their sense of place through virtual reality.
3. Encourage instructional collaboration across curriculums within the secondary grades.

Overall, the most important implication for teachers is that classroom instruction and student learning can improve using virtual reality field trips.

Furthering the Study

While the current study provided insight into what secondary students experience during a virtual reality field trip, the comparison to real life experience still requires further study. Expanding the focus of geography teaching beyond simply introducing students to a place with hopes that they may someday experience it for themselves can serve as a bridge to incorporate virtual reality field trips into the curriculum.

By examining virtual reality versus real field trips, using quantitative approaches and engaging students as active participants, educators can better understand the role virtual reality field trips can have on secondary students' geographic knowledge and skills. Administrators and teachers can utilize this new method of teaching geography to increase students' awareness of the world around them; thus creating more informed citizens of tomorrow.

For a proposed quantitative study, an experimental study could be conducted to test the theory of experiential learning by comparing concrete geography knowledge learned through real-world field trips and virtual field trips among secondary students using Google Daydream. Comparing a class of students who took the virtual field trip to a class who only had classroom instruction about a particular place could show a difference, if any, in student engagement and understanding.

Considering the move toward teaching geography through interactive technology, virtual software, lecture, and Google Daydream virtual field trip applications, the study would seek to answer the following question: Can geographic knowledge and thinking skills of a particular place be developed without physically experiencing life in that place? An early hypothesis could be that secondary students who participate in virtual reality field trips will have higher achievement scores on concrete geographic knowledge skills than students who participate in real-world field trips. Both the treatment and control groups will benefit from this study. Once the study is completed, the students who only took the virtual field trip will also take the real field trips.

Summary

In most American schools, educators and administrators work tirelessly to close academic gaps, working hard to create rigorous curricula and to demonstrate that social studies education is an essential ingredient for success in life. Although effective teachers are constantly in pursuit of the best strategy to teach content within the classroom, the use of virtual reality in the classroom to increase student engagement and improve teaching and learning is relatively new.

The topic of virtual reality field trips is important because many times off-campus activities are cut from a school's budget as a way of saving money. Using the findings of the

study, students can experience immersion during a virtual reality field trip. If this holds true, then the possibilities of places students could virtually travel are endless.

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LIST OF APPENDICES

APPENDIX A: IRB APPROVAL LETTERS

Date:

Title of Study: Virtual Reality Field Trips

Principal Investigator: Melissa Thomas

To the University of Mississippi IRB,

As the superintendent of the Nettleton School District, I am aware of the research procedures for the study. I give permission for the study to take place at 179 Mullen Ave, Nettleton, Mississippi and for the researcher to have contact with students at this site (as described in the Permission to Conduct the Research). My permission is contingent upon successful IRB approval.

Brian Ternigan
Printed Name of School Superintendent

Brian Ternigan
Signature of School Superintendent

10-18-19
Date

Date:

Title of Study: Virtual Reality Field Trips

Principal Investigator: Melissa Thomas

To the University of Mississippi IRB,

As the principal of the Nettleton Junior High School, I am aware of the research procedures for the study. I give permission for the study to take place at 179 Mullen Ave, Nettleton, Mississippi and for the researcher to have contact with students at this site (as described in the Permission to Conduct the Research). My permission is contingent upon the Nettleton School District Board of Trustees permission and IRB approval.

Betsy Grubbs

Printed Name of School Principal

Betsy Grubbs

Signature of School Principal

10/18/18

Date

**APPENDIX B: CONSENT TO PARTICIPATE IN THE STUDY AND APPROVAL
LETTER**



**The University of Mississippi
Institutional Review Board**

Protocol # 19-037

Approval Date 11-5-18

Expiration date 11-4-19

Signature *Miranda Cole*

**MANDATORY CONSENT FORM
– PARENTAL PERMISSION FOR CHILD PARTICIPATION**

Consent for Your Child to Participate in Research

Study Title: VIRTUALLY THERE: A PHENOMENOLOGICAL STUDY OF SECONDARY STUDENTS AND THEIR ENGAGEMENT WITH VIRTUAL REALITY FIELD TRIPS

Investigator

Melissa S. Thomas
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University of Mississippi
University, MS 38677
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Faculty Sponsor

Ellen Foster, Ph.D.
Department of Teacher Education
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The purpose of this study

The purpose of the proposed phenomenological study is to explore the lived experiences of a virtual reality field trip for seventh-grade students. The study seeks to examine how students respond emotionally, physically, and cognitively to the use of virtual reality field trips within the secondary social studies classroom.

