UNIVERSITY OF CALIFORNIA, SAN DIEGO

Developing Thoughtful World Explorers:

Incorporating technology and active learning into a fifth-grade geography classroom

A Thesis submitted in partial satisfaction of the requirements

for the degree Master of Arts

in

Teaching and Learning (Curriculum Design)

by

Tyler James Hales

Committee in charge:

Marcia Sewall, Chair
Cheryl Forbes
James Levin

2010

The Thesis of Tyler James Hales is approved and it is acceptable in quality and form for publication on microfilm and electronically:

Chair

University of California, San Diego

2010

Dedication

This thesis is dedicated to my loving wife Jena for her constant support and encouragement throughout the past year. I also dedicate this thesis to my family for instilling in me the importance and value of education, as both a student and a teacher.

Epigraph

"Tell me and I'll forget; show me and I may remember; involve me and I'll understand."

~Chinese Proverb

"Choose a job you love and you will never have to work a day in your life."

~Confucius

Table of Contents

List of Figures

List of Tables

List of Graphs

Acknowledgements

There are so many people in my life to thank for supporting me throughout this thesis process and who always helped me see the light at the end of the tunnel.

I would not have survived this year without my incredible wife Jena. From editing each of my drafts, to correcting my school work, to making dinners and running errands, Jena not only supported me, but she was also my biggest fan.

I thank my family for their constant words of encouragement whenever I needed a boost. My parents and siblings have always fully supported my academic endeavors, and I will be proud to join my siblings with my advanced degree.

I thank the incredible EDS faculty at UCSD. In particular, I owe much thanks to Marcia Sewall, who always knew my thoughts and ideas better than I did, as she guided and pushed me forward in my project. I also appreciate all of Cheryl Forbes' effort and feedback, as she was always a positive source of guidance during the entire thesis process. Finally, I thank Jim Levin and Paula Levin for the incredible wealth of knowledge about technology and the world that they shared with me.

I thank my colleagues and administrators at my school and all of the wonderful students whom I feel privileged to teach. I am grateful for the support I received at my school this past year. I am proud of the effort my students displayed on a daily basis.

Lastly, I thank my passionate cohort peers. I appreciate how everyone cared so genuinely about each other, and I owe great thanks for the way they were always able to help clarify my thoughts. I feel lucky to have had the opportunity to work so closely with such a positive group of educators.

ABSTRACT OF THE THESIS

Developing Thoughtful World Explorers:
Incorporating Technology and Active Learning into a Fifth-Grade Geography Classroom

by

Tyler James Hales

Master of Arts in Teaching and Learning (Curriculum Design)

University of California, San Diego, 2010

Marcia Sewall, Chair

Although technology has rapidly created a more accessible world necessitating broader global understanding, geography knowledge has lagged far behind. Young students are becoming more familiar and comfortable with using technologies, such as computers, cell phones, and iPods; however, they are unable to locate sites of significant events that impact the world today.

Virtually Traveling Europe (VTE) is an approach that addresses the need for improved geography understanding through incorporating technology in the classroom. *VTE* utilizes collaborative and active learning to engage students in a project-based curriculum. The ultimate goal of this approach is for students to gain an improved understanding of their place in the world and the relevance of geography to their lives. Additional goals include engaging students through technology, choice, collaboration, and authentic real-world applications of geography.

In this study, students worked in groups to research a region of Europe using books, the internet, and Google Earth. Groups created a travel brochure with geographic, historical, cultural, and travel information about their European region, and the project culminated in student presentations about each group's region using Google Earth as a visual tool.

VTE was implemented in a private school fifth-grade geography classroom. The data sources collected and analyzed included field notes, surveys, and student work. Evaluations of this data suggest that students were engaged in their study of Europe and that positive collaboration led to greater success. Google Earth had limitations as a research tool but great potential for presentations, and further studies into its classroom application are recommended.

I. Introduction

Geographic knowledge is playing an increasingly important role in today's daily life. From looking up the fastest, easiest directions to get somewhere to finding the hourly local weather on the internet to planning a family vacation across the world, people rely on technology to draw them back to their fundamental knowledge of geography. People commonly draw on their knowledge of geography when using the internet, on both computers and cell phones, and GPS systems, in both cars and on cell phones. However, while geography plays an important role in people's everyday lives, this subject has often been neglected, overshadowed, or taught at a shallow level in American schools. Students often have trouble relating to and finding relevance in their studies of different cultures and places (Winter, 2009). Within the current global climate, in which many Americans have been sent to fight in Iraq and Afghanistan during the last eight years, it is especially critical for students to form a better understanding of where these countries are located in the Middle East and what the land is like, as well as the culture and fundamental beliefs of people in these regions. A better understanding of life in the Middle East on the part of American students, for example, is essential for creating more informed global citizens.

In addition, as technologies have become more advanced in the past decade, understanding geography has become increasingly important in order to be more aware about the world. How better to address these needs than to work to develop both geography and technology skills together through an integrated curriculum? By incorporating new technologies into current approaches for teaching geography, through visualization tools such as Google Earth and online virtual tours, students become more engaged in the study of this subject, while also building the critical thinking skills

necessary to become more productive global citizens. The study described in this thesis, in which students researched a region of Europe in a group, created a travel brochure about the region, and then presented the region to their classmates, is applicable in an upper elementary or middle school classroom.

II. Assessment of Need

Why Geography Teaching and Learning Must Improve

The incorporation of more technology in the teaching of middle school geography is needed to improve student engagement, interest, and understanding of this subject. With technology bringing people closer together by expanding individuals' worlds and making it possible for more global communication and understanding, it is beneficial that students become more proficient in their understanding of world geography and cultures to be better prepared to enter this new world. Unfortunately, as the National Assessment of Educational Progress (NAEP) reported (2002), there was little increase in Geography proficiency between 1994 and 2001, as 26% of students still tested below basic expected achievement levels in 2001 compared to 30% in 1994. The fact that a national assessment of geography proficiency has not taken place since 2001 and that there was a seven-year gap between the past two assessments in itself shows a lack of attention to this subject.

Geography is generally defined as the study of Earth and its physical and human features, and this study is often broken up into two specific types: physical geography, the study of land and physical features of the world, and human geography, the study of people and cultures and how they relate to each other and their environment (Lewinski, 2008). The development of the "Five Themes of Geography" - Location, Place, Movement, Human/Environment Interaction, and Regions – in 1994 further helped to define geography in the classroom, in a push towards more national standardization in these classes (Salter, Hobbs, & Salter, 1998). Geography is commonly perceived to simply be a study of maps and the rote memorization of countries and capitals, geography encompasses so much more. Curricula that incorporate mapping activities and the study

of people and cultures around the world can help students develop better global awareness.

NAEP conducted a Geography Consensus Project to determine and assess the fundamentals of geography that should be taught by outlining the areas to be tested on the 1994 and 2001 national tests (Council of Chief State School Officers, 2000). This NAEP document expresses the importance of providing a well-rounded geography curriculum for American students for two primary reasons: 1) this is an area of study that has often been neglected in our schools, and 2) the need for Americans to gain better understanding of their place in the world is becoming increasingly clear to avoid global ignorance (Council of Chief State School Officers, 2000). Some specific skills that should be learned by geography students, according to NAEP, are shown in Table 1.

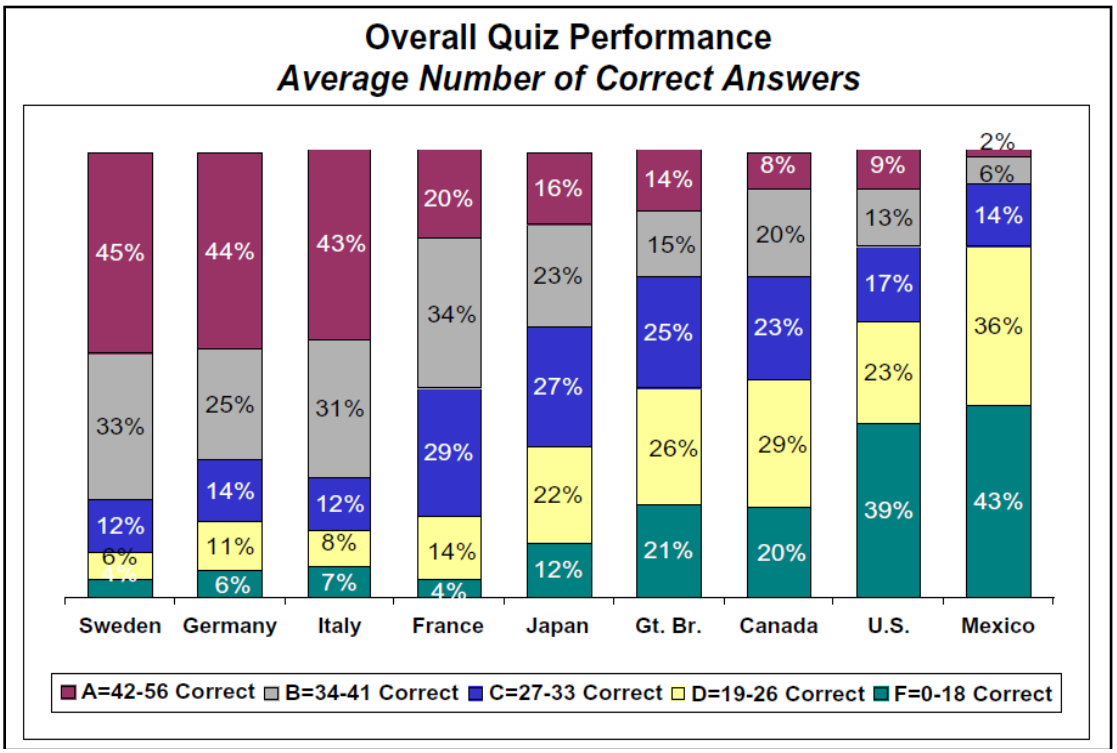
Table 1: Core geography skills outlined by NAEP in 2000.

	Core Skills Expected to be Learned by Geography Students:
1	The capability to use technological tools
2	The understanding of maps
3	The understanding analytical concepts (scale, change, diversity, models, and systems)
4	The ability to analyze, manage, and apply content of geography
5	The knowing and understanding how to apply geographical concepts
6	The application of the "Five Themes of Geography" (Location, Place, Human/Environment Interaction, Movement, and Region)

Applying geographical knowledge is a useful skill for Americans' daily lives, whether for the purpose of mapping out directions to a new destination or looking up the local weather. In addition, with more businesses and jobs incorporating global

communications, understanding of world geography and cultures could play a vital role in becoming a better-informed global citizen. As the National Geographic Education Foundation (NGEF) (2006) reported, however, the United States ranked second to last in overall geography knowledge on a survey conducted in 2002, with Canada, France, Great Britain, Germany, Italy, Sweden, and Japan all scoring better. Graph 1 illustrates the lower levels understanding of geography in the U.S., as 62% of American students surveyed scored in the "D-F" grade range. Adding to NAEP testing results in 1994 and 2001, the NGEF also did not show an increase in geography knowledge between 2002 and 2006, as demonstrated by survey results in these years (National Geographic Education Foundation, 2006).

Graph 1: Geography Quiz Score Range (NGEF, 2002, p.17).



The lack of geography knowledge has been a result of the devaluation of this subject as a whole within the American school systems, with other courses taking precedent and being emphasized in schools and on standardized tests. With more attention to other subjects in school, many students feel indifferent towards geography because they do not see it as an important class (Winter, 2009). Results of the recent NGEF (2006) survey further suggests this perspective among students, as less than a third of Americans between the ages of eighteen and twenty-four considered locating foreign countries as a necessary skill in today's world. This survey of 510 young American adults also suggested that students who had taken a geography class while in school not only had higher scores on the fifty-six question geography quiz, but also had a more positive attitude towards this subject and were more confident in their knowledge of geography.

The 2006 National Geographic Education Foundation survey revealed other fundamental issues and problems with young Americans' current global understanding. Among the most telling signs that there is a need to improve teaching and learning in geography is the low percentage of people who were able to accurately name places of particular importance or relevance in the United States and around the world. For example, despite the constant barrage of news stories and images of the American involvement in the Middle East, 63% of those surveyed could not locate Iraq on a map and 88% could not locate Afghanistan; at the time of the survey, American troops had been stationed and fighting for over three years in both of these countries. Over 70% of those surveyed also failed to locate Israel, Iran, and North Korea, and 65% incorrectly located the United Kingdom (NGEF, 2006, p. 24-26).

Americans as a whole have shown a great lack of knowledge of countries and regions around the world; in addition, they have also demonstrated misconceptions about significant areas within the United States. While most young adults could name California and Texas on the NGEF survey, only 50% found New York correctly. Even though Hurricane Katrina had recently happened when the survey was conducted, only two-thirds of those asked were able to locate Louisiana (NGEF, 2006, p. 28). The results of this in-depth study are summarized as follows:

> Taken together, these results suggest that young people in the United States – the most recent graduates of our educational system – are unprepared for an increasing global future. Far too many lack even the most basic skills for navigating the international economy or understanding the relationships among people and places that provide critical context for world events. (NGEF, 2006, p. 7)

While the NGEF report noted many problems with Americans' understanding of geography, there were some optimistic highlights. As previously mentioned, students who had taken a geography class not only scored better on tests but also exhibited more positive feelings towards the study of geography. Another relevant result of this study focused on the ways in which technology, such as computers and the internet, impact students' knowledge and attitude about geography. Regular internet users were able to match landmarks with their correct continent better than non-users. In addition, while only 28% cited knowing where countries are as absolutely necessary, 61% and 56% named computer skills and internet use, respectively, as absolutely necessary skills in today's world, with only 4% and 6% thinking these skills were not important (NGEF, 2006, p. 14). These results suggest that incorporating these technologies into the

classroom could better engage geography students and improve geography performance and understanding.

As we embark on the second decade of the 21st century, it has become clear that we live in a technology-driven age, in which new technologies are constantly emerging and quickly become the "norm" in the United States and around the world (Lenhart, Madden, & Hilton, 2005). These technologies have not only created more accessible means for communication throughout the United States, but they have also made global communication readily available at our fingertips. As people continue to utilize modern technology to access information from around the world, studies such as the NGEF survey suggest that it is becoming more important to have a fundamental knowledge of geography in order to better communicate and to understand differing cultures. With advances in technology, there is an opportunity to address this need for the better understanding of geography by implementing new technological tools.

Using Technology to Improve the Teaching of Geography

Despite the ample evidence from a variety of academic and educational journals that suggest incorporating technology into classroom practice will help improve student engagement, attitude, and understanding, many schools and teachers have struggled with using technology effectively in their classrooms. In a 2002 survey by the Pew Internet & American Life Project, teens were said to be dissatisfied with the ways technology, specifically the internet, were applied in their class and in their learning (Levin & Arafeh, 2002). Within this survey, many students cited teachers' use of technology in their classes as boring, un-engaging, and irrelevant because they often felt their teachers had little command of the technology in use (Levin & Arafeh, 2002).

Although using technology in the classroom can engage students in subject matter they may otherwise find boring, I believe it is important for teachers to understand how to effectively incorporate it into their teaching.

Technology has made the world smaller through jobs that require global communication and through the ease of knowing up-to-the-minute news occurring anywhere in the world. As students enter the classroom, they are also bringing with them certain knowledge of current technology. By increasingly incorporating this knowledge into the geography curriculum, students will be able to apply their own technological capabilities and will likely become more interested and motivated to learn and develop a deeper understanding of the world around them. This is the premise on which *Virtually Traveling Europe* was designed.

III. Literature Review

What Researchers Have Said About Geography and Technology

Teaching geography provides teachers with the opportunity to make learning interactive, fun, and engaging, while also fostering deeper levels of understanding in students. Researchers have studied various ways to inspire students to be more engaged and interested in geography. It has been well documented that effective teaching practices in this field focus on a variety of active learning approaches. In order for students to connect to the material, they must discover its relevance to their own lives. Developing these connections is especially important in a subject like World Geography which covers everything from learning about the locations of countries, their capitals and their physical features to understanding global issues regarding human rights and cultural differences.

Active Learning

Due to the vast amounts of information encompassed in the subject, teachers of Geography often struggle with the dilemma of teaching a large amount of material superficially versus covering less material at deeper levels. Klein (2003) sheds light on this problem as he describes the benefits of active learning in geography. Through active learning, the teacher takes on more of the role of facilitator than lecturer. This style creates a more hands-on experience for students as they answer a variety of questions and problems the teacher presents, thus requiring students to develop and utilize geographic skills and methods within this subject (Klein, 2003).

Within his college geography course, Klein found that employing a variety of active learning approaches enables students to better think and act like real-life geographers and transfer knowledge from topic to topic and region to region (Klein,

2003). Through questions and projects, Klein asked his geography students to dig deeper into their areas of study in order to make connections between places and learn why places are the way they are. During activities like "atlas warm-ups" and "concept-discoveries," Klein's students developed concrete geographic skills like map interpretation to understand themes and patterns around the world. These types of activities can be adapted to a fifth grade classroom, in which multiple approaches to teaching geography are especially important for maintaining the engagement of students at this developmental level. For example, when fifth grade students enter the geography classroom, their teacher can direct them to answer daily trivia questions allowing them to reflect on their current unit of study. Getting students into the geography mindset as soon as they enter the classroom can make them excited about that day's lesson.

Mowell (2003) also adds to the field of active learning in geography through his use of "edible geography." In this concept, Mowell uses the diversity of international foods and diets to teach differences in cultures and reasons for these differences. As students study various cultures they are provided with opportunities to explore the cultures they study by researching types of foods that are significant and why they are important for that specific culture. This type of activity provides a way to tie in physical geography features to cultural practices within the context of tradition, economy, and industry. According to Mowell, by actively participating in aspects of other cultures, students can gain more interest in the subject of geography, which again can lead to life-long learners in this area.

Problem-Based Learning. Spronken-Smith et al. (2008) add to the concept that active learning environments and student-centered classrooms are essential for teaching

geography by focusing on inquiry- and problem-based learning, in which students are focused on solving problems posed by the teacher. Figure 1 illustrates the spiraling relationship between these learning styles, as problem-based learning spirals off of inquiry-based learning, which stems from active learning.

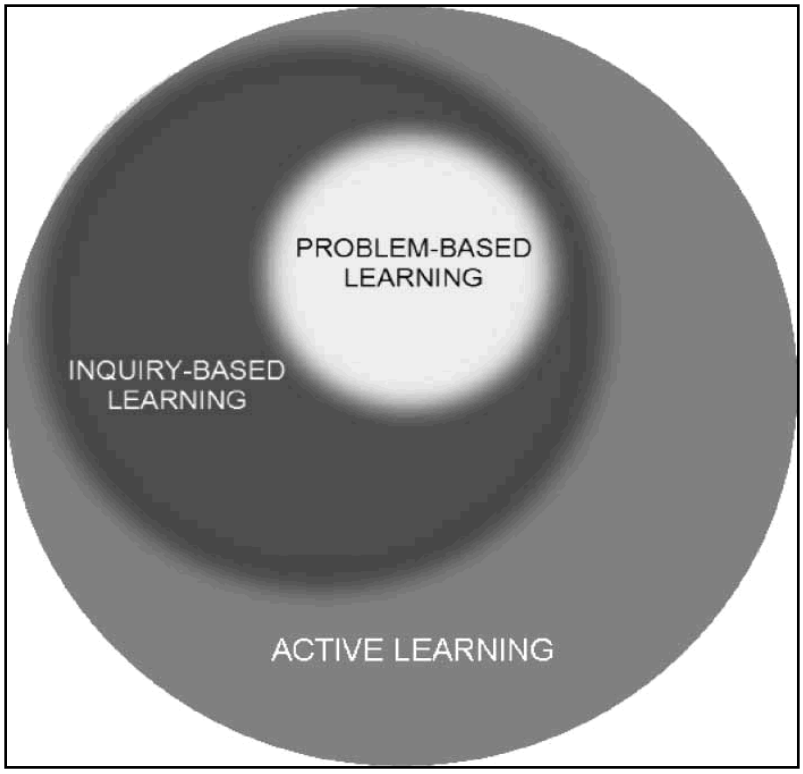


Figure 1: Spronken-Smith Active Learning Funnel

The authors admit this approach can be difficult at times due to the time and dedication required for the teacher to master and become comfortable in this style, the common issues that arise with group work, and the lack of concrete direction and instruction. Spronken-Smith et al. argue, however, that incorporating this teaching style as a fundamental aspect of the geography classroom greatly enhances students' experiences

(Spronken-Smith, et al., 2008). When teachers understand their role as a facilitator of learning rather than as a lecturer and they are comfortable and competent in this type of student-centered setting, they can more successfully utilize this approach in the classroom. Spronken-Smith et al. found their inquiry- and problem-based methods of teaching geography led to key student gains, specifically with students having "a greater sense of achievement and improved preparation for lifelong learning" (p. 83). In the subject of geography, I believe that preparation for lifelong learning is especially important because understanding the world around them can benefit students for the rest of their lives, even after their schooling ends.

Collaborative Learning

Along with actively searching for answers through their own research, geography students in active learning environments are often asked to work in groups to solve various problems. By collaborating with partners, students have the opportunity to learn from each other in ways that add to the teacher's instruction. Also, while groups of students work together, teachers are able to guide students more subtly as they circulate among student groups.

Through collaborative learning, students are often able to reach higher levels of understanding as a result of working with their peers. Wink and Putney (2002) explain Vygotsky's concept of the Zone of Proximal Development as a way for "students to become active participants in their learning through the use of language and interactions with others" (p. 87). Because students bring specific knowledge into the classroom, it is beneficial for them to have the opportunity to share these unique understandings with their peers. In addition, when students work in groups, they are often able to successfully

complete challenging assignments that might otherwise have proven too difficult if worked on independently. Wiegand (2003) shows how collaborative learning can be especially effective in geography, as students work together to discuss and understand the meaning behind various maps. Wiegand found that students gained comfort and confidence in their map-making ability by working with partners.

Technology and the Study of Geography

Incorporating technological tools into the study of geography has also been shown to lead to deeper understanding and more interest in this subject matter (Baker & White, 2003; Doering & Veletsianos, 2007; Patterson, 2007; West, 2003). Many forms of technology can be utilized with the student-centered active learning approach to geography. One such approach that has been studied is the use of Geographic Information Systems (GIS), with which various themes and layouts of particular regions can be manipulated and analyzed. West (2003) describes the use of GIS as an excellent way to incorporate inquiry-based learning strategies into the classroom, while also building relevant geographical skills. West discusses the many benefits of GIS for increasing students' intrinsic motivation and "higher-order thinking" as students develop advanced mapping skills through projects of their choosing. GIS has been shown to be effective in developing these skills because it combines three areas that are key components of active learning: data collection, data analysis, and data presentation (Baker & White, 2003; West, 2003). Because of these reasons, GIS can be a powerful tool for use within geography classrooms.

This GIS technology tool, however, has been underutilized in many classrooms for a variety of reasons. Aside from the logistical issues of lack of computers, software,

or internet, many teachers are either unfamiliar or uncomfortable with how to actually use GIS in their classes. Patterson (2007) also cites time to be a significant roadblock to implementing GIS in geography classes because teachers must learn the system, create lessons for it and with it, and teach students how to use GIS. Similarly, Doering and Veletsianos (2007) emphasize the lack of teacher training and school-related GIS tools as other major factors preventing greater implementation of GIS within the teaching of geography.

While GIS may be difficult to understand and facilitate in K-12 geography classrooms, studies have emerged discussing Google Earth (GE) as a more "user-friendly" form of GIS (Doering & Veletsianos, 2007; Patterson, 2007). GE is more commonly used because it is free to download the software from the internet, therefore requiring only internet access. Although GE is a limited version compared to the more complex GIS available, GE still offers the spatial awareness and thinking skills that are being more heavily emphasized in geography curricula (Patterson, 2007). Incorporating GE into the classroom can excite students about learning geography and motivate them to look deeper into geographic studies (Doering & Veletsianos, 2007, Patterson, 2007). Despite these recommendations for use of GE and other GIS tools in the geography classroom, these remain untapped tools in active learning environments (Patterson, 2007).

Technological Pedagogical Content Knowledge

In order to effectively utilize such technologies as Geographic Information Systems and Google Earth into the geography classroom, teachers must have a firm understanding of this technology. Mishra and Koehler have done extensive work in the field of teachers' understanding and use of technology through their development of the concept of Technological Pedagogical Content Knowledge (TPCK). These researchers have shown that teachers with a firm TPCK foundation can have a tremendous impact on their classroom because they understand how to use technology effectively in relation to their pedagogical content knowledge (Mishra & Koehler, 2006).

Mishra and Koehler credit Shulman's 1986 research with the idea of combining previously separated education practices of content knowledge and pedagogical knowledge into the more cohesive approach of Pedagogical Content Knowledge (PCK), which focuses on understanding the best teaching methods in relation to the subject matter. Mishra and Koehler relate Shulman's concept to the way technology is viewed in education today, as separate from PCK. Figure 2 illustrates the relationship between Technological Content Knowledge (TCK) and Technological Pedagogical Knowledge (TPK) as described by Mishra and Koehler.

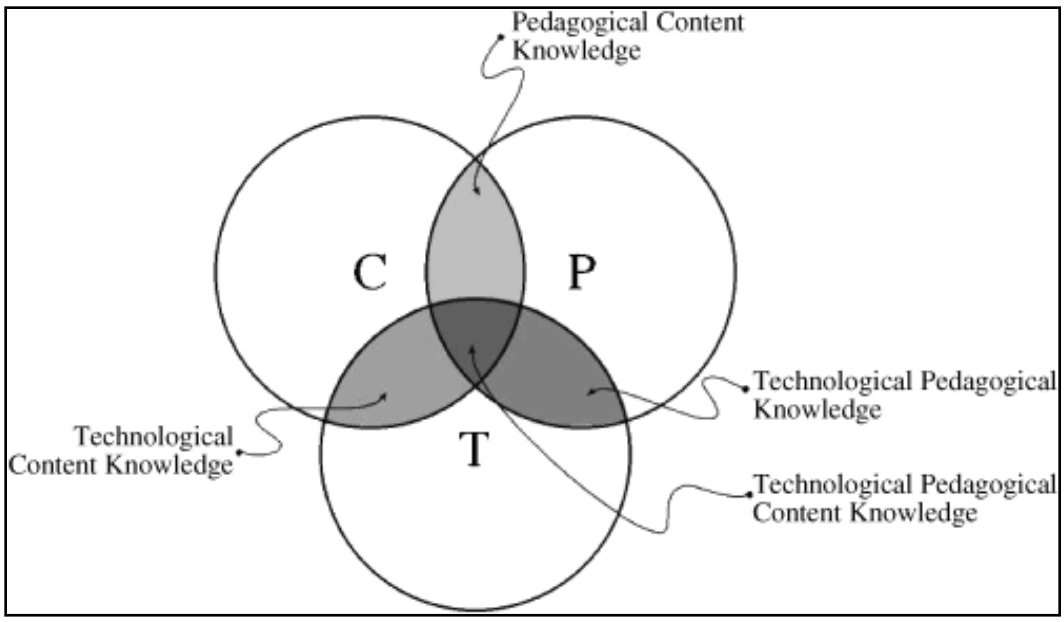


Figure 2: Relationship between content knowledge, pedagogical knowledge and technological knowledge (Mishra & Koehler, 2006).

Within TCK and TPK, Mishra and Koehler stress the importance of having an understanding about how to apply appropriate technology within content areas and within pedagogical practices, as well as how to transform these teaching practices and the subject matter knowledge using various available technologies. Mishra and Koehler argue that TPCK should be the foundation that all teachers strive for, as they claim a teacher who brings this into the classroom creates the ideal learning environment. A key point these researchers stress is that TPCK looks different in each classroom and is unique to each teacher and subject.

According to Mishra and Koehler, many common mistakes are often made in the field of technology and education, and ineffective uses of and trainings in technology are often to blame. Throughout their analysis, Mishra and Koehler link the lack of a firm understanding of technologies as the underlying problem in the effective use of

technology in the classroom. An important distinction Mishra and Koehler make regards the difference between teachers having the ability to teach with technology rather than simply learning about technology. To create a deep understanding rather than a simple knowledge of technology, these researchers focused their teaching of technology on "learning-technology-by-design" approach, in which technology is learned through relevant activities within specific content and using specific pedagogical strategies. During these learning activities, the teachers (primarily these two authors) acted more like guides for the students instead of instructors in order to create an environment of active learning. By providing the opportunity for students to make their own choices within a topic, Mishra and Koehler believe that teachers create a classroom environment in which students become intrinsically motivated and develop a better understanding of concepts leading to a deeper learning.

Hofer and Swan (2009) provide an example of Mishra and Koehler's TPCK in action in their study of a middle school digital documentary project. The teachers in this study focused on creating student-centered rather than teacher-centered learning environments, which Hofer and Swan claim helped these teachers' comfort level in this collaborative technology project. By having already established an active learning, student-centered environment, their implementation of the digital documentary project was more successful. Hofer and Swan state that when incorporating technology into the curriculum, teachers need to carefully blend it in to the pedagogical environment of the classroom; otherwise, the "comfort-level" of both students and teachers can be negatively affected (Hofer & Swan, 2009).

With these factors in mind, Hofer and Swan found both successes and areas still in need of improvement in this project. While all of the students completed their digital documentary projects and seemed to enjoy the process, the researchers admit that the level of skill, ability, and flexibility of the teachers were critical; they believe this project may have been less successful if implemented by teachers with less understanding of TPCK. The teachers in this study, all of whom were experienced in both pedagogy and technology, were able to manage any technical difficulties as they arose while also keeping their students engaged and working. It was evident that the students remained engaged and productive throughout the project experience and that this was a positive learning experience on multiple levels; however, many obstacles had to be hurdled during the implementation. Among the most pressing issues were time, online research skills, and set-up/storyboarding. Planning and providing for more time to implement this project may have also alleviated some of the other problems the researchers and the teachers faced during the study. Despite issues faced during this project, both the researchers and the teachers recommended using this type of TPCK-based activity.

As illustrated by studies such as Mishra and Koehler and Hofer and Swan, technology should not simply be added onto existing curricula but should be carefully integrated and thoughtfully woven in with the classroom philosophies and subject matter. These studies also point to the importance of having a firm grasp and understanding of technology in order to successfully incorporate it into the classroom. Technology needs to be used in relation to teachers' comfort levels both with the tools and also with the topic. Students can sense when teachers are uncomfortable with technology or when it is clear that they are forcing it into the curriculum. When teachers show passion and

enthusiasm for the topic they teach, students can become inspired and more engaged in that subject, and the use of technology can be similarly understood. Therefore, when teachers are passionate about both the subject they teach and their use of technology in relation to that subject, students' motivation and engagement are greatly enhanced.

Google Earth the Teaching of Geography

Google Earth (GE) provides an opportunity to incorporate TPCK into the geography classroom because it is easy to become proficient in its uses, emphasizes active learning, and ties well into the study of geography. Doering and Veletsianos (2007) cite GE as an excellent way to utilize TPCK, describing Geographic-Technological Pedagogical Content Knowledge (G-TPCK) as integrating geospatial skills into the K-12 geography curriculum. Patterson (2007) claims that GE fits into the concept of TPCK in that he describes GE as a virtual globe with many options of exploration available, which helps facilitate the active learning approach to teaching geography. In addition, Schultz, Kerski, & Patterson (2008) explore GE's ability to meet the National Geography Standards, demonstrating that GE can be supportive in standards-driven classrooms.

While GE, GIS, and TPCK all have been shown to be beneficial for teaching and learning geography because of their active learning components, researchers have stressed the need for further study in order to better understand the best practices for implementing these techniques. The study described in this paper attempts to expand on our current understanding in this area.

IV. Curriculum Review

Current Teacher Practice in the Geography Classroom

In order for geography teachers to be most effective, they must keep the subject engaging and relevant to their students. In geography and other social studies classes, an active learning environment has been shown to greatly enhance students' learning and understanding. Further studies have added inquiry-based, problem-based, and project-based learning as effective ways to incorporate active learning into the geography classroom. When working with an age group such as fifth graders, it is even more important to keep learning active, engaging, and relevant by using a variety of approaches to engage children's natural curiosity (Bransford, Brown, & Cocking, 2000). Building on what students already know and providing ample choice in activities are other methods that improve learning in subjects such as geography (Deci, 1995; Wink & Putney, 2002).