What your child will do for this study

As your student returns the signed consent and release forms, he or she will be assigned a number based on the order in which they submit his or her forms. Then, I will select students using Microsoft excel random sampling software. The eight selected numbers (students) will be asked to participate in the study.

For the first day, your child will spend 45 minutes listening to a geography unit on the Egyptian Pyramids. The lesson plan is included for your information. Day two will require that your child take a virtual field trip. He or she will go on a virtual expedition to the pyramids at Giza and learn its geographic characteristics about when and where they were built.

While your child is participating on the virtual field trip, I will observe using the observation tool to determine any identifiable social and physical engagements of the participant with the virtual world. This is an interactive tool using Google Forms to enter and collect data during the observation. A video recording will be completed for each virtual field trip. Your child will be videoed taking the virtual field trip using a Sony, handheld video/audio recorder. Using the same Observation Protocol form, I will seek to identify social and physical engagements of the participants.

After your child has experienced the VR field trip, he or she will be interviewed individually to gain insight into his or her thoughts and feelings during the virtual field trip. The interviews will be conducted in the teacher resource room located on the main hallway in the main building within five days of the VR field trip. Forty-five minutes will be allocated for each interview. A formally structured instrument will be used to conduct the interviews (Student Interview Questions). I am happy to provide you with a copy of the interview questions. These open-ended questions will be asked to help provide talking points for the students without compromising the originality of the students' responses to taking the virtual field trip. Each interview will be recorded using a hand-held Sony recording device.

The interview will conclude your child's participation in the study.

Videotaping / Audiotaping

Your child will be videotaped while he or she participates in the virtual reality field trip so that I can more accurately observe their interaction and engagement.

Your child will be audiotaped during the interview to make sure I accurately gather their responses as they intend for it to be said.

Time required for this study

This study will take about 45 minutes for the 1st day class instruction, 1 hour for the virtual field trip, and 45 minutes for the 2nd day field trip and interview – for a total of 2 hours and 30 minutes.

Possible risks from participation

There are no reasonably foreseeable (or expected) risks. There may be unknown risks.

Benefits from participation

There are not expected benefits to this study at this time.

Incentives

There are no incentives for participation to this study at this time.

Confidentiality

I will not be collecting or retaining any information about your child's identity.

The records of this study will be kept confidential. Research records will be kept in a locked file, and all electronic information will be coded and secured using a password-protected file. I will not include any information in any report I may publish that would make it possible to identify you child.

A signed release will allow your child to be videoed while taking the virtual field trip, however, your child's identify will still be protected.

Your child's identity will be disclosed in the material that is published. However, you and your child will be given the opportunity to review and approve any material that is published about your child.

Confidentiality and Use of Video/Audio Tapes

- Your child will be videotaped while he or she participates in the virtual reality field trip so that I can more accurately observe their interaction and engagement.
 - Your child will be audiotaped during the interview to make sure I accurately gather their responses as they intend for it to be said.
1. Only the lead researcher will have access to video/audio recording.
 2. All recordings will be kept indefinitely and stored in a locked file cabinet in a locked office

Right to Withdraw

You do not have to volunteer for this study, your child does not have to participate, and there is no penalty if either of you refuses. If you and your child start the study and either one of you decides that you do not want to finish, just tell the researcher. This can be done by phone call (662)832-0289 or email (msjones1@go.olemiss.edu). Whether or not you and your child participate or withdraw will not affect your current or future relationship with the school, or with the University, and it will not cause you to lose any benefits to which you are entitled.

The researchers may stop your child's participation in the study without your consent and for any reason, such as protecting your safety and your child's safety or protecting the integrity of the research data.

Compensation for Illness or Injury

I understand that I am not waiving any legal rights or releasing the institution or their agents from liability from negligence. I understand that in the event of physical injury resulting from the research procedures, The University of Mississippi does not have funds budgeted for compensation for 1) lost wages, 2) medical treatment, or 3) reimbursement for such injuries. The University will help, however, obtain medical attention which my child may require while involved in the study by securing transportation to the nearest medical facility.

IRB Approval

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions or concerns regarding your rights or your child's rights as a research participant, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, then decide if you want your child to be in the study or not.

Statement of Consent

I have read the above information. I have been given an unsigned copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to allow my child to participate.

Furthermore, I also affirm that the experimenter explained the study to me and told me about the study's risks as well as my right and my child's right to refuse to participate and to withdraw, and that I am the parent/legal guardian of the child listed below.

Signature

Date

Printed name of Parent/Legal Guardian

Printed name of Child

**NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED**



Office of Research and Sponsored Programs

11/5/2018

Ms. Melissa Thomas
Teacher Education

Dr. Foster
Teacher Education

IRB Protocol #: 19-037
Title of Study: VIRTUALLY THERE: A PHENOMENOLOGICAL STUDY OF SECONDARY STUDENTS AND THEIR ENGAGEMENT WITH VIRTUAL REALITY FIELD TRIPS
Approval Date: 11-5-18
Expiration Date: 11-4-19

Dear Ms. Thomas:

This is to inform you that your application to conduct research with human participants has been reviewed by the Institutional Review Board (IRB) at The University of Mississippi and approved **as Expedited under 45 CFR 46.110, category 7 and 46.404 Research with children**

Research investigators must protect the rights and welfare of human research participants and comply with all applicable provisions of The University of Mississippi's ~~Federalwide Assurance~~ 00008602. Your obligations, by law and by University policy, include:

- Research must be conducted exactly as specified in the protocol that was approved by the IRB.
- Changes to the protocol or its related consent document must be approved by the IRB prior to implementation except where necessary to eliminate apparent immediate hazards to participants.
- **Only the approved, stamped consent form may be used throughout the duration of this research unless otherwise approved by the IRB.**
- A copy of the IRB-approved informed consent document must be provided to each participant at the time of consent, unless the IRB has specifically waived this requirement.
- Adverse events and/or any other unanticipated problems involving risks to participants or others must be reported promptly to the IRB.
- Signed consent documents and other records related to the research must be retained in a secure location for at least three years after completion of the research.
- Submission and approval of the *Progress Report* must occur before continuing your study beyond the expiration date above.
- The IRB protocol number and the study title should be included in any electronic or written correspondence.
- If research is to be conducted during class, the PI must email the instructor and ask if they wish to see the protocol materials (surveys, interview questions, etc) prior to research beginning.

If you have any questions, please feel free to contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Sincerely,

Miranda Core
Research Compliance Specialist, Research Integrity and Compliance

**APPENDIX C: VIRTUAL REALITY FIELD TRIP LESSON PLAN: GIZA
PYRAMIDS OF EGYPT**

LESSON TITLE: The Giza Pyramids of Egypt

In this lesson, the students will be introduced to the Giza Pyramids of Egypt. After which the students will go on an expedition to the pyramids at Giza.

LESSON BACKGROUND Day 1

MS College and Career-Readiness Standards for the Social Studies (2018)
Strand- World History

7.1. Demonstrate and understanding of the unique features of ancient Egyptian culture.

Main question:

When and where were the pyramids built?

Guiding questions:

1. When were the pyramids built?
2. Where were they built?
3. What shape are they?
4. What were the main reasons for building the pyramids?

Vocabulary: Giza, limestone, cardinal directions, tomb, burial chamber

Grouping: small group

EXPEDITION

Selected expedition: **Sites in Virtual Reality: Giza Pyramids**

Selected scenes and points of interest:

- **Pyramids at Giza:** Pyramid of Menkaure; Pyramid of Khufu; Small Pyramids; Pyramid of Khafre.

Directions for the expedition:

- Place the smart phone in the VR device
- Connect both devices to wireless internet and turn on the Bluetooth setting
- Select the application "Sites in VR"
- Click on the tab "Ancient"

- Click on the tab “The Pyramids”
- Choose GIZA Pyramids of Giza
- Allow the students to take the VR field trip, assisting with the device when needed

Additional resources:

- Virtual Reality Device
- Smart Phone
- Sites in VR Application
- Squared paper
- Hand-Held Video Camera

BEFORE THE EXPEDITION (Prior to VR Field Trip)

Student activity: The students locate Egypt on a map and consider the location of Giza in relation to Cairo, Egypt’s capital city, and the River Nile.

Ask the students to use an atlas or Google Maps to locate Egypt. Point out Giza, and explain that it will be useful in their study of Egypt to consider its proximity to Cairo, Egypt's capital city, and also to the River Nile.

Ask the class to estimate how long ago the Great Pyramids were built in Egypt. Tell them that the date is around 2500 BC.

Ask the class to calculate how long ago the pyramids were built.
Around 4500 years ago (it is not appropriate to be more precise here).

Show students the Virtual Reality Device, pointing out all of the features for using the device.