The actual teaching focus of geography has evolved over time from a subject focused on basic memorization of places to one that investigates the reasons behind people living the way they do based on their environment. In addition, the term *geography* is rather vague. It has been defined as the study of "the world and all that's in it" by Alexander Graham Bell, who served as the National Geographic Society's second president (Shearer, 2003). Recent approaches to geography now focus the curriculum on more definitive criteria known as the "Five Themes of Geography" which are: Location, Place, Human/Environment Interaction, Movement, and Region (Council of Chief State School Officers, 2000). Many educators have been asked and expected to apply these themes to the various aspects of geography they teach. For example, using these themes

in an investigation of North America, students should be able to tell *where* the continent is located, *what* features are found there and *what* people do there, *how* people adapt and change their environment, *why* and *how* people have moved around, and *how* people organize the land. This approach goes beyond teaching the basic knowledge of studying names of places, as it helps students better understand how to apply similar ideas to various places, leading them to more direct and relevant comparisons between places. Based on the "Five Themes of Geography," many geography curricula have been developed to meet the National Geography Standards (Council of Chief State School Officers, 2000). These National Standards set guidelines and benchmarks to aid in development of such curricula by focusing on 18 standards that are divided into six categories, as Table 2 illustrates.

Table 2: The 18 National Geography Standards and the six categories in which they are organized (Salter et al., 1998).

1	**The world in spatial terms**: 1. Maps and other geographic tools for information in a spatial perspective 2. Mental maps and spatial context 3. Spatial organization of Earth
2	**Places and regions**: 4. Physical and human characteristics of places 5. Regions interpret Earth's complexity 6. Culture and experience influence perception of places and regions
3	**Physical systems:** 7. Physical processes shape patterns of Earth's surface 8. Characteristics and distribution of Earth's ecosystems
4	**Human systems:** 9. Human populations 10. The nature and complexity of Earth's cultural mosaics 11. Patterns and networks of economic interdependence 12. Human settlement 13. Forces of cooperation and conflict that shape Earth's surface
5	**Environment and society:** 14. Human actions modify physical environment 15. Physical systems affect human systems 16. Meaning, distribution, and importance of resources
6	**The uses of geography:** 17. How to apply geography to interpret the past 18. How to apply geography to interpret the present and plan for the future

National Geographic Society. The National Geographic Society (NGS) has provided many resources for teaching geography using the eighteen standards listed in Table 2. Salter et al. (1998) summarized the relationship of the five themes with the eighteen standards and to actual classroom practice in geography in a guide written for geography teachers by the NGS:

> The themes represent an instructional approach; they allow a particular focus to be given to the lesson of the moment. The standards comprise the geographic subject matter, skills, and perspectives of geography. The 5 themes flow all through the 18 geography standards and can be used in the instruction of all of them, at any grade level. (Salter, 1998, p. 3)

Salter's guide provides a resource to better understand how to apply these geography standards to the classroom because he explicitly describes examples of themes and activities within each of the standards. For example, under Standard Four, "The Physical and Human Characteristics of Places," Salter explains this standard in detail and describes which themes relate most to the standard, such as Human/Environment Interaction, Place, and Region. Along with this basic outline of how to apply the five themes and eighteen geography standards, the NGS offeres curriculum guides for the study of each continent. The NGS Map Pack and the NGS Picture Pack combine to provide a solid understanding of the continent being studied by providing a variety of resources. For example, the Map Pack focuses on the analysis of a number of different types of maps of various aspects of the continents.

While these activities reinforce map skills and analyses, many of the activities prove to be difficult to translate to the class, as they often require more background knowledge and study than is provided in these lesson plans. Coupling the Map Pack with the NGS Picture Pack helps to broaden students' understanding of regions by providing

additional visual aids. However, if the students have not yet acquired the background knowledge needed to better analyze these pictures, the Picture Pack loses much of its strength.

Evan-Moor Geography Units. Evan-Moor Educational Publishers (Moore, 1999) also offers a curriculum to teach each continent based on the five themes of geography (Moore, 1999). With this curriculum focusing on grades three to six, the activities are much more student-friendly, particularly for a fifth grade classroom. The assignments include a number of informational pages with related and grade-appropriate questions in addition to a variety of different map activities. The reproducible maps in this guide are especially useful and easy for students to work with and interpret because they highlight the specific areas of focus and assignment objectives. Many other lessons in this guide effectively incorporate the five themes, especially when studying human geography. While the activities Evan-Moor presents are generally clear, they do not necessarily bring geography to life and make it as relevant to the students due to the lack of visual stimuli offered to support learning.

Smith's Mapping the World by Heart: An Innovative Approach to Learning Geography. Smith (1999) provides a different approach to the study of geography putting even more emphasis on map skills and an ultimate goal of teaching students to draw a map of the world from memory by the end of the year. In his curriculum guide for teachers, Smith draws upon his experiences as a teacher and specific lessons he developed. He demonstrates a number of different mapping activities and describes his original method as a "menu of activities to be used at will and adjusted accordingly" (Smith, 1999, p. 5). While this guide illustrates a number of ways for geography teachers

to teach map skills, which is a major component of the 18 National Geography Standards, Smith's curriculum does not study human geography extensively enough to sustain an entire geography curriculum. Similar to the previous curricula described, "Mapping the World by Heart" does not include information about the people and cultures living in around the world, thus requiring the teacher to supplement these materials into the curriculum.

World Geography and Cultures. Textbooks provide another source of curriculum in the field of geography. One of the most recently published, *World Geography and Cultures* (Lewinski, 2008), incorporates an approach to the study of geography through its focus on the five themes, maps, cultures, and history that appears to be more well-rounded than that provided by Smith (1999) and others. Although this curriculum does not place as much emphasis on the National Geography Standards as others, these concepts are integrated throughout text. In addition to the textbook there is a student workbook and a teacher's resource library CD-ROM which includes a variety of related activities. *World Geography and Cultures* is organized in units, one for each continent, and within each unit are chapters focusing on specific countries or regions of the continent. Along with each chapter are chapter outlines, worksheets for each section of each chapter to guide reading, review tests, and maps. Within the teacher's edition, *World Geography and Cultures* includes a variety of activities to accommodate different learning styles in the classroom, such as small group activities and kinesthetic learning. Each chapter and unit includes physical and political descriptions of the land itself before investigating the cultures and human characteristics of each place. The reading level is

accessible for many students, as it is written at a fourth-grade reading level, which can be beneficial for many fifth graders who still have trouble reading for understanding.

This textbook provides a great deal of information and activities to meet the National Geography Standards set forth; however, if students are only presented with activities and information from this curriculum, they may become disinterested and disengaged in the subject matter. While a passionate teacher can make much of this information come to life, working straight out of the book can become monotonous for many students, especially in fifth grade, and this teaching method does not meet the suggestions of active learning within geography. Despite the extensive material covered in *World Geography and Cultures*, the textbook does not engage students in learning about the world because of the lack of creative and engaging activities offered.

A more common approach to teaching geography is to use a textbook, such as *World Geography and Cultures*, as well as a variety of supplement materials, such as different mapping activities and curriculums by the NGS, Evan-Moor, and Smith. While incorporating a variety of materials can enhance classroom geography lessons, problems of consistency can arise, as conflicting formats among the various resources can be confusing for students to interpret. Although many of the activities developed in these various materials incorporate active learning and group or partner work, they do not include the number of problem-based projects that have been shown to improve student understanding and motivation in social studies and geography.

Project-Based Learning and Technology Integration

Blumenfeld et al. (1991) argue for implementing project-based learning activities in order to improve student motivation. Blumenfeld et al. claim that such an approach to

curriculum design creates deeper and longer-term understanding in students, as they are encouraged to investigate topics of their choice more thoroughly and transfer this knowledge to different types of projects in order to demonstrate what they have learned (Blumenfeld, et al., 1991; Deci, 1995). The subject of geography lends itself to the approach of project-based learning. This type of active learning has been shown to greatly benefit geography education by supporting students in the acquisition of higher-order thinking, thus meeting many of the National Geography Standards (Klein, 2003, Spronken-Smith, et al., 2008; Zemelman, Daniels, & Hyde, 2005).

Incorporating thoughtful and appropriate technology strategies enhances the project-based approach (Blumenfeld, et al., 1991; Liben, 2008; Harris, Mishra, & Koehler, 2009). Integrating a curriculum based on active learning, collaborative learning, and project-based learning into the geography classroom helps build students' enjoyment of this subject. When students engage in active learning, they are better able to build on prior knowledge of geographical regions, which helps them transfer knowledge from their lives into the classroom (Bransford, 2000; Wink & Putney, 2002). Using technology – such as online mapping resources, online virtual tours, various engaging and educational websites, and videos – is an important way to supplement any geography curriculum and is necessary for creating the best possible learning environment for geography. *Virtually Traveling Europe* was designed to include these four components for an effective and engaging geography curriculum.

V. *Virtually Traveling Europe*

Virtually Traveling Europe (*VTE*) is a project-based unit that incorporates the constructs of engagement, active learning, collaborative learning, and technology to help students develop a more in-depth and relevant geographical understanding. *VTE* enables students to not only interpret and analyze information they learn, but also apply it to their own lives in meaningful ways.

Goals of *Virtually Traveling Europe*

VTE encompasses multiple teaching and learning goals. One goal is to teach young learners effective research strategies, such as taking notes from various sources and elaborating these notes into their own words, and to engage students in learning geography by incorporating choice and collaboration in the curriculum. Deci (1995) stresses the importance of providing students with choices in the classroom in order to engage them in developing a deeper understanding of and interest in the material. By giving students the flexibility to research topics of their choice in ways that make sense to them, students are more engaged in the research process. Giving students the opportunity to work in groups provides them with peer support to help develop these research skills and produce impressive work (Wink & Putney, 2002). The project-based curriculum also relies on the depth of information gathered and processed by the students, which further emphasizes developing effective research skills (Spronken-Smith et al., 2008).

Another goal of *VTE* is to incorporate technology into the classroom in a way that engages students and helps them develop in-depth understandings of Europe and geography. As described in Chapters Two and Three, many students exhibit a natural comfort, understanding, and joy in using technology (Levin & Arafeh, 2002). By

incorporating technology as a core component of this curriculum, students can connect to the project in ways that let them take advantage of this technological knowledge (West, 2003). In addition, *VTE* helps students realize how they can use technology specifically in the geography classroom.

The final goal of this curriculum is to engage students in understanding the real-world applications of geography through authentic explorations and activities. Students consequently can become more globally-aware and invested citizens by actively learning about life in other countries. The way in which students present their region to the class reveals their understandings of Europe and geography while also demonstrating how this understanding can be applied in an authentic way, such as planning a trip.

Core Components of *Virtually Traveling Europe*

Engagement. Choice is a major factor in developing engagement in *VTE*. The first choice students make is choosing the countries to study in their region of Europe as well as how to divide up the research process (see Appendix). After researching their region, students have choices in how they present this information as they design their group travel brochure, which is a major component of the project. This choice enables groups to think about a format that makes sense to them as they plan their brochure. In the final phase of the curriculum, students choose how to present their European region as a group and how to incorporate Google Earth (GE) in this presentation.

Along with the choices that are central to the curriculum, the project-based approach itself engages students in *VTE* (Spronken-Smith et al., 2008). Through the classroom setup and project introduction, students are given the opportunity to become travel agents who must "sell" their European region to an imaginary family. Adding the

element of an authentic, real-world experience to the curriculum is an effective way to engage students in the project, as they take on the new identity of travel agent instead of student. The inclusion of GE is another way to engage students because they enjoy using the many features of this hands-on mapping technology (Patterson, 2007).

Active learning. *VTE* uses active learning throughout the curriculum as students "learn by doing" (Klein, 2003). During the project, the teacher acts as a facilitator while providing students with the opportunity to use hands-on learning in their discoveries about the culture, history, and geography of Europe. Students first learn about their European region by actively conducting research to find key information, such as significant landmarks. Besides the research component of this curriculum, the creation of a travel brochure and presentation are examples of how students actively learn, as they must interpret information and determine how it can best be presented. Additionally, students become active listeners during the presentations as they note interesting facts about other European regions. In becoming travel agents, and thus experts of their region, students demonstrate their understanding through how convincingly they sell the uniqueness of their region with accurate and interesting information.

Collaborative learning. Through collaborative learning, students have support from their peers as they actively engage in their learning (Wink & Putney, 2002). Collaborative learning is integrated in *VTE* in multiple ways for various purposes. This curriculum involves students working in groups rather than individually in order to achieve a wider understanding of Europe. Students share information they find with their group and compare and contrast features of their countries to enhance their understanding of their European region. Working together also helps students motivate each other to

investigate their European regions more fully, as they must be able to clearly teach their partners about what they have learned in order to create a successful and cohesive project.

Collaborative learning also helps teach students how to work successfully with others in a group or on a team. This skill is something that students often struggle with because they can have trouble communicating and making compromises; therefore, this is a skill that all students must continually develop (Zemelman, Daniels, & Hyde, 2005). In order to be successful in this project, students must learn to cooperate with each other.

Technology. The use of technology in *VTE* enhances student engagement, active learning, and collaborative learning, while also setting the curriculum apart from similar approaches that might focus on designing travel brochures. In this curriculum, students use GE to actively research their group's European region by exploring areas they are interested in and looking up places they have learned about through other resources. With this technology, students can get a firsthand look at various views of landmarks, such as Stonehenge, the Brandenburg Gate and the Colosseum. Using GE, as opposed to pictures or videos, puts students in control of what they wish to look at, as they can navigate different views of these landmarks and see where they are relative to other locations in those countries. This process helps students understand details of these places so they can describe these landmarks in more depth in their brochure sand presentations.

Groups also use GE collaboratively when they are researching and sharing information with each other. By working together with this tool, they help each other find more relevant information to enhance their travel brochure and presentation. Groups can

also take advantage of GE to find and agree on interesting pictures to use in their travel brochure.

The Geographic Information System (GIS) technology of GE is a core feature in the presentation component of this project, which is a critical element of *VTE*. While part of the final phase of this curriculum is to present the travel brochure of their region, students augment this presentation by providing virtual tours of their European regions using GE. Through their use of this technology, students demonstrate their understanding of Europe, as they share what they believe to be the most important places to see in their countries. As they show the class interesting places in their region, students discuss the importance and uniqueness of these places and why they chose to display these specific places on GE.

Overview of *Virtually Traveling Europe*

VTE is organized in three phases. In Phase One, each group of students learns about their assigned European region as they become "experts" about the geography, culture, and history of that region. Once student groups have sufficiently researched their regions, they begin Phase Two where they bring their information together and organize it into an informative and attractive travel brochure. After groups have finished applying their knowledge about their European region onto their travel brochures, they demonstrate their understanding of their region through their presentation in Phase Three. Table 3 shows how the constructs of *VTE* are embedded and incorporated within each phase of the curriculum.

Table 3: Constructs and Activities embedded within each phase of *Virtually Traveling Europe*.

Phases of *VTE*	**Constructs**	**Activities**
Phase 1: Research	Engagement	Students are hired as "travel agents;" students have choices of which countries to focus their research on and how to divide their research.
	Active Learning	Hands on research of region in Europe; becoming "experts."
	Collaborative Learning	Groups work together to divide research and share information, strategies, and ideas.
	Technology	Students use the internet and Google Earth to research.
Phase 2: Travel Brochure	Engagement	Students have choices in how they lay out their information on their travel brochure.
	Active Learning	Students interpret how best to display information about their region of Europe on the travel brochure.
	Collaborative Learning	Groups work together to design and create their travel brochure; groups divide final draft work between group members.
	Technology	Groups write information on computers and print pictures to put on their brochure.
Phase 3: Presentation	Engagement	Students have choices in how they plan to present their European region; students' task is to "sell" their region.
	Active Learning	Students continue to learn about their region by discussing and sharing with classmates in an organized and informative way.
	Collaborative Learning	Groups work together to plan their presentation and then to present their European region to the class.
	Technology	Students use Google Earth as a tool to enhance the presentation with a virtual tour of their European region.

Building prior knowledge. Before beginning this project, it is beneficial for students to develop background knowledge of the region of study, in this case, the countries of Europe. Specifically, by acquiring a baseline understanding of where countries are located and how they relate to each other geographically, as well as becoming familiar with their physical features, students are more prepared to become experts about particular regions of Europe. Within this student-centered approach, students actively explore and label different maps of Europe to discover where these countries, capitals, and physical features are located throughout Europe.

Phase One: Introduction to *VTE* and research.

***Getting started*.** When it is time to implement this project-based curriculum, transforming the classroom into a travel agency can immediately engage students because the unit becomes an authentic experience that can be applied outside of the classroom. Students, acting as newly hired travel agents, are given an official travel agency document that outlines their first assignment, which is to create the ultimate trip to a region of Europe using GE as a primary tool for research and presentation. Students are placed in their travel teams where they learn the region of Europe they will study. In order to prepare students to effectively and successfully use a GIS like GE, it is important to model how to use this tool for research, clarification, and presentation. Some features may be familiar to students and some may be new, so this broad overview will help guide all students. After the brief lesson, groups use a class laptop or computer to begin actively exploring their region together using GE.

***Research*.** Before students start actively researching their region, reviewing how to read texts for research and how to take quality notes may be helpful, depending on the

students' research experience. Travel teams then work together to decide how best to divide the research in order to be most effective and efficient in their team's study and presentation of their region. Students use a combination of resources for their research, from books (specific country books and reference books) to the internet websites (provided by the teacher, such as ciafactbook.com, worldatlas.com, culturegrams.com) to GE. While researching their regions, students are encouraged to collaborate with teammates about what they find regarding the geography, culture, and history of their countries.

Organizing research. Students continue their research and share information they find with their team. As team members share their information with each other, they can identify which areas have been covered sufficiently and which need to be researched further. After identifying gaps in their research, teams continue to gather all necessary information about their European region.

Phase Two: The travel brochure.

The rough draft. Once groups believe (and the teacher agrees) that they have researched their region sufficiently, the students in the group collaborate and share information in order to figure out exactly what they think is important, relevant, and interesting to include in their brochure. Their rough draft illustrates the details about the layout of the brochure and indicates where specific information will be located. Students also draft the actual written information to be included on each section of the brochure.

The final draft. Once the brochure rough draft has been approved by the teacher, travel teams receive a large poster board to begin creating the final draft of their oversized travel brochure. Teams work together to develop a plan for how everyone can

help on the brochure, and teamwork and cooperation are critical elements for effective use of class time. After finishing their travel brochure, travel teams begin planning how to present a tour of their region.

Phase Three: The presentation.

***Planning the presentation*.** After using GE throughout the research phase and creation of the travel brochure, students are familiar with how to locate various important landmarks they want to display as part of their presentation. Teams members work together to decide on one landmark from each country to present using GE. Groups also plan how to make their presentation clear, interesting, and informative, with all members having specific roles.

Presenting the Region. In addition to showing the audience significant landmarks of their region, each team explains why they chose to focus on each landmark with GE and why that landmark would be an important place to visit. The objective of this presentation is not only to teach their region of Europe to their classmates but also to sell their trip to an imaginary family. During the presentation, students in the audience take notes about the geography, culture, and history being presented.

Assessment and Evaluation of the *Virtually Traveling Europe* Curriculum

Assessment of this curriculum is based on the depth of information students gather and how well they translate and present their information to the rest of the class. Cooperative group work is another essential component of this curriculum, as the degree to which students collaborate and work together to build knowledge is vital to students' success. Observations, interaction, and surveys are conducted to evaluate students'

feelings toward and engagement in geography as a measure of the effectiveness of this curriculum.

Conclusion

VTE is designed to motivate and engage students in learning geography and to teach them skills for exploring this subject. In addition, the ultimate goal of this curriculum is for students to understand the role of geography in their lives and how they can apply this subject in various real-world ways. The constructs of engagement, active learning, collaborative learning, and technology are implemented within *VTE* in order to meet these objectives. The following chapter outlines the details of implementing *VTE* in my fifth-grade geography classroom as well as my revisions to this curriculum.

VI. Implementation and Revision of *Virtually Traveling Europe*

The Setting

The *Virtually Traveling Europe* (*VTE*) curriculum was implemented in a private school in southern California. The small college preparatory school includes approximately 1,100 students, with classes ranging from early childhood and pre-kindergarten to twelfth grade. The school is divided into an Early Childhood Center (ages three to five), a Lower School (grades one to four), a Middle School (grades five to eight), and an Upper School (grades nine to twelve). The school's goals are to instill lifelong learning in its students and to help them develop into productive citizens. The students at this school come from all areas of a large metropolitan area and from a range of socio-economic backgrounds, despite the high tuition of the school. The student body is 73.69% non-Hispanic White, 10.59% Hispanic, 10.59% Asian and Pacific Islander, and 5.14% Black. Approximately 15% of students receive varying degrees of tuition assistance based on the need and financial background of the families. Aided by a low student-to-teacher ratio of 9.5 to one, students' progress is closely monitored by teachers, administrators, and parents. The school generally retains 90% of its students from year to year, while 60-70% of new applicants are admitted each year. Typically, 100% of seniors attend four-year colleges after graduation.

The Middle School separates fifth and sixth graders from seventh and eighth graders by keeping these classes on opposite sides of the Middle School campus. During the year of this study, the fifth grade included sixty-five students divided into four classes, and two of these classes, each with 16 students, were the focus of this curriculum

study. Students attend the Geography and World Culture class four days a week, for 45 minutes on three days and 80 minutes on one day.

During the implementation of this curriculum, I was in my first year of teaching fifth-grade Geography and World Cultures after spending two years teaching third grade in the Lower School. I taught over 80% of these fifth graders when they were in third grade. Within my classroom, I used both traditional and progressive methods of teaching. In line with traditional practices, homework assignments often consisted of reading and answering questions out of the textbook, which would be discussed on the day these assignments were due. The classroom set-up reflected a more progressive classroom, as the seats were usually set up in a "U" shape in which all students could see each other, facilitating participation by each student in daily class discussions. Throughout the year, students often worked in groups (both assigned and student-chosen) to complete various tasks, such as poster projects, mapping activities, and presentations or skits. Within each unit, students usually took a map quiz to name countries and capitals as well as a unit test that covered political and physical features of a continent, as well as the culture and history of the area.

Overview of Implementation

Before outlining the implementation of the phases of *VTE,* it is important to note a defining feature of the curriculum. *VTE* differs from previously reviewed curricula through the incorporation of technology, specifically the Geographic Information System (GIS) of Google Earth (GE), to engage students in a collaborative and active project-based curriculum. GE played a prevalent role during the group research component of this project by acting as an interactive atlas in which students could directly look for the

specific information they wanted. For example, two boys who were studying Northern Europe together learned about Stonehenge through a book about Great Britain; then, using this knowledge, they were excited to look up Stonehenge on GE. Using GE's street view feature, the boys took a virtual tour of this famous landmark, and both commented that they felt like they were actually there. These boys also took GE to another level after finding and touring Stonehenge by browsing the area around this landmark. By using different layers, or information that appears on the map, the boys found nearby hotels where they thought it would be interesting to stay "because the family would probably want to stay at a hotel close to Stonehenge." This string of events was entirely student-driven, as the boys together used GE to actively seek out the information they wanted. GIS technology, such as GE, enabled students to research in an interactive way, which cannot always be done using atlases and books.

If *VTE* merely used this GIS technology for research alone, however, it would not have taken advantage of all of the capabilities this tool offers. When students completed their travel brochures, they then worked together to plan a presentation about their region of Europe. While one aspect of this presentation was to share their travel brochure with the class, another aspect was to supplement their brochure with a virtual tour of their region using GE to present one interesting landmark from each country. Students were given freedom in terms of how they used GE to present each landmark, but they were told that they needed to explain the landmark's significance, why they chose this landmark, and why the landmark would be a good place to visit during the trip. As Deci (1995) suggests, providing this type of choice leads to better engagement than telling students exactly how to present information. With the students' use of GE in their

presentation, I looked at the specific places they chose to share and how well they defended their choices. My goal was for students to demonstrate an understanding of their region by choosing landmarks unique to that region, such as Stonehenge in Northern Europe, and being able to clearly explain the importance of each landmark. In order to choose such relevant places, students had to work together to actively seek out and discuss what they thought were distinctive landmarks.

Implementation Timeline

Table 4 shows a sample timeline of the implementation of *VTE*. This timeline divides *VTE* into seven weeks, which is about the length of my implementation. However, *VTE* may take more or less time depending on the grade of the

Table 4: Sample schedule and timeline of the *VTE* curriculum.

Sample Timeline of *VTE*				
Week	**Day 1 (45 minutes)**	**Day 2 (45 minutes)**	**Day 3 (80 minutes)**	**Day 4 (45 minutes)**
1	*Begin Phase One:* Introduce *VTE*, assign European regions, research	Research European regions	Research European regions	Research European regions
2	Research European regions	Research European regions; organize notes	Research European regions; organize notes	Research European regions; organize notes
3	*Begin Phase Two*: Introduce travel brochure; Begin brochure rough draft	Brochure rough draft	Brochure rough draft	Brochure rough draft
4	Brochure rough draft	Begin brochure final draft	Brochure final draft	Brochure final draft
5	Brochure final draft	Brochure final draft	Brochure final draft	Complete brochure
6	*Begin Phase Three:* Introduce presentation	Plan and practice presentation	Plan and practice presentation	Plan and practice presentation
7	Finalize presentation	Present	Present	Post-project wrap-up

students and their familiarity with conducting research, as this phase was most challenging and time-consuming for my fifth-graders. In addition, planning and creating the travel brochure spanned several weeks for students to complete this task. The rest of this chapter explains the implementation and revisions of each phase of *VTE* in my fifth-grade geography classroom.

Phase One: Introduction and Research

Introducing *Virtually Traveling Europe*. Students created a buzz of excitement throughout their geography classroom as they noticed how it had become the "headquarters" of The Hales Travel Company, Inc. When they came through the doors on the first day of implementation, the students were directed to find their new seats within table groups that had been arranged in four groups of four desks. When I congratulated the students on being officially hired as travel agents, they seemed eager to find out what this job entailed, as demonstrated by their active participation throughout the discussion of the project. Class discussions of students' experiences with traveling (especially trips to Europe) and familiarity with travel brochures helped set the tone for the implementation of *VTE* because students were able to draw on their own experiences while also comparing those with their classmates. For students with limited travel experiences, I inquired about possible family or school day trips they may have taken as well as the types of trips they would be interested in taking and why.

The beginning of this implementation was spent setting up the project and explaining expectations before travel teams were randomly assigned their European regions. Students showed immediate engagement in this project by quickly asking follow up questions to the assignment. For example, in one class the Northern European group,

as well as a few other groups, wanted more information about the family they were planning the trip for in order to cater to their needs. I responded by telling them that they were to design a trip to their region that any family would be interested in going on by illustrating what is unique and interesting about their region.

Once groups had a chance to review the research questions they would be answering about their region in Europe (see Appendix), I demonstrated the features that could be used within GE. Even though students had used GE multiple times earlier in the year, I modeled ways they could used this tool effectively to reinforce the value of this tool. By wirelessly projecting GE onto the white screen in the front of the room, I toured San Diego with the students and showed them how to utilize the different layers of GE. Layers such as Street View, Borders and Labels, and Places of Interest were all demonstrated as tools that could aid students in a variety of ways. I also showed them the Geographic Web layer, which shows photographs of places of interest along with Wikipedia entries. As a class, we discussed how they should be careful in using Wikipedia as a resource because it is not reliable due to the lack of regulation and it is not considered an academic source of information. We also discussed additional limitations to these layers, and students seemed to comprehend the reasons why some features would be more useful for what they were doing. Students were in agreement that GE was much clearer and easier to navigate when fewer layers were turned on, compared to when all layers were turned on. When groups were given a few minutes to explore their region using GE, students' body language and enthusiastic comments showed how interested they were in this technology. Many students seemed to be immediately interested in this project and in their region of Europe as they huddled together around the laptop with

their eyes fixated on the screen and fingers constantly pointing out various aspects of the region and of GE to explore next.

To further engage students in this activity, for homework I asked students to discuss with an adult how they go about planning a trip and what they look for in a trip. In addition, students were asked to bring in any sample travel brochures they found at home. For students or families with limited travel experiences, I suggested imagining how they could plan a trip and what sort of activities they would want to do. Rather than bring in a travel brochure, I gave students the option of brainstorming types of information they thought would be important and helpful to include on a travel brochure. A number of students showed their engagement as travel agents by bringing in piles of travel brochures they found at home. Two boys also had fun turning their homework into an official Hales Travel Company document by finding and using my logo as the heading for their assignment. When students brought their homework into class, they discussed what they learned with their group and then with the whole class. Through this discussion, students found a number of similarities between the information they were given from adults they talked with and the information other students had received, especially in terms of how many of the adults mentioned finding deals and planning trips using the internet on specific websites like Travelocity and Kayak. This information demonstrates how technology often plays an important role in planning trips.

The research. As fifth-graders, my students had little exposure to the research skills necessary for embarking on the type of project they were being asked to do. Therefore, it was very important to discuss with these ten- and eleven-year-olds how to actually conduct research, as in how to read for a purpose and take specific notes, before

having students begin this phase of the curriculum. I related this task of purposeful reading to their experiences using their geography textbook to answer questions from the assigned chapters. I explained to students that rather than reading a reference book, such as the Worldbook (a country-based encyclopedia), from beginning to end, they should start by looking through the table of contents, the index, and various headings to find the specific information they want. In addition to looking for this information, I reminded students that when they found interesting information that related to their search (which was based on the guiding research questions provided) that they were to write it down in language they could understand in order to make sense of the information. I used my own research experiences as an example, by sharing with students how helpful it was for me to always put any notes I took into "Mr. Hales" words in order to better understand them.

Besides reviewing how to do research and actively find information, it was also important to give groups time to discuss their plans for research. Because so much research was being asked of them, I suggested that students devise a clear plan to break up the work so that they were not spending time researching overlapping information about their region while omitting other important information. As an example of how to effectively divide the research, I recommended that groups might split up their research based on countries within their assigned regions. That is, because there were four countries and four students for each region, each student within the group could focus on one country of the region. I also mentioned that students could each focus their research on one of the four specific topics they were asked to address, such as the geography, history, or culture of the region. Again, I allowed groups to choose the research strategy

they felt would be most effective. Once groups had time to become organized, they embarked on the research of their region.

Students demonstrated their engagement in this project when they began their research in the library. The librarian had placed a variety of books about the countries of Europe on a table for my classes to help make the process of looking through relevant books more efficient. In each class, students immediately swarmed to the table to find a book about their region, and there was a constant murmur within groups as students eagerly shared information they found with their partners. However, while many students found important and helpful information from books, a few students in each class had trouble identifying the crucial information. Because of the students' lack of experience in using books to research information, they often needed to be reminded to refer to the table of contents and the index for guidance to find the specific information they were looking for. Despite the additional guidance the students needed to research productively, they were learning important active researching skills.

After two classes of researching with these books, I gave students the opportunity to use laptop computers for their research. With the addition of the laptops collaboration seemed to increase, as did engagement for those students who had been struggling to use books productively. I provided each group with two laptops and told them only one laptop at a time could be using GE, in order to prevent the laptops from having overload problems. I directed students to use the other laptop (or both if the group chose) to look at websites I had provided for them on the whiteboard and on my class website. Most students found the website Culturegrams.com to be a very useful website and they enjoyed learning key phrases in their country's language(s) as well as listening to

national anthems. For example, one Eastern European group noted how to say "hello," "goodbye," "yes," "no," "please," "thank you," and "welcome" in Russian, Slovakian, Polish, and Romanian. This website was especially helpful because it contained a wide variety of important information the students were to research in both a student-friendly version and a more advanced version. Many students utilized both versions of the website, as each offered unique information. In addition to using the internet, groups used GE for research, especially when trying to locate interesting places to stay and to travel to in their countries.

One problem students continually faced when using the internet in the classroom was that the laptops would often disconnect from the internet. My comfort and familiarity with laptops was important in helping students repair these lost internet connections and also in helping students navigate between websites. Each time a student was unable to connect to the internet, I showed him or her how to reconnect, and then I named that student an "expert" in his or her group for whenever the issue came up again. I was pleased to see that when laptop issues later arose in these groups, the "internet expert" student was able to help fix the problem. Throughout the rest of the unit, I continually heard different students eagerly tell classmates that they could fix their laptops as they rushed over to help. Not only did these "experts" develop improved technological skills, but they also took on more leadership roles within their group and the class.