APPENDIX D: OBSERVATION PROTOCOL

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

*** Required**

Student Number

Your answer

Date

Date

mm/dd/yyyy

Time

Time

: AM ▾

Provide general description of student learning through vocabulary, language, and rhetoric used *

Your answer

The following actions were observed:

- Present Tense
- Verb Tense
- Speaking as if they are actually there

Description of Students' Physical Behavior and Interactions with the VR Environment

Your answer

The following actions were observed: *

- Walking
- Reaching Out
- Bending
- Attempting to Touch
- Ducking
- Stumbling
- Other:

Description of Students' Social Behavior and Interactions with the VR Environment

Your answer

The following actions were observed:

- Asking questions about things they see
- Talking off topic
- Manipulating the device
- Other:

Impressions of the extent of interest and enthusiasm shown by the students

Your answer

The following actions were observed:

- Visible excitement
- laughing
- Expressions (ex. Wow)
- Asking Questions
- Reluctant
- Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

Your answer

SUBMIT

Never submit passwords through Google Forms.

APPENDIX E: OBSERVATION PROTOCOL RESPONSES

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 5

Date

MM DD YYYY

12 / 11 / 2018

Time

Time

12 : 30 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I see big trees

I see Columns

There's One

Oh Crap

I am in a tunnel

There's a big pile of rubbish right here

Ok, I'm here

- Present Tense
- Verb Tense
- Speaking as if they are actually there

Description of Students' Physical Behavior and Interactions with the VR Environment

Turning around
Looking up
Walking forward
Reaching out as if to touch
See Men with Skirts

The following actions were observed: *

- Walking
- Reaching Out
- Bending
- Attempting to Touch
- Ducking
- Stumbling
- Other: Jumping

Description of Students' Social Behavior and Interactions with the VR Environment

Let me click on one
Able to find control and move from one scene to another
Found a hideaway in the pyramid
I'm walking but it will not let me walk anywhere else on the screen

Asking questions about things they see

Talking off topic

Manipulating the device

Other: _____

Impressions of the extent of interest and enthusiasm shown by the students

Oh Crap

Wait

Oh there's a door

Laughing

Oh there's a camel

Oh my Gosh!

The following actions were observed:

Visible excitement

laughing

Expressions (ex. Wow)

Asking Questions

Reluctant

Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

Participant 5 was very engaged in the virtual field trip. The student spoke with lots of enthusiasm and amazement as she worked her way through the Giza pyramid.

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 2

Date

MM DD YYYY

12 / 11 / 2018

Time

Time

01 : 00 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I see rocks

I see everything

Things seem close by me

Rocks this way too

I see umm, I don't know what this is

I see some more bricks

It must take them a long time to build these without machines

I see drawings of people on the wall

There's a doorway here

- Present Tense
- Verb Tense
- Speaking as if they are actually there

Description of Students' Physical Behavior and Interactions with the VR Environment

Walking
Turning to the left and right
Moving in the direction of what he sees
Doesn't really show me walking towards it though
Try's to step on the rubbish

The following actions were observed: *

- Walking
- Reaching Out
- Bending
- Attempting to Touch
- Ducking
- Stumbling
- Other: _____

Description of Students' Social Behavior and Interactions with the VR Environment

He was able to manipulate controls

Asking questions about things they see

Talking off topic

Manipulating the device

Other: Very talkative about the device

Impressions of the extent of interest and enthusiasm shown by the students

Oh!!

Man, what is that

This is cool

The following actions were observed:

Visible excitement

laughing

Expressions (ex. Wow)

Asking Questions

Reluctant

Other:

General Comments: Please take note of important quotes or ideas that came out during the session

This participant was very interested in the device itself. He asked lots of questions about why it doesn't show him moving on the screen. He thought the drawings on the wall were very cool.

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 4

Date

MM / DD / YYYY

12 / 11 / 2018

Time

Time

03 : 00 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I am in a desert
I see two pyramids
They are big
I am walking on rocks

The following actions were observed:

- Present Tense
- Verb Tense
- Speaking as if they are actually there

Environment

The student moved around easily

Wanted to know why he didn't see himself walking in the game

The following actions were observed: *

- Walking
- Reaching Out
- Bending
- Attempting to Touch
- Ducking
- Stumbling
- Other: _____

Description of Students' Social Behavior and Interactions with the VR Environment

The following actions were observed:

- Asking questions about things they see
- Talking off topic
- Manipulating the device
- Other: _____

students

Wow

Oh man

This is cool

Wow

The following actions were observed:

Visible excitement

laughing

Expressions (ex. Wow)

Asking Questions

Reluctant

Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

This form was created inside of University of Mississippi.