Researching with Google Earth. While students were eager to use GE right away, some discovered that this tool was not as helpful for finding certain information they were looking for, such as historical information about the countries. Other students utilized the different layers of GE to locate well-known landmarks that they had already

researched, such as Bran Castle in Transylvania, Romania, so they could have a better sense of how they related to the rest of the region. Students found this technology especially helpful as they began to think more about planning their trips by looking at possible travel arrangements, particularly hotels, for the family. However, I found it very important to continually ask students *why* they were looking at each hotel, as it was important that students found hotels based on their specific location, rather than simply choosing random hotels. At times, I needed to remind students to remain on task while using GE because some students became too fixated on exploring the technology without a specific goal in mind. The few times when I found that students were aimlessly browsing Google Earth, I asked them what guiding question they were trying to answer and then directed them to a website or a book. I noticed that these students were often ones who were not working collaboratively with their partners, as they were not always clear on what the rest of their group was doing.

Phase Two: The Travel Brochure

The travel brochure rough draft. I hoped that providing teams of students with choices in how they designed their travel brochures would help create engagement and ownership in the assignment. To provide students with a better understanding of what these brochures should look like, I modeled several possible ways they could create their brochures. I also gave students the Travel Brochure Checklist (see Appendix), which outlined the details of all information that needed to be on the brochure. While some groups became more focused on this design than on organizing the specific information to include, other groups exhibited great engagement in working together to develop a

creative way to display information about their region because of the opportunity to design their own travel brochure template.

As groups created this travel brochure template as part of their rough draft, I encouraged students to begin sorting and organizing their research notes in order to determine the specific information they thought was important to include on the brochure. The task of deciphering the most important information from their notes proved to be a very challenging activity for the fifth graders. In order to guide them in this process, I suggested that students try to match their notes to various sections of their travel brochure. I revised the curriculum so that after groups created their detailed travel brochure template, they were asked to enlarge each page on white lined paper as a way for them to add details to the brochure from their notes in a more organized and structured manner. In order to ensure that all groups were on track, it was critical that I sat down to discuss exactly what each group (and each member specifically) was doing at that moment and what they were planning to do next and why. With these individual group discussions, I helped groups devise a more detailed plan of what they needed to do in order to complete their assignment successfully. As a result of these small group discussions, multiple groups revised their travel brochure plans and information to make significant improvements.

The travel brochure and Google Earth. Students also used GE to aid them in planning their trip and brochure. A number of students enjoyed finding places to stay on their trip through using the lodging layer on GE. By utilizing this aspect of GE, students found a number of possible places to stay in their countries. As students found these places, they also searched the surrounding areas to locate nearby activities that were

unique to that country or region. While some students struggled to explain their reasoning for choosing particular hotels and were thus encouraged to think harder about location and other relevant criteria, others easily told me that they chose their hotel for well-researched reasons. Some of the reasons given were because the hotel was right near Stonehenge, for example, or only a quarter of a mile from the beach in Poland, or in the center of Barcelona on the main street with great shops, restaurants, and museums. Even though a handful of students appeared more distracted than focused in their GE use, other students took advantage of the opportunity to use this technology to learn about their European region in a way they could not have done using only atlases and paper maps. For example, it was necessary to use multiple maps in order to find how certain characteristics of a region relate to each other. But with GE, students controlled exactly the type of information they saw on the map. Judging from how they pointed out and eagerly shared the variety of information they found in their map explorations, students enjoyed this interactive nature of GE.

The travel brochure final draft. Once I approved each groups' travel brochure rough drafts, I gave each group a poster board to begin creating the travel brochure final draft. For the final brochure, groups again made choices in how they wanted to present their perspective regions. Using the layout and information from the rough draft, most students and groups created an enlarged version of their travel brochure by typing out their information and searching for pictures and maps online. Students generally found maps for their region online; however, a few used GE to create the exact map they wanted. While groups focused on using typed information and printed photos, the way in which students organized this information varied. The more technologically-advanced

students and groups decided to incorporate pictures within their written pages, while other students created separate written pages and pictures.

Different levels of group collaboration became very evident during this process, as I noticed groups agreeing on features such as using the same font and size of text for each member's part of the brochure. On the other hand, despite my emphasis that students decide on a uniformed style of writing for their brochures, a few groups clearly did not follow this suggestion. Within the pages of these brochures the text consisted of different colors, fonts, and sizes, in addition to an inconsistent format of how information was presented. In addition to the text on the travel brochure pages reflecting the level to which students collaborated during this part of the project, the types of pictures and information they selected also reflected this collaboration. Almost every group included accurate information about the geography, culture, and history of their European region on their brochure, although the detail of this information ranged greatly between and within travel brochures. The groups who were the most successful with their travel brochures were the ones who made it look as if one student had created the brochure. In order to prevent groups from relying on single students to produce the majority of the work, I actively met with each group to find out the specific contributions each student was making.

Phase Three: The Presentation

Planning the presentation. After completing the travel brochure, each group received the presentation plan checklist to help them organize their presentation (see Appendix). As I read through the directions and explained the expectations of the presentation, I modeled examples of engaging and interesting presentation styles as well

as less effective ways to present. For example, I shared information with the students by mumbling into the document I read with my back to them to demonstrate an ineffecitive presentation style, and then I spoke clearly and loudly and looked out at the audience to show how they might better engage their audience.

In planning how to present their European regions, student groups were expected to share their travel brochure as a way to point out key features of their region. In addition, each group was expected to present four landmarks from their region, with each student per group expected to discuss one landmark and then use various aspects of GE to virtually tour the classroom around this landmark. As groups planned their presentations and decided on what they thought were the most significant landmarks of their region, I met with each group to find out which landmarks they planned to show with GE and why they chose each one. Once I approved their choices, I located each landmark and saved the locations on the GE on my laptop so students could use my computer to connect to the wireless projector in my room. I gave the students approximately one week to plan and practice their presentation and, for homework, I expected students to practice their roles in their group's presentation.

The presentation. The time limit allowed for the presentations was fifteen to twenty minutes. Within each presentation, each group member was to explain one page of the travel brochure and one landmark on GE. Within these requirements, groups were free to choose the ways in which they presented their region to the class audience. I used the presentation rubric (see Appendix) as a tool to evaluate the degree to which each student and group demonstrated an understanding of the region as well as how well each student utilized GE during the presentation. Presentation styles varied among the groups

with some creating small skits to present their European region. Also, the students demonstrated a wide range of proficiency with GE, as within many groups a student or two was designated as the computer navigator who would zoom in to each landmark on GE while a partner discussed the landmark. The most common use of GE was for students to zoom in to their landmark and then pull up one or two street view images as well as one or two photos linked to the landmark. Many students also showed their landmark in 3-D, adding even more depth to their explanation of their landmark. However, some groups simply rushed through explanations of their chosen landmarks without showing them in multiple ways.

During the presentations, students in the audience took notes about the key geographic, historic, and cultural aspects of the region being presented. Students also noted other interesting facts they learned about the other regions of Europe. Following the presentations, students in the audience asked clarifying questions to add details to their notes. After all groups had presented, I provided students with approximately five to ten minutes of class-time to browse through their classmates' travel brochures, which gave them an opportunity to add to their notes as they wished. Students then turned these handouts in for me to check to make sure they had been actively paying attention to each presentation.

Summary

Throughout *VTE*, I challenged my students to actively discover interesting information about regions in Europe. I then asked students to apply their understandings by planning the ultimate trip to these regions. In creating travel brochures that celebrated these European regions and presentations that toured them, students demonstrated how

much they learned about Europe. While I enjoyed observing and helping my students become experts about specific places in Europe, I was most excited to see my students engaged in their study of geography as they learned how this subject is applicable in their daily lives. In the following chapter, I elaborate on this engagement that students demonstrated by examining the impact that choice, collaboration, technology, active learning, and authentic exploration had on students in each phase of this curriculum.

VII. Evaluation of *Virtually Traveling Europe*

The overall goal of this project was to use technology, specifically Google Earth (GE), to engage students in making personal connections between geography and the real-world in order to develop a better global understanding. Within this goal, *Virtually Traveling Europe* (*VTE*) combined technology with engagement, active learning, and collaborative learning in a project-based curriculum. Students were to become "expert travel agents" by researching a region in Europe, creating a travel brochure, and presenting this region using GE.

To evaluate how well *VTE* met these goals, I analyzed student work, survey results, and my compiled field notes. The student work I collected included their final travel brochures and their presentation notes. Students also filled out three different "Travel Agent Updates" (see Appendix) during the implementation, which were essentially three- or four-question surveys about the progress students felt they were making as individuals and as a group. In addition to these updates, I conducted a post-project survey about students' overall feelings toward the project as a whole. To triangulate my evaluation, I recorded field notes of my observations and interactions during each phase of the curriculum. I used this data to look for patterns that addressed the effectiveness of this curriculum for meeting my goals. I coded answers to the travel agent updates and surveys to more accurately compare student responses and create quantitative data. Specifically, I examined this data to understand how Geographic Information System (GIS) technology affected engagement, collaborative learning, active learning, and overall geography understanding. In order to evaluate the impact of *VTE*, I focused on the qualitative and quantitative data regarding three specific goals.

Data Collection

In order to assess student achievement of the goals for *VTE,* I used the following six evaluation sources: field notes, travel agent updates, final travel brochures, presentations, post-project survey, and end of the year survey. Table 5 shows how each source was used to evaluate the three goals of *VTE*.

Table 5: Goals that each data resource helped to evaluate.

Data Collection Sources	**Goal 1:** *VTE* will engage students in learning geography through student choice and collaboration.	**Goal 2:** *VTE* will engage students in learning geography through the use of technology.	**Goal 3:** *VTE* will engage students in learning geography through authentic and real-world exploration and application.
Field Notes	**X**	**X**	**X**
Travel Agent Updates	**X**	**X**	**X**
Travel Brochures/Rubric	**X**	**X**	**X**
Presentations/Rubric	**X**	**X**	**X**
Post-Project Survey		**X**	**X**
End of Year Survey		**X**	**X**

Field notes. I took field notes during each phase of *VTE* using the Class Observation Checklist in Figure 3. The focus of these notes was to record how well students researched, how well groups worked together in creating their travel brochures, how well they planned their presentation, and how organized, clear, and informative they made their final presentation.

Class Observation Checklist

Group: **Class:** **Date:**

Observations	**Yes**	**No**	**Comments/Quotes/Observations**
Do students seem engaged in material and on task?			
Is everyone contributing and getting a chance to speak?			
Is there evidence of collaboration/inquiry? What?			
Do students seem to be positive/happy/ excited about project (Y) or seem frustrated/ stressed/confused (N)?			
Interactions	**Yes**	**No**	**Comments/Quotes/Observations**
Can students tell me clearly what they are working on and WHY? Do they all seem to be on the same page?			
Have students learned anything new? How'd they learn it?			
Did the group teach *me* anything today?			
Does the group need extra guidance/support from me? What problems are they having?			

Figure 3: Class Observation Checklist

Within these field notes, I observed the role technology played during each phase of the curriculum. I used my observations and interactions with students to determine their engagement and how well different aspects of this curriculum worked. Through my interactions with students, I assessed how well students were working together and how well students understood the work they were doing. My observations of the final presentation helped me determine the level of understanding students obtained during this project.

Travel Agent Updates. Students completed three Travel Agent Updates during the implementation of *VTE* (see Appendix). The focus of these updates was to find out students' opinions regarding their own and their group's progress during this project. While each update had similarities, the questions students answered varied as the curriculum progressed. These updates were used as both warm-ups and "exit slips," which are final reflections students hand them in before leaving the classroom. As an evaluation tool, I coded student responses from various questions into specific categories, such as feelings about group work, types of information that they found interesting, and favorite aspects of the curriculum.

Travel brochures. The final travel brochures reflected how well groups' work met the three goals listed in Table 5. In order to assess the quality of these brochures, I created a Travel Brochure Score Sheet (see Appendix) to help score this project. The organization, creativity, and cohesiveness of these brochures demonstrated the students' choice and collaboration in creating these products. In addition, the brochures showed the degree of technology used by each group. Finally, the accuracy and relevance of

information presented on the brochures reflected how well students connected with and understood their region of Europe.

Presentations. I scored each groups' presentations according to the Presentation Score Sheet (see Appendix) I created. I used this rubric to examine how well students conveyed key ideas and information about their European region to their classmates. Success on these presentations depended on how well students collaborated, incorporated technology, and demonstrated understandings of their region.

Post-Project Survey. My Post-Project Survey (see Appendix) was designed to reveal students' interpretations of the ways in which technology played a role in their success in this project. The survey also asked students to discuss the research phase of this project. In addition, this survey evaluated the depth of students' understanding through their responses regarding various things they learned about Europe. Lastly, this survey examined the real-world connections to European geography students formed by asking them to report which trip they wanted to go on and also to compare their region to San Diego. This survey was conducted after all groups had presented their European regions.

End of Year Survey. The End of Year Survey, shown in Figure 4, was conducted in the final week of the school year, which was over two months after the completion of *VTE.* Using a Likert scale, students selected from a range of responses to three prompts about the effectiveness of GE during the project. The final question asked students to qualitatively describe their use of GE. I used this data source to analyze students' lasting impressions of GE's role during *VTE* and to understand what students found most helpful about this tool.

End of Year Survey!

The Hales Travel Company, Inc.

Please answer the following questions about the Europe project as honestly as you can.

1= Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5= Strongly Agree

1. Google Earth was a helpful *research tool* during the project. **1 2 3 4 5**

2. Google Earth helped you *better understand* your European region and the information you researched. **1 2 3 4 5**

3. You *enjoyed* using Google Earth during this project. **1 2 3 4 5**

4. How was Google Earth *MOST helpful*?

Figure 4: End of year survey.

Organization of Findings

To evaluate *VTE*, I organized my findings according to my three goals from Table 5. Within each goal, I describe specific findings that relate to that goal using a variety of sources. I end my evaluations of each goal by discussing revisions for improving the curriculum to better meet the goal and by summarizing the overall findings for the goal.

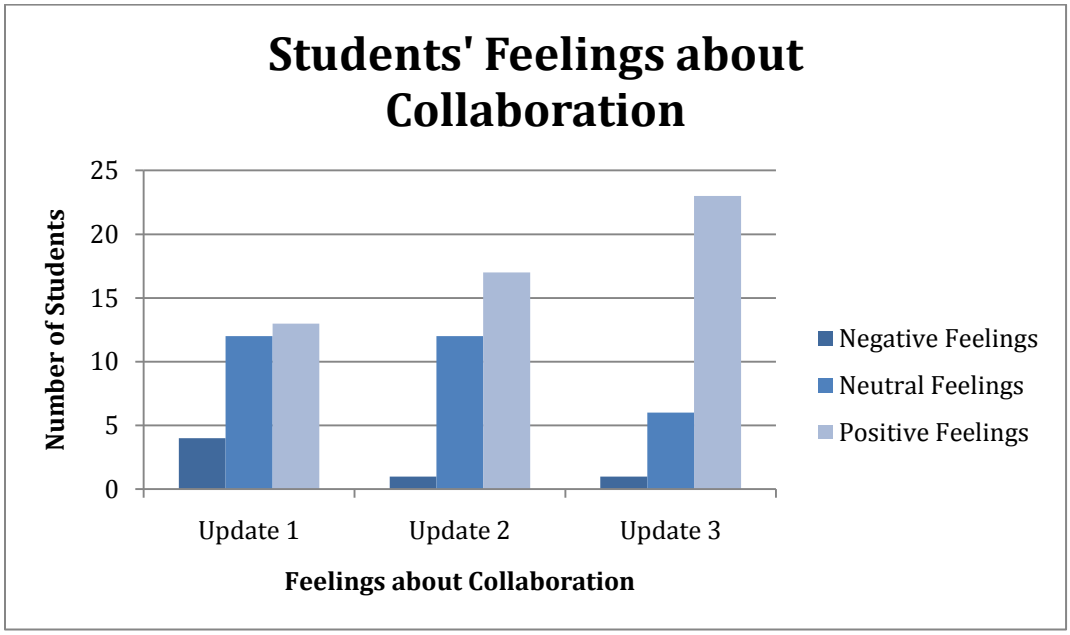
Goal One: *VTE* will engage students in learning geography through collaboration and choice. As described by Deci (1995), students are more engaged when they are provided with choices in the classroom. For this reason, choice was a key component of this curriculum. In Phase One, in which students researched their European region, the goal was to provide students with choices in what and how to research in order to get students more engaged in this process and ultimately improve these research

skills. In Phases Two and Three, groups chose how to present their research on their European region on the travel brochure and in the presentation.

In addition, *VTE* incorporated student collaboration so that students could learn from each others' unique perspectives while producing work that they may not be able to do alone. Wink and Putney (2002) explain Vygotsky's theory of the zone of proximal development as an effective way to increase student understanding through peer collaboration. During the research phase of this project, students were encouraged to work together to better understand the material they learned, and students constantly collaborated throughout their work on the travel brochure and presentation.

Finding One: Working in groups had a positive impact on students' success as travel agents, and groups that worked well together created more cohesive travel brochures. While less than half of the students had positive feelings about collaborating with their partners in the beginning of the project, by the end of the research phase 77% of students named group work as a positive aspect of the project. Graph 2 illustrates how students' feelings about collaboration evolved during the project. As students felt more positive about their group, they also produced better research and felt prouder about their research, as observations and field notes suggested.

Graph 2: Students' feelings about collaboration



The further *VTE* progressed, the more comfortable students seemed to get with their partners and working as a group. This improved comfort led to more communication and positive cooperation between students. Students gained more confidence in the work they produced for the travel brochure while feeling proud of their contributions to their group. By the end of the project, several students even discussed working in their group as one of their favorite parts of the project, such as Brian (all names used throughout this thesis are pseudonyms), who on the post-project survey wrote that his favorite part of the project was "when [his] group was on top of it and [they] all got along." Other students had similar sentiments about collaborating with partners, as they were very excited when their group was able to solve various problems that arose throughout the project. While I did have to address issues that occurred within groups, as Graph 2 reflects, these issues happened less often as the curriculum progressed.

An important outcome of the positive collaboration that happened during *VTE* was that groups produced work that would have been unlikely for individual students to match. As suggested by Vygotsky's zone of proximal development, I observed students accomplish a quality of work more advanced than they may have achieved had they worked alone. Students like Billy, Kristy, Garrett, and Natalie expressed pride in the work they added to their group. Each of these students had struggled throughout the school year producing work they were proud of because many tasks proved to be very challenging for them. However, during *VTE* these students had the support of their partners to help push them through the difficulties they faced. This collaboration positively influenced these students as the quality of the work they each produced for their group's travel brochure was more detailed than much of the work they had completed in previous units.

These positive collaborations directly affected the travel brochures that groups created. One of my expectations for the students' final travel brochures was that they would have a cohesive look as if created by one student. I described and modeled examples of cohesive brochures as ones with clearly organized formats, similar size and font texts, and similar types of information for each country or topic. I continually reminded each group of this expectation as they planned and created their travel brochure. In order for groups to meet this expectation, cooperation and teamwork were essential. Before groups advanced to the final brochure, I addressed the whole class about the importance of being a positive teammate by cooperating and compromising, and as a class we discussed examples of each student could be this type of positive teammate.

Right from the start of the project, many groups seemed to immediately get organized and working productively while other groups struggled to cooperate. Most groups quickly divided up the research of their region so that each student focused on researching one country. Within these groups, very few students were disappointed about their country and students quickly looked through books to find information about the geography, history, and culture of their county.

One student, Nina, was especially unhappy with the way her group divided the research, even through the rest of her group seemed content with their focus. When I asked her why she did not seem very excited about her research, she told me that she did not feel like she was given a choice and that her partners had assigned her a country in their region instead. As a result, rather than taking advantage of the class time to research their countries, this group spent the majority of the period with me discussing strategies for compromise. Unfortunately, this was not the only discussion we had in this group about working together, as conflicts arose nearly every other day often due to miscommunications about the research and the travel brochure. This group finally came together as they completed their final travel brochure; however, because they had so much trouble collaborating earlier, their travel brochure lacked cohesiveness, with all of their writing done in different fonts, sizes, and formats.

The travel agent updates also reflected the feelings and frustrations students in this group had during the project. In the first two updates, members of this group had few positive feelings about the overall progress of the group, as they cited that they did not feel everyone in their group was pulling his or her weight. Finally, in the last travel agent update, all of the students in this group felt they were making more progress on their

project and that they were getting along better. I found that this group did indeed work better together and became more productive at the end of the project, as I noticed more positive collaboration and explicit communication between members of the group. Earlier, some members of the group had expressed frustration about certain partners not speaking up or contributing to their conversations about the project, while the other students felt like their voices were not being heard. This group needed a great deal of direct guidance and direction from me in order to help them communicate with each other and work together to get organized. Their final travel brochure reflected the way this group collaborated, as there were distinct features that were clearly completed by different people; however, the brochure also had a couple of pages that showed improved cooperation. If this group had worked as well together at the beginning of the project as they did at the end, I believe their brochure would have been greatly improved.

The groups who displayed positive feelings throughout the project created the most cohesive travel brochures. Table 6 shows the criteria to determine the cohesiveness of each travel brochure. Using this scale, I assigned each travel brochure a number from zero to three depending on its cohesiveness. I found that four of the eight brochures met my expectations and received a score of three. I gave two brochures a score of two, one brochure a score of one and a half, and one brochure a score of one in its cohesiveness.

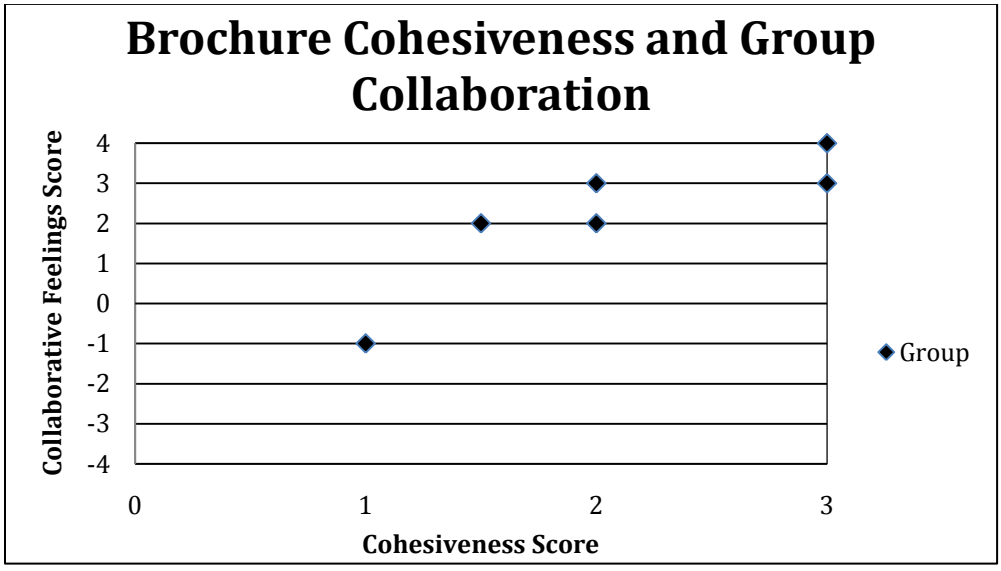
Table 6: Scale for determining cohesiveness of travel brochures.

Travel Brochure Cohesiveness	
0	Brochure is disjointed, has no theme or relation between pages, and was clearly made by four different people.
1	Brochure has few similar features or themes between pages and is not clearly organized.
2	Brochure shows clear organization and theme between each page; collaboration is evident.
3	Brochure looks like it could have been made by one person. Not only is it clearly organized and laid out similarly on each page, but the writing (font, size, and color), maps, and pictures are all similar.

I then compared these cohesive scores to students' responses about their feelings toward group work in the third travel agent update. After compiling these responses according to each students' group, I gave each group a score based on the students' overall feeling they had towards collaboration. If a student expressed positive feelings about working in a group, I added a point; if a student felt negatively about working in a group, I subtracted a point. A neutral feeling resulted in no points being added or subtracted.

Graph 3 displays the comparison between these collaborative feelings scores within each group and the cohesiveness of the group's travel brochure. The two groups in which all members expressed positive feelings towards their group also received the highest cohesive scores of three, while the group with the most negative feelings received the lowest cohesive score. In addition, two of the three groups with a collaborative feelings score of three scored cohesive scores of three. This data suggests a correlation between students' positive collaboration and the cohesiveness of their travel brochure.

Graph 3: Comparing group collaboration with travel brochure cohesiveness



My field notes and observations also reflect similarities in how well groups worked together. Throughout *VTE,* I spent much time working with the North group of class two because they often seemed to be off track. At one point during the research phase of the project, I realized that this group had not clearly divided the work, as multiple students were researching Ireland while nobody was researching Finland. I also reminded the group to focus on their work during the other phases because they were easily distracted. Therefore, I was not surprised by this group's negative feelings towards their collaboration or by the lack of cohesiveness of their travel brochure.

On the other hand, class one's Western Europe group worked well together during this project. Students in this group routinely compromised and communicated with each other, while also being helpful and responsible in their work. During one class, this group had a major disagreement and two of the students, Ruben and Erin, had trouble getting along. However, after talking with this group after class about their issues, they were able to talk to each other about their frustrations and come to the resolution to be more cooperative. I did not need to have any more discussions with this group about working together after this class, and I was happy to see Ruben even helping Erin finish organizing her Switzerland information after he had completed his Germany page. Aside from that one difficult day, the students in this group were among the most supportive as they tended to be quick to compliment each other. Again, it was no surprise to find that these students felt positively about their group and that they created a cohesive brochure.

Finding Two: Students enjoyed having choices throughout VTE, but too much choice led to ineffective or inefficient use of time. The eight student groups created eight very unique travel brochures. While some group's brochures were laid out similarly or

contained similar features, no brochures were identical in presentation of format. By allowing students to design their group's travel brochure however they chose, I received an impressive assortment of styles that represented each individual group. Students demonstrated their creativity as they incorporated features on their travel brochures that I would not have considered to include had I given them stricter guidelines or specific brochure templates for students to follow. For example, the Western Europe group in class one created an actual flight plan that included potential times of departure and arrival to and from the capital of each country as well as the duration of the flight. This information showed the students' understanding of the distance between each country, and these students enjoyed creating this detailed plan that even included specific airlines.

Another group presented the flags and maps of their Eastern European countries in a completely novel way by laying each country's flag below two maps of the country. Of the two maps for each country, one showed the location of the country relative to other countries in Europe, and the other focused on the country and its major cities and physical features. Sarah, the member of the group who thought of the design, was very eager and excited to share this idea with me while describing her plan. As soon as I told her that I liked the idea and that her group could display this information in this way, Sarah sprinted back to her group to share the good news with her excited teammates. The students in this group took ownership of this unique feature, and they showed their pride in this design as they shared it with their classmates during the presentation.

Unfortunately, the amount of choice I provided students during *VTE* was not always beneficial. At times students became unproductive and inefficient due to their greater focus on figuring out the design of the brochure rather than organizing and

processing the actual information that they would be using. This lack of focus would cause students in the group to show frustration, which was reflected in their travel agent updates and in my observations.

A relust of these off-task behaviors and difficulties choosing among so many options, some students were distracted from their primary goals, and the project took longer than expected. Towards the end of the project there were students who seemed to become bored with the project as they felt that it had dragged on too long. By narrowing some of the choices I gave students, I believe that students would have been more efficiently productive, and the project would have taken less time to complete.

Revisions to VTE to better meet Goal One.

Revising the travel brochure rough draft. As this implementation progressed, it became clear that a more structured template for the travel brochure might have been beneficial for students to better organize their thoughts. A possible revision would be to create a few brochure templates (see examples in Appendix) from which groups could choose; groups would then complete the brochure with their specific information about the region they studied. While I hoped that giving students the opportunity to design the layout of their own travel brochure would help them organize their notes in ways that made sense to them, I found that this was a component of the project that could have been omitted because it took much longer than expected for students to agree on how to plan out their brochure. By providing a few different brochure templates, groups would still be able to have a choice in how they present their region, but they would also have more structure in organizing their research notes to fit within this template. Incorporating this

template might also help students collaborate more on how the information they found could fit into the brochure.

More student editing and revising final draft information in class. Because students proved themselves to be so technologically capable, this technology could be better utilized within the classroom to improve the cohesiveness of groups' final travel brochures. Students could either email their written work to themselves or to me, or they could bring in a USB key with their saved work in order to upload their drafts onto the school laptops. Once students within a group bring in their work, the group could then edit the writing to create a unified and cohesive brochure with all similar fonts, sizes, colors, and styles. A couple of the groups who had the most cohesive brochures incorporated this concept in some way, suggesting that this type of structuring could prove to be beneficial to students' success.

Summary and discussion of findings for Goal One. Collaboration and choice can have tremendous benefits on student learning, especially within a project-based curriculum. Both collaborative learning and choice impacted students' success during *VTE*. Students enjoyed working with partners to research their group's European region, design and create their travel brochure, and present their region, and this group work helped most students be successful in this project. In addition, the groups that worked better together also had more cohesive travel brochures. By having ample choices throughout this curriculum, students were engaged in each phase of the project and were especially creative in their designs of the travel brochure. However, at times too much choice led to students having trouble staying focused and on task. Providing travel brochure templates would likely keep students more focused on organizing and analyzing

their research, and using more class time to work on final draft information in groups would help groups create cohesive travel brochures more consistently.

Goal Two: *VTE* will engage students in learning geography through the use of technology. To many students, using technology comes very naturally. Unfortunately, too few teachers have been able to successfully use technology in the classroom in a way that gets students excited about learning. Mishra and Koehler (2006) found that when teachers combine an understanding of technology with knowledge of pedagogy and content, they can create an ideal learning environment for their students.

Technology was utilized in different ways throughout each phase of *VTE*. In Phase One, students used technology to research their country or region. On their travel brochure in Phase Two, students used technology to type and share their information and to find interesting pictures and maps for their brochure. Technology played a central role in students' presentations during Phase Three.

Finding One: Technology played an integral role in VTE, and students enjoyed learning new technological skills applicable outside of the classroom. To begin this project, I took students to the library so they could use a variety of print resources to research their European regions. Even though students immediately asked to use computers for their research, I stressed the importance of knowing how to use books for research. After two full class periods of using only print sources to gather information, students began to use the class laptops to add to their research. I gave students choices in how to use the computers to research, but I limited these choices to a handful of specific websites and GE. For the next couple of weeks, students employed all of these different resources to learn about their European region.

While some students preferred researching with the books, most students favored researching with the laptops. Through my observations and daily interactions with my students, it was clear to me that students were very comfortable navigating the internet for important information about their countries. In addition to my field notes, students' responses in the post-project survey regarding which resource they found most useful during this project supported my observations. Of the thirty-two students who took the survey, I actually received forty responses because some students named more than one helpful resource depending on the sort of information they were looking for. Students found technology to be most helpful in their research, as 72.5% of students named either an internet website or GE as their preferred research tool. About two-thirds of these respondents named different internet websites as the most useful resource, while about one-third of these students felt that GE helped them the most with their research.

Technology not only played a very active role during the research phase of *VTE*, but it was also an important part of Phases Two and Three. As groups worked on their final draft of their travel brochure, they used technology in many different ways. Many students used their experience with computers to type their information for the travel brochure and format this information with related pictures. Students also found and printed many interesting pictures and maps from the internet that were relevant to their region.

An unexpected use of technology employed by many students involved sending their work via attachments to email either to themselves or to me from the classroom or from home. A few students were familiar with this technique, but I also needed to show many students how to attach documents to their email. With this strategy, students had

the freedom to work on the same project wherever they had access to the internet. By sending information back and forth to themselves, students also had more opportunities to edit and revise their work, which became especially useful for groups to make their brochures more cohesive. Some students, such as Diane, even used email to communicate with their partners out of school.

During each group's presentation of their European region, students applied GE as a visual tool. Groups spent time in class practicing navigating around this tool and exploring their countries for important and interesting landmarks to share with the class. Students utilized a variety of features of GE, such as 3-D buildings, Street View, and panorama photos to present their region.

Students enjoyed using the various technologies, including GE. When asked on the end of the year survey during the final week of school if they enjoyed using GE during *VTE,* approximately 60% of students agreed that they enjoyed using this technology during this project. Many students told me about their continued use of GE after the conclusion of the project as they downloaded this tool to their computer at home. During a mapping activity about Asia at the end of the year, nearly two months after using GE to study Europe, Jake told me that he thought this technology was the easiest tool to help with labeling blank maps.