Google Forms

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 14

Date

MM / DD / YYYY

12 / 12 / 2018

Time

Time

01 : 00 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I see rocks and wood

I am outside of the pyramid

I see a big pile of dirt

I am in the desert

I am inside the tunnel with the train

I see a railway

What's this right here?

Present Tense

Verb Tense

Speaking as if they are actually there

Description of Students' Physical Behavior and Interactions with the VR Environment

Oh It's hole here

Can I step in it?

Student made circles

Walked around

Looked up and down

The following actions were observed: *

Walking

Reaching Out

Bending

Attempting to Touch

Ducking

Stumbling

Other: Stepping

Description of Students' Social Behavior and Interactions with the VR Environment

Able to manipulate the device

Able to move from one VR Site to another

I found the control dot

How do I click on it

Asking questions about things they see

Talking off topic

Manipulating the device

Other: _____

Impressions of the extent of interest and enthusiasm shown by the students

Ooooo

Wait a minute

Oh my _____

The following actions were observed:

Visible excitement

laughing

Expressions (ex. Wow)

Asking Questions

Reluctant

Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

The student was a little off balanced and moved a lot during the VR trip.

She seemed as if she was trying to step over or jump over the things she was seeing. She was engaged and asked lots of questions about what she was seeing. _____

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 12

Date

MM / DD / YYYY

12 / 12 / 2018

Time

Time

01 : 30 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I see walls right here

I see the camel

I am on a Cliff

The following actions were observed:

- Present Tense
- Verb Tense
- Speaking as if they are actually there

Environment

Looking to the left and right

Turning in circles

Walking

The following actions were observed: *

Walking

Reaching Out

Bending

Attempting to Touch

Ducking

Stumbling

Other: _____

Description of Students' Social Behavior and Interactions with the VR Environment

Student was able to move around

The following actions were observed:

Asking questions about things they see

Talking off topic

Manipulating the device

Other: _____

students

Oh my! I am on a Cliff

This is cool

The following actions were observed:

- Visible excitement
- laughing
- Expressions (ex. Wow)
- Asking Questions
- Reluctant
- Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

Student seemed a little unsure about moving around. The student moved slowly but started to warm up as she continued.

This form was created inside of University of Mississippi.

Google Forms

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 16

Date

MM / DD / YYYY

12 / 12 / 2018

Time

Time

02 : 00 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I see drawings

I'm in the inside

I'm in the desert

He spoke about it being dark where he was

The following actions were observed:

Present Tense

Verb Tense

Speaking as if they are actually there

Environment

Looking all around

Very reluctant to move around

The following actions were observed: *

- Walking
- Reaching Out
- Bending
- Attempting to Touch
- Ducking
- Stumbling
- Other: Pointing

Description of Students' Social Behavior and Interactions with the VR Environment

He was very quiet but seems interested in what he was seeing

He was able to manipulate the device

The following actions were observed:

- Asking questions about things they see
- Talking off topic
- Manipulating the device
- Other:

students

Not a lot of enthusiasm

Very quiet and laid back

The following actions were observed:

Visible excitement

laughing

Expressions (ex. Wow)

Asking Questions

Reluctant

Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

He said it made him feel a little weird to move

This form was created inside of University of Mississippi.

Google Forms

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 8

Date

MM DD YYYY

12 / 12 / 2018

Time

Time

02 : 30 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I don't want to be in this train
She was in a tunnel
I am walking through the rocks
Here go a pyramid right here
Am I walking

The following actions were observed:

- Present Tense
- Verb Tense
- Speaking as if they are actually there

Environment

Student was asking

Turning

Jumping

The following actions were observed: *

- Walking
- Reaching Out
- Bending
- Attempting to Touch
- Ducking
- Stumbling
- Other:

Description of Students' Social Behavior and Interactions with the VR Environment

Wait how do I go

The following actions were observed:

- Asking questions about things they see
- Talking off topic
- Manipulating the device
- Other: Screaming

students

Ooooo

Wow

Wait

The following actions were observed:

- Visible excitement
- laughing
- Expressions (ex. Wow)
- Asking Questions
- Reluctant
- Other: Yelling out

General Comments: Please take note of important quotes or ideas that came out during the session

Student was visibly excited
She was laughing and wanted to visit several sites
She showed the most excitement and interest

This form was created inside of University of Mississippi.