While technology, and especially the use of laptops and the internet, played an important role throughout *VTE*, at times the problem of a lost internet connection occurred. This lost connection prevented students from browsing the internet for research, printing documents and pictures for the brochure, and practicing on GE for the presentation. To address this frustrating issue, I modeled how to repair the connection as I

demonstrated GE for the class. In addition, as issues with internet connections arose, I showed individual students how to fix this problem. These students then became local experts in repairing these connections for their classmates. Multiple times I observed students jumping out of their seats exclaiming that they could help as soon as they overheard a peer asking for help fixing their laptop connection. This skill, along with knowing how to attach documents to emails, will be useful to students beyond the geography classroom.

Students also explained how computers and technology could help the study of geography in their responses to this question on the post-project survey. Of the thirty-two students who answered this question, approximately 56% responded that using the internet can help to teach about another place and culture. Half of the students named online maps, such as GE (34%), as helpful ways to see what other places look like without actually going there. Within the study of Europe during *VTE*, technology took on many different roles to engage students in a variety of ways.

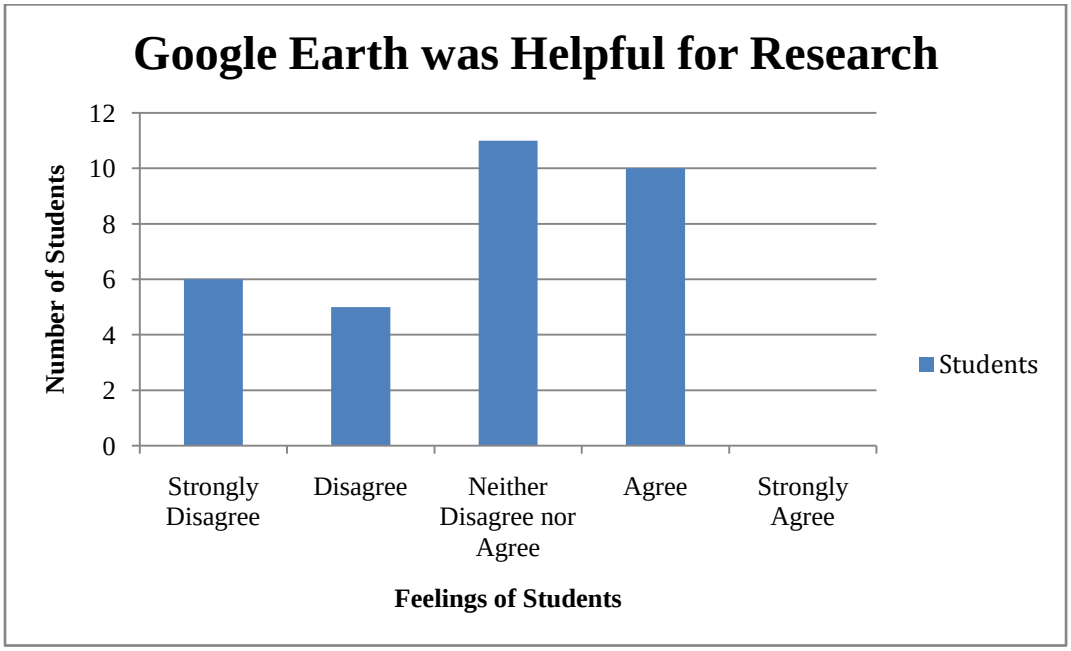
Finding Two: The effectiveness of Google Earth varied depending on how it was used. Students used GE throughout *VTE*. In Phase One, GE was one of the many resources available to students as they researched their European region. As students created their travel brochures in Phase Two, GE was used to add more detailed information and to print maps and pictures of their region. Finally, GE was a key component during the presentation in the final phase of *VTE*. While most students enjoyed using GE, this tool was not always effectively used to enhance learning.

Depending on the information students were looking for, GE had varying degrees of effectiveness as a research tool. To find and learn about the geography, history, and

culture of countries, many students had difficulty navigating this tool. However students successfully utilized different features of GE to find certain information, such as possible hotels people could stay at and which hotels were located near important landmarks. Students used GE to compare locations of famous landmarks they had found, and they used the Wikipedia aspect of GE to learn more background information about each of them. Students were advised, however, to avoid the Wikipedia feature because it is not considered a reliable research tool. Students often reverted back to internet websites or books in order to complete their research.

My observations about GE's effectiveness for research were supported by students' responses on the end of the year survey, in which I asked students if they believed GE was a helpful research tool during *VTE*. Students were clearly divided in how helpful they thought GE was for researching their region, which is evident in Graph 4.

Graph 4: Effectiveness of Google Earth as a research tool during *VTE*.



Approximately one-third of students agreed that GE helped them research, approximately one-third disagreed, and one-third neither agreed nor disagreed for various reasons. Another piece of this data that stood out was that nearly one-fifth of the thirty-two respondents strongly disagreed with this statement but nobody strongly agreed that this tool was a helpful research tool. Based on student feedback, adjustments may need to be made to the curriculum in order to incorporate GE more effectively as a research tool.

Groups used GE in different ways as they constructed their travel brochures. Students mainly used this tool to help them better understand their European region as they organized and process their research. My field notes indicated that students commonly used GE to find and print pictures and maps to use on their travel brochure. In addition, I found that GE helped students better understand their regions and countries as they could explore and visualize unique features and landmarks with a simple click of the mouse by zooming in closely or using Street View. Students also used GE to compare the distance between their countries and to explore the locations of their chosen landmarks. When students were asked on the end of the year survey to name how GE was most helpful during this project, 75% of the thirty-two students named an aspect of GE that helped them visualize their countries, such as seeing a country's location relative to other countries in Europe, to look closely at the various physical features, hotels and landmarks, and to explore their countries in a first-hand way. This improved understanding of their regions helped students create travel brochures with detailed information about specific places to see and ways to travel.

The group presentations of their European regions were the final phase of this curriculum. I expected GE to have its greatest impact during the presentation phase of *VTE*. However, I found that this tool was not used as effectively as I had anticipated. I believe that my directions for the presentation led students to focus more on presenting their region through their travel brochure than with GE. Additionally, I granted students much choice in their presentation style, as previously discussed, which diverted students' attention away from practicing presenting with GE to presenting their region through a creative skit.

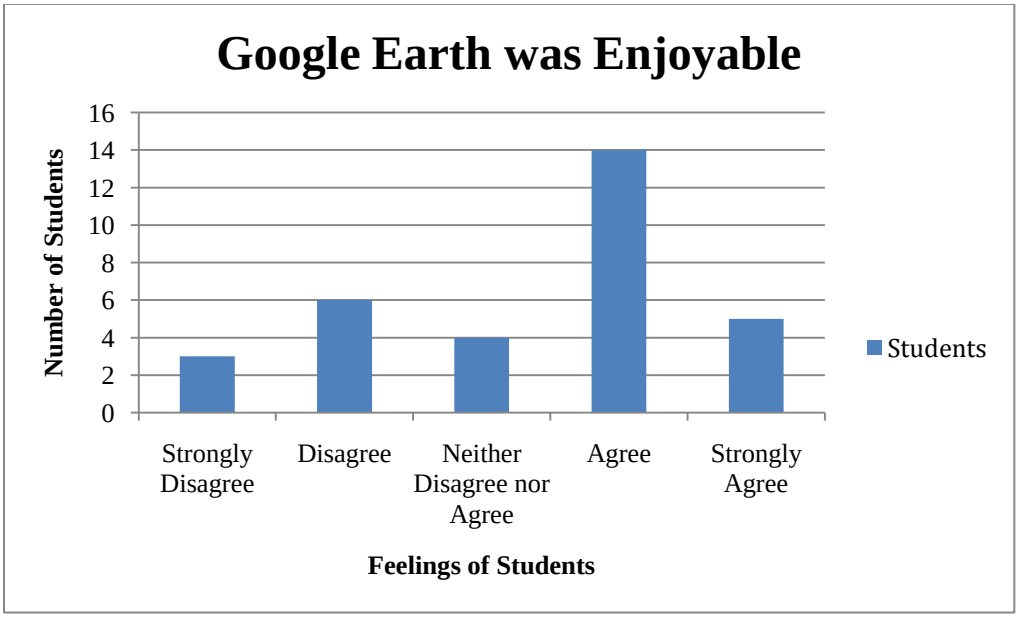
My hope for the presentation was for groups to use GE to to take the rest of the class on a virtual tour of their region of Europe, but many groups focused their presentations more on explaining each page of their brochure rather than zooming around Europe with this tool. A few groups ended up spending so much time presenting their brochure that they had to rush to quickly display their chosen landmarks in a limited, unorganized, and uninformative way. It was clear from many of the presentations themselves, as well as the class time used preparing and practicing for the presentations, that the use of GE in the presentations was an afterthought for many of the groups.

The groups who utilized GE most effectively in their presentations tied in their tours of each landmark with their discussion of their travel brochure. As one student described aspects of a country as shown on the brochure, a partner would use GE to display the landmark they chose, from this country in the background. These groups did well explaining why they wanted to show the landmarks they chose and they also used multiple GE features to share their landmarks, such as Street View, 3-D buildings, and panorama pictures. While students' GE presentations of their European regions did not

provide virtual tours around Europe as well as I had hoped, there were aspects of these presentations that led me to believe that revisions to the presentation directions could make a considerable difference.

Regardless of how much students thought GE helped them throughout each phase of *VTE*, it was clear that the majority of students enjoyed using this technology during the project. I observed student engagement in exploring their regions together as each member of the group would routinely hover over a laptop to see different views of their countries. Graph 5 illustrates students' positive feelings towards using GE, as nineteen of the thirty-two students surveyed agreed that they enjoyed using GE.

Graph 5: Students' enjoyment using Google Earth.



Nevertheless, I found some problems and limitations using GE as a classroom application. One problem was that the tool tended to have technical difficulties in that it would freeze if too many laptops were logged in to GE at once. To address this problem,

I only allowed one laptop to be using GE at once within each group so that no more than four laptops would be exploring GE at any time. In addition, laptops would periodically lose their internet connections, which would also freeze GE or cause GE images to be blurry. Students expressed frustrations about these issues, which often led to them to shy away from using GE more. Even though we had used GE earlier in the school year and I had reintroduced this tool at the beginning of the unit, students lacked an understanding of how to effectively utilize all GE features. Students' unfamiliarity with GE tools limited the effectiveness of this technology as a both a research tool and a presentation tool. Increasing students' prior knowledge of, and familiarity with, the capabilities of GE before embarking on this project and adjusting my directions for the presentation to focus more on GE would likely have enhanced GE's role in *VTE*.

Revisions to VTE to better meet Goal Two.

Revising the instructions for the presentation. As previously mentioned, during the presentations groups focused more on presenting their travel brochure than on presenting their European region through a GE tour. Therefore, when groups presented their chosen landmarks on GE they were often unclear or unorganized in their presentation. Also, groups were given a time limit within which they needed to present their entire travel brochure as well as an important landmark from each country, which quickly limited how thoroughly students presented their regions. In addition, students could choose how they presented their region, leading to a range of presentation styles from creative but sometimes off-topic skits to simply talking through the details of each page of the brochure.

Revising the instructions for the presentation component of *VTE* would likely improve the effectiveness of students' use of GE. Placing the emphasis more on GE then on the brochure could push students to further explore GE's features and practice presenting with this tool. Eliminating the presentation of the travel brochure would also help students focus their attention on creating the tour of their region through GE. More time could be provided following the presentation for students to explore other groups' brochures without groups having to actually present them. This type of gallery walk-through approach would allow students to look closer at their classmates' brochures in a way that they could not through the presentations.

Another element that could be added to improve the presentation would be to have students create a GE video, in which they record the process of "flying" around their European region and zooming in to different views of their landmarks. This process would add time to the planning and rehearsing of the presentation, but it would likely help groups to better focus and control how they provide virtual regional tours for their classmates. In this approach, students could either record scripted audio with the video or they could present information about their region to the class verbally during the GE video. Implementing the presentation in this way would require more explicit teaching of how to utilize this tool in GE.

Summary and discussion of findings for Goal Two. Technology played an integral role in each phase of *VTE*. Embedding various technologies within the curriculum helped engage students in their learning of Europe. In addition to learning new information in geography, students developed new technological skills that could be

applied in and out of the geography classroom. I believe that incorporating technology in *VTE* enhanced students' learning of Europe.

In developing this curriculum, I expected GE to be an engaging and informative tool for students to learn about Europe in a hands-on way; however, this technology was not as consistently effective in its classroom application as I had hoped. GE had limited functions as a research tool, as students had difficulty finding key information about their European region through this tool alone. Instead, students found GE helpful when used to look closer at their region to enhance their understandings. Students used GE to varying degrees as they created their travel brochures. Finally, the GE aspect of the presentation needs revisions in order to incorporate this tool more successfully. By focusing their presentation to exclusively use GE, students would likely be more comfortable, skilled, and successful in using this tool. While weaknesses in the application of GE in the classroom emerged during the implementation of *VTE*, I believe this technology has great potential for engaging students and improving their understanding of geography.

Goal Three: *VTE* will engage students in learning geography through authentic and real-world exploration and application. In order to prepare students to become productive global citizens, it is important to teach them how they relate to different cultures of the world. Wiggins and McTighe (2005) and Zemelman, Daniels, and Hyde (2005) emphasize making school relevant to students by teaching for understanding rather than for simple knowledge. These researchers and many others have stressed the effectiveness of teaching for depth, not breadth, of a subject because "in-depth inquiry activities will help them [students] to make meaning from the information they encounter" (Zemelman, Daniels, & Hyde, 2005, p. 176). In addition, activities that

have authentic real-world applications, such as role-plays and debates, can also be effective in helping students understand how a subject is relevant and important to their own lives.

Students in *VTE* took on the roles of travel agents for The Hales Travel Company, Inc., with the job of planning the ultimate trip to a specific region of Europe. In transforming the classroom into a travel agency and hiring students as official travel agents, my goal was to make the students' study of Europe come alive. Through the planning of a trip, students could see how geography plays a role in their own lives. In addition, by assigning the roles of travel agents, I wanted students to learn how geography is applicable in the real-world through this example of an occupation in which geography is embedded.

Each phase of *VTE* was designed to push students to form these understandings and connections to the real-world application of geography. Through the research component of Phase One, students investigated their countries deeply in the specific areas of geography, culture, and history to develop understanding and become "experts" about their region of Europe. Creating the travel brochure in Phase Two was designed to have students analyze, manage, and apply their research as they determined how to display this information on their brochure. By presenting their region in Phase Three, students shared how they used geography to interpret the past and present of their European region.

Finding One: Students enjoyed actively exploring Europe. As soon as I officially "hired" my students as my new travel agents for The Hales Travel Company, Inc., the classroom commotion reflected students' excitement for *VTE*. The first day students began researching their European region, many continued to relate their research

back to their new job as travel agents, as they often told me that they deserved raises in pay for their hard work. Erin even said that being a travel agent was her favorite part of the project on the third Travel Agent Update because "it is just fun planning trips." By the end of the project, students asked where we were going to travel next and if they were going to be hired as travel agents again.

In compiling and analyzing students' responses to the final question on the post-project survey, I noticed a common trend as students explained reasons for choosing their favorite part of their Europe study. While students' choices varied in the part of *VTE* they enjoyed the most, many of their reasons for their choice were very similar. These responses reflected that students enjoyed their Europe study, and the different aspects of *VTE* they named showed how the curriculum met the needs of the diverse learners because students could connect to the phase of the curriculum most meaningful or interesting to them. Among the most common reasons for choosing a particular part of *VTE* as their favorite, students cited that they had fun exploring and learning about new places and that they felt like experts. Figure 5 lists a sample of the student responses to this survey question to illustrate further how and why students enjoyed actively learning about Europe.

	Students' favorite part of *VTE*
Student	Response
Erin	"I thought presenting was fun because you got to tell the whole class all about your brochure and just get all of the info. Out of you!"
Danny	"I loved learning about everyone elses countries because I think it will be handy in our jobs"
Darren	"My favorite part about this project is the researching because its fun to gather your knowledge up and feel like you're an exepert."
Stephanie	"I love doing the research because, you usually learn something new every time you research it's really really cool."
Mark	"I really liked the finding of the pictures. I liked it because you get to explore for stuff and cool photography. decorating your brochure is also fun."
John	"My favoriot part was getting the research because I did a lot and I was proud of myself."
Veronica	"My favorite part of this project was designing the brochure because we came up with a good design and it was fun testing the different possibilities."
Diane	"My favorite part was to make the brouchure. I thought it was an artsy and fun way to show off all the work we did."
Rusty	"I like using Google Earth because I got to explore different places in Russia that I didn't even know existed."
Zoe	"I liked planning out the brochure. Our group was very creative and worked together well. I think the brochure turned out great."