Google Forms

Observation Protocol

The observation tool will be used to determine any identifiable social and physical engagements of the participant with the virtual world

Student Number

Participant 7

Date

MM / DD / YYYY

12 / 12 / 2018

Time

Time

03 : 00 PM

Provide general description of student learning through vocabulary, language, and rhetoric used *

I am going down stairs in the pyramid

I see sand

I see a frame of a boat

The boat has like a box

The following actions were observed:

Present Tense

Verb Tense

Speaking as if they are actually there

Environment

Walking

Looking from side to side

Reaching out towards what she see

The following actions were observed: *

Walking

Reaching Out

Bending

Attempting to Touch

Ducking

Stumbling

Other: _____

Description of Students' Social Behavior and Interactions with the VR Environment

It's not letting me move

I don't feel like I am moving

Knew how to load the additional sites

The following actions were observed:

Asking questions about things they see

Talking off topic

Manipulating the device

Other: _____

students

Student seemed very interested in what she was seeing
She asked lots of questions about the pyramids and the inside

The following actions were observed:

- Visible excitement
- laughing
- Expressions (ex. Wow)
- Asking Questions
- Reluctant
- Other: _____

General Comments: Please take note of important quotes or ideas that came out during the session

Very engaged and very excited
Wanted to visit other places

This form was created inside of University of Mississippi.

Google Forms

APPENDIX F: STUDENT INTERVIEW QUESTIONS

STUDENT INTERVIEW QUESTIONS

These are the guiding interview questions following the student's engagement in the virtual reality field trip. Considering the nature of phenomenological research, these questions are simply listed as a guide for the open discussion. Therefore, not all questions on this list may be asked and each individual participant may add other questions depending on the direction of the discussion.

- Can you recall a previous field trip you've taken at school? What was it like? Do you remember anything specifically about the trip?
- Have you ever taken a virtual reality field trip before? If so, what was it like? How did it compare to this one?
- Can you describe how you felt when you first entered the virtual environment? Did it make you feel anything physically?
- What did you see? Were there things that startled or scared you?
- Did the environment seem realistic?
- Did you find it easy or difficult to concentrate?
- What are some of the things you learned from the Virtual Field trip?
- Would you like to do more field trips like this one?
- If presented the opportunity to take more field trips like this, do you think it would help you in your classwork?
- After taking this VR trip, are you interested in more that virtual reality could offer?

APPENDIX G: STUDENT INTERVIEW TRANSCRIPTIONS

Participants 12, 5, and 4 requested to do their interview together rather than individual. This was allowed because there were no changes in the questions and everyone had the same opportunity to participate.

Researcher: Alright so, can you recall the last field trip you've been on? Like a real field trip... Where did yall go?

Participant 5: We went to Columbus

Researcher: Ok where did yall go to see?

Participant 5: We went to a theater.

Researcher: Ok

Participant 12: We watched different types of plays.

Researcher: Ok Do yall remember anything specific about the trip? Like how long was the bus ride? Did it take yall a long time to get there?

Participant 4: It was like an hour.

Researcher: Was this the first time you all took a virtual field trip?

All Participants: yes mam

Researcher: What did you think about it?

Participant 12: It was very fun.

Researcher: Tell me something about it. When I took it the first time, it sort of made me dizzy.

Participant 12: It didn't make me dizzy but I felt like I wasn't really moving.

Participant 5: Yeah me to

Participant 12: I mean I could see everything and everything looked like 3D I guess. But I tried to walk somewhere and I was still in the same place. It was cool

Participant 5: I liked it.

Researcher: Tell me how you think this field trip compares to a real field trip?

Participant 4: Like what kind of real field trip?

Researcher: Like actually gonging somewhere? Did you feel like you were there? At the pyramids?

Participant 4: Yeah. Whenever I was walking through the building I felt like I was about to fall off of that cliff.

Researcher: Did the things in the picture on the virtual field trip seem real? Some of you talked about rocks and dirt and stuff. Did that seem real?

Participant 12: Yeah, Some of it did

Researcher: So some of it did and then there were time when some of it didn't? What about the size? Could you tell how big things were?

Participant 5: One was like a triangle so I didn't know if it was like a pyramid or another thing.

Participant 12: I couldn't really tell how big it was because if you looked up at it, it seemed bigger but if you looked straight at it, it looked smaller.

Researcher: Did it make you feel funny physically while you was actually with the device on?

Participant 4: Kind of

Researcher: Ok. Was there anything that scared you or startled you?

All: no

Participant 5: I wanted to see the camel but...

Researcher: The camel? Ok

Participant 12: Why couldn't we walk up to it?

Researcher: I don't know. That's going to have something to do with the limitations of the device itself. That's one thing I guess that's different from a real field trip. If you go to the buffalo park, you can actually go up and feed the animals. But in the virtual, you see if, but you can't really touch it.

Participant 4: Yeah you can't touch it

Resercher: Did you think you could sometimes? I saw a couple of you jump as if you were going to jump off the rock or whatever it was you were standing on. Did It seem realistic?

Participant 4: if I was on the part where you could jump, I would have jumped.

Researcher: Was it easy or difficult to concentrate?

All: Easy. Yeah

Researcher: Do you think its some things that could be learned if we took virtual trips like this? What if we took a virtual field trip to Memphis? Or actually saw a cathedral? What are yall studying right now in social studies?

Participant 5: We are reading a book about the holocaust

Researcher: There are several holocaust museums. Do you think it would be helpful to see some of it while you're studying it without having to leave the classroom?

Participant 12: Yeah

Researcher: If you had more opportunity to do more trips like this, would you want to?

All: yes

Researcher: Where would you want to go?

Participant 4: Hawaii. To the beach

Researcher: Ok

Participant 12: I would go to New York

Participant 4: I would like to go out of space.

Researcher: So are you interested in taking more trips?

All: yes. We would like more trips

Participants 14 and 2 requested to do their interview together rather than individual. This was allowed because there were no changes in the questions and everyone had the same opportunity to participate.

Researcher: Tell me what you thought. Let me ask you a question. Have yall every taken a real field trip?

Participant 2: yes mam

Researcher: Where to? Do you remember the place?

Participant 2: We went to MUW and someplace in Belden. I forgot.

Researcher: Ok What about you? You ever been on a real field trip?

Participant 14: Ummmm yes, no. I think

Researcher: What did yall go see there? Did you all go see the college?

Participant 2: We went to go see like a play.

Researcher: Was it a long bus ride there and back?

Participant 14: yes

Researcher: Have either of you ever taken a virtual field trip before?

Participant 2: No

Participant 14: No

Researcher: Tell me how you felt when you looked through the device? Did it feel weird?

Participant 14: Yeah a little bit.

Researcher: Like what?

Participant 14: It's like you in there for real.

Researcher: Oh ok. Did the pyramids look funny? The rocks?

Participant 2: Yeah

Researcher: Did the color look clear?

Both: Yeah

Researcher: Did it make you feel dizzy or anything like that? I know one time Zyliesha you look like you were trying to step off the cliff or something like that.

Participant 14: Yeah

Researcher: Did you have a hard time concentrating?

Participant 2: A little bit

Researcher: What if we could visit more places using these things? What if you could visit Paris and see the Tower or London.

Participant 14: I would walk around.

Researcher: Would you like to see more places like that?

Both: yeah

Researcher: There are lots of ways you can use these devices. Can you think of other ways we could use these in class?

Participant 2: Probably when you go over a test or probably in Science class.

Researcher: Do you think having devices like this would make learning a little more fun and more interesting in class?

Both: yeah

Researcher: Would you like to use them.

Both: yes

Researcher: Anything else you would like to share with me about the virtual field trip.

Both: no mam

Researcher: Ok

Participant 8 did his/her interview individually.

Researcher: Have you ever taken a virtual field trip before like that?

Participant 8: no mam

Researcher: What did you think about it?

Participant 8: It was fun. It had a lot of different places you could go. You could go inside the building. It felt so real.

Researcher: Did the picture seem clear?

Participant 8: Umm hmm very clear

Researcher: Good. Did you feel dizzy or anything like that?

Participant 8: no

Researcher: Did you feel like you were moving or could walk around?

Participant 8: I felt like I could walk around to different building and stuff.

Researcher: Did you find it hard to concentrate?

Participant 8: No. It was fun.

Researcher: You liked it?

Participant 8: I loved it.

Researcher: Do you think if we had more things like this in the classroom, the lessons would be more interesting?

Participant 8: yes

Researcher: What other places would you like to visit if you could?

Participant 8: I don't know. Probably like the beach or somewhere.

Researcher: Ok. You ever been to the beach?

Participant 8: yes

Researcher: Ok. That would be cool. Anything else you want to tell me?

Participant 8: no

Researcher: Was the pyramids cool?

Participant 8: Yes, it like looked so real.

Researcher: Ok well thank you.

Participant 16 did his/her interview individually

Researcher: Was that your first time ever taking a virtual field trip?

Participant 16: I have used one before.

Researcher: What did you use it before to do?

Participant 16: Playing my game.

Researcher: Did it look real while you were playing your game? Could you hear it too? You put the earphones in?

Participant 16: yes mam

Researcher: What do you think about using this in class? What if we had a classroom set that you guys could use.

Participant 16: It would be more fun.

Researcher: Do you think it would be cool that when you guys talk about a place to actually put the headset on and look at it?

Participant 16: Yeah, look at it.

Researcher: Was the picture clear?

Participant 16: yes mam

Researcher: Did it seem like you were actually there:

Participant 16: yes expect when I was in the dark one

Researcher: the lighting? Ok. Anything else you want to tell me?

Participant: no mam

Researcher: Thank you .

Participant 9 did his/her interview individually

Researcher: Tell me what you thought about the virtual field trip?

Participant 9: It was good. I like the graphics and stuff on the thing.

Researcher: Oh ok. Did they look real?

Participant 9: yes

Researcher: Was the picture kind of clear or did it seem fake?

Participant 9: It was like clear and it didn't seem fake though.

Researcher: Do you think if we had some of these in class that you would like to use them in your social studies classes that when you're talking about a place you could use these to go along with it?

Participant 9: yes mam

Researcher: It didn't make you feel funny or anything like that did it?

Participant 9: no

Researcher: I know you said one time when you were walking that you didn't feel like you were moving. Stationary.

Participant 9: yeah

Researcher: Anything else you want to tell me about it?

Participant 9: No. I just hope I get one.

VITA

PROFESSIONAL PROFILE

Energetic, data- driven instructional leader with 16 years of experience at the school and district level

- *Proven track record of improving student achievement - consistent "B" or High Performing Schools*
- *Participant in the MSBA Prospective School Leadership Academy*
- *Skilled in Curriculum Development and Alignment*
- *Experienced in Personnel Management & Evaluation*
- *Trained in Budget & Finance*
- *Knowledgeable of Strategic Planning*
- *Experienced in Decreasing School wide Discipline*
- *2017 District Administrator of the Year*

EDUCATION

Specialist in Education

The University of Mississippi

Major: Secondary Curriculum and Instruction

December 2010

University, MS

Master of Arts in Education Leadership

University of Phoenix

Major: Education Leadership

May 2003

University, MS

Bachelor of Arts

The University of Mississippi

Major: Secondary Education

May 2003

University, MS

ADMINISTRATIVE EXPERIENCE

Lawndale Elementary School, Tupelo, MS

Principal 2015-Present

Oversee the implementation of State and District Curriculum; Schedule and provide district-wide professional development for all employees. Recruit and recommend staff for employment within District. Serve on the district disciplinary committee. Make presentations to Superintendent's office.

Tupelo High School, Tupelo, MS

Assistant Principal 2014-2015

Monitored discipline, maintained records of classroom and fixed asset, custodian assignments; responded to bus referrals, assisted in writing grants, assisted in teacher evaluations and staff supervision, assisted principal with reports, made decisions during the absence of the principal, and many other tasks as assigned by principal.

Nettleton High School, Nettleton, MS

Principal 2013-2014

Directed and monitored school operations such as academic instructional curriculum, discipline, school budgets, bus referrals, and custodians' assignment; supervised staff, scheduling, hiring and placement of employees.

Nettleton Junior High School

Principal 2011-2013

Directed and monitored school operations such as academic instructional curriculum, discipline, school budgets, bus referrals, and custodians' assignment; supervised staff, scheduling, hiring and placement of employees.

Nettleton School District

Curriculum Director 2009-2011

Developed, aligned, and implemented the district curriculum and maintained district and state assessments; maintained district students' progress monitoring for all four schools

TEACHING EXPERIENCE

Nettleton Junior High School 2004-2009
Classroom Teacher/Coach

Planned and conducted lesson plans and activities for a balanced program of instruction, demonstration, and assessment. Established engaging learning opportunities for all students including lessons, units, and projects and communicated these objectives to students. Coach Junior high basketball.

Coldwater High School 2003-2004
Classroom Teacher/Coach

Planned and conducted lesson plans and activities for a balanced program of instruction, demonstration, and assessment. Established engaging learning opportunities for all students including lessons, units, and projects and communicated these objectives to students. Coached varsity softball and assisted with basketball.

CERTIFICATIONS/ADVANCED PROFESSIONAL DEVELOPMENT

486 Career Level Administrator Mississippi Department of Education
Mississippi School Boards Association Prospective Superintendent Leadership Academy, 2018