Figure 5: Students' favorite parts of *VTE*

The students' responses in Figure 5 demonstrate that the part of *VTE* they enjoyed the most was when they controlled their work. Students enjoyed the active aspects of *VTE* in which they explored Europe through a variety of hands-on methods. From seeing other countries in new ways to constructing their brochures in ways that made sense to them to sharing with their classmates all they learned, students not only had fun during this project, but they were also proud of their accomplishments.

The enjoyment that students exhibited throughout this project and their feelings of pride were evident in the high quality of work they produced on their travel brochures

and the detailed information they presented. In observing the students during each phase of *VTE*, it was clear that they enjoyed this project-based study of Europe. Following the introduction of the project, students began their research in the library. Once the librarian finished explaining the wealth of library resources available to the students, she allowed them to find books relating to their countries that she had placed on a table. Students immediately rushed to the table to find a book about their assigned countries, and they were quick to share interesting information with their partners and with me. I saw many students smiling as they showed their group pictures from their country, and I heard a constant buzz from each group of students. Danny was especially interested in the books about popular foods in his country, as he read and shared about all of the chocolate and cheese in Switzerland. On the third Travel Agent Update, around the time that students were moving from their research to their brochure, Danny mentioned that his favorite part of the project was "that [he got] to learn so much culture because [he loves] learning about Switzerland." Other students showed strong interest in researching their countries because of their prior experiences of having traveled there. I heard several students tell their classmates about their own trips to various parts of Europe, and many of these students expressed their excitement about connections they made between their research and their experiences.

While working on their travel brochures, students were fascinated by organizing their research and by pictures of their countries. According to their responses on the third Travel Agent Update, students like Elizabeth had fun putting the brochure together because it was "cool to see how [their] brochure [was] going to turn out," while Sally "liked to do all the planning" of the brochure. By relating these types of responses to my

observations of students' work on their brochure, I believe that students enjoyed actively applying their research to the creation of their travel brochure. For example, the students in the Southern Europe group in class two were so excited about completing their final travel brochure that they started singing "The Final Countdown" together. This group was also very proud of the work they produced as they told me that they had created the "best travel brochure ever!" The final score this group earned on their brochure reflected that this was indeed one of the best.

Students also showed enjoyment of the presentation phase of *VTE*. One way that students demonstrated this feeling was that each group immediately got to work, often before class even officially began, planning and practicing their presentation without instruction from me to do so. Students did not only have fun creating their presentation, but they also enjoyed and were impressed by the presentations of their classmates. As groups shared their European region on GE, audience members admired the unique images being displayed.

Finding Two: Students applied understanding of geography to the real-world. A general question on the post-project survey asked students why geography is or is not important to study. When I posed this question in the first week of school, almost every student agreed that geography is indeed an important subject to learn. However, many of these students had difficulty articulating support for their feelings. After asking this question following the completion of *VTE*, I found that students not only agreed that geography is important to study, but that many also cited multiple reasons for their claim. Of the thirty-two students who answered this question, twenty-six agreed that geography is important to study, while only one student thought it is not an important subject to

learn; five students cited reasons why geography is and is not important depending on various factors, such as occupations. Among the twenty-six students that answered that geography is important, five distinct categories emerged to support this reasoning (some students named more than one reason): to learn about what other people and places are like (twenty students), to know about the world (ten students), to plan trips or vacations (eight students), to get a job or for a job (eight students), and to know how to use maps (three students). These student-generated reasons for the importance of studying geography demonstrate their ability to apply their understanding of geography to the real-world. Furthermore, the fact that 77% of students explained geography to be important in order to learn about different cultures of the world reflects their understanding that geography is about more than learning maps and countries and capitals.

As *VTE* progressed, I found that students became more aware of the ways in which geography surrounds them on a daily basis. Through the process of planning trips to Europe, many students shared their interest in actually going to these places on a real trip. Students learned about the many resources available to them to learn about other places when they travel in the future.

Additionally, the 2010 Winter Olympic Games happened to coincide with this Europe curriculum, and so students were very excited to see the counties from their European region win medals. Many students routinely came to my room before school to tell me that their country had won a gold medal the night before. Other students entered my classroom and immediately approached the whiteboard that displayed the top fifteen countries with the most medals in the Olympics. Some students were disappointed to find that their assigned countries had fallen in the rankings, while others were excited when

their countries moved higher in the list. Students, especially of the Southern Europe groups, were quick to acknowledge a discrepancy in the medal standings. While as a class we recognized many European countries winning many medals, these medals were not divided evenly across the regions of Europe. These facts generated discussions about why so many European countries were doing well in the Olympics and also why some European regions did better than others.

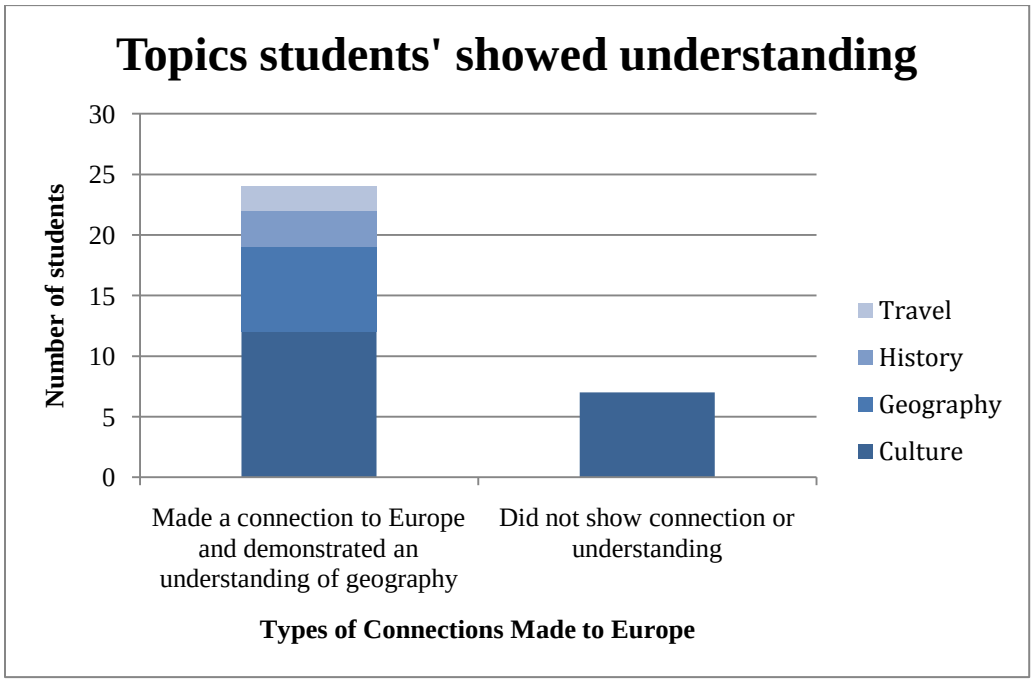
In our discussion of why countries of this continent did well in the Winter Olympics, students explained that many of these countries are in located in northern latitudes and have colder climates. In addition, students cited countries like Norway, Switzerland, and Austria as doing well in skiing events because of the mountains located in these countries. Students also shared that winter activities like cross-country skiing, curling, and ice hockey were popular in the cultures of these countries. Other students told their classmates that they had learned about the Olympics being held recently in the country they researched, such as Norway in 1994 and Italy in 2006. In the end, students decided that climate must play a role in a country's success at the Winter Olympics because European countries, as well as countries like Canada, the United States, and China, are located well north of the equator and have more seasonal weather than countries with warmer climates in South America, Africa, and southern Asia. Students applied their understanding of Europe and geography to the real-world success of countries in the Winter Olympics.

Students studying Southern Europe complained about the lack of Winter Olympic medals won by countries like Italy, Spain, Portugal, and Greece. When I asked students to explain the climate of these Southern European climate countries, they compared it to

that of southern California. These students also looked at how European mountain ranges like the Alps essentially separated Southern Europe from other European countries. As a class, students applied their understanding of geography and of Europe to an impromptu discussion about why some countries win more medals than others during the Winter Olympics.

Another way that students demonstrated their understanding of the geography of Europe in relation to the real world was through their responses to the first question on the final Travel Agent Update. This question asked students to name the most interesting thing they had learned about Europe to that point. Graph 6 illustrates how these answers could be categorized into the four specific areas students researched, such as the region's geography, culture, history, and travel.

Graph 6: Students' understanding of Europe.



As the graph shows, about 80% of the thirty responses connected an interesting fact to a key aspect of our geography study, while only about 20% of student demonstrated weak understandings. Overall, students were able to apply what they learned about their European region to their understanding of geography as a whole.

Approximately 40% of students reported the strongest interest and understanding in the culture of Europe. For example, Mark enjoyed learning that "England developed soccer, boxing, tennis, and golf" because he is very interested in sports. However, other students made different connections relevant to their interests, like Nina, who found that people in Slovakia "tend to dress very fashionably and care a lot about their appearance." In Figure 6, I show how some students, like Danny, Stephanie, and Brian, named cultural taboos as interesting things they learned; during their presentations, these students also warned their classmates to avoid these taboos if they visit their countries. Examples such as these illustrate how students related what they learned to the real world.

Cultural Taboos of Europe	
Brian	"I learned that in France that it is impolite to do a fierce handshake."
Danny	"The most interesting thing I learned about Switzerland is that asking for salt and pepper is an insult."
Stephanie	"That in Italy it is rude to take off your shoes in front of someone."

Figure 6: Cultural taboos learned by students.

Even though most students exhibited an understanding of their European region in relation to one of the key areas of our study, a few students wrote vague responses about what they had found interesting, such as Lisa who cited "its [Europe's] culture and how it

is different from ours," and Sarah who stated that she didn't know what was most interesting because "all of this information [was] very neat."

Finally, by providing travel information on their travel brochure, students made real world connections in their jobs as travel agents through their research of possible hotels and ways to get around in their respective regions. As discussed previously, one Western Europe group listed an authentic flight itinerary that they had created on a travel website. This itinerary included flight departures, arrivals, and durations, as well as layovers. Other students were excited to find quality hotels in famous cities and near interesting landmarks. Several students looked up hotel reviews to ensure that they were finding the best accommodations for their clients. I even overheard Zoe explain to her partners that they should make sure that the hotels they find are "nice but affordable," which reflects how she related this project to ways that people in the real world plan their trips. On their brochures, students did well matching the hotels they chose to relevant interests of their region. For example, in Switzerland and Norway, students recommended staying at ski resorts because skiing is popular in these countries. In the Southern Europe group from class two, students named hotels that were close to the beach so clients could easily "kickback and relax at the beach." These types of recommendations illustrate how students applied their understanding of geography to the real world, thereby supporting Goal Three.

Revisions to VTE to better meet Goal Three. While students seemed to learn about the geography of Europe and how this knowledge is applicable to the real world through tasks such as planning a trip, *VTE* could be revised to help even more students connect this unit to relevant real-world applications. One way to make this project more

authentic and help students understand the real-world applications of geography would be for students to plan the Europe trip for a specific client. This client could be made up of a family with specific wants and needs, or it could be someone the students know, such as a school administrator or teacher and his or her family. In addition, these families could be specific for each region, or each group could plan a trip for the same family, who would then choose one of the trips based on the groups' brochures and presentations. By planning a trip for a specific family with children of particular ages and unique family interests, students might better understand the relevant connections between their study of Europe and the real-world applications of this knowledge.

Another way to possibly enhance these connections would be to provide roles other than travel agents, especially because few people today hire travel agents to help plan trips. Therefore, students could take on different roles within this curriculum and continue to meet my goal of engaging students through authentic real-world explorations and applications of geography. For example, I could hire students to be tour guides of their region of Europe. In this role, students would guide tourists around their region of Europe and explain and show various facets that make the region unique. Students could even dress in clothing that is specific to that region of Europe.

A different adjustment to the jobs of *VTE* could be for students to become journalists investigating their region of Europe and then reporting back their findings to their boss, who could be an editor, world traveler, or even a diplomat. Through this job, students would be expected to research similar aspects of Europe, but with a different focus than planning a trip. Instead, students could be investigating important

characteristics of their region to possibly prepare their boss for a potential business trip to that area.

Summary and discussion of findings for Goal Three. Transforming the classroom into a new environment based on a specific unit can engage students in learning geography while also showing them how this subject is relevant to their everyday lives. By focusing this project-based unit around the concept that students were travel agents working for The Hales Travel Company, Inc., I helped students understand the real-world applications of geography in their own lives. In their roles as travel agents, students developed authentic experiences for the ways geography is commonly used. In addition, their active exploration of a European region engaged students in this curriculum and helped them develop deep understandings of this European region.

While students named a variety of favorite components of *VTE*, their reasons for their choices were similar. Overall, students' favored activities that were engaging and ones they felt they could control. Students also demonstrated their enjoyment of this curriculum throughout each phase. By enjoying working as travel agents and actively researching their European region, students were engaged in learning geography as they recognized the ways in which geography is relevant to our lives in a myriad of ways.

Final Thoughts

The *VTE* curriculum attempted to address issues in students' geography understanding and effective technology use within the classroom. By incorporating technology with collaborative learning and active learning in a project-based curriculum, my goals for this curriculum were to engage students in developing a more in-depth understanding of geography and its application in the real-world. The specific

Geographic Information System (GIS) technology of GE was used throughout this curriculum as a tool for students to research, analyze, interpret, and present information about a region of Europe. In addition, *VTE* aimed to develop research skills in beginning researchers. Field notes, surveys, and student work suggested that collaboration was an important component of this curriculum, as groups who worked well together were also more productive and created more cohesive travel brochures.

The three phases of *VTE* were developed to build upon each other. Students first became familiar with GE during their research of their group's European region. Students also actively researched their group's region of Europe in order to become "experts" who could plan the ultimate European trip. The component of collaboration was an important aspect of this first phase in order for students to immediately get organized. Groups who quickly divided up their region for research, such as the Eastern Europe group in class one, were not only more productive and organized in their research, but they also had fewer social and academic problems arise during this unit. In contrast, groups like the Eastern European team in class two did not communicate and collaborate effectively and clearly early in Phase One of *VTE* and often stumbled in their research and were more inclined to become less engaged and productive in their research.

Students learned the values and effectiveness of GE while also realizing its limitations, especially as a research tool. GE may have been more effective throughout this unit had the students had more exposure to it throughout the school year. While students were familiar with GE having explored the world with this tool multiple times during the school year, they were not all proficient enough using it independently to be as

successful as I hoped. Students could have also benefitted from more modeling and direct instruction in effective uses of GE.

In regards to the presentation, had the students focused less on their travel brochures and more on incorporating GE in a meaningful way, this technology may have been more successful as a presentation tool. In the future, limiting or eliminating the time spent presenting the travel brochure will enable students to focus their attention on presenting through GE. It was clear that groups became more concerned with sharing their travel brochure than with using GE to present their European region. More direction in making GE the main feature of their presentation would likely have made the students' virtual tour of their regions clearer.

While GE was the primary technology focus of this project, students improved their technological understanding as a result of their computer use in class. A common issue that arose when using computers in the classroom was the loss of wireless internet connections. After a few students were shown how to repair this problem they were able to then help others as they were deemed class "experts." Along with learning how to deal with this computer problem, students also learned how to attach documents to their email so they could continue to work on the same document at school and at home. Because of the capability students showed in emailing documents, this area could be incorporated more in the future. Students could potentially work more cohesively as a team on their final brochure by editing each other's work in class and creating a uniform font and format in their writing.

As Patterson (2007) and Doering and Veletsianos (2007) recommend, GE certainly has potential as an effective tool to use in the classroom. Students were very

engaged in using GE. However, as this project demonstrated, GE must be used strategically in order for students to get the most out of this technology. Further studies about ways to incorporate GE in the classroom would greatly benefit the GIS field on educational technology.

Additionally, as research by Wink and Putney (2002), Zemelman, Daniels, and Hyde (2005), and Weigand (2003) has shown, collaborative learning is an excellent way for students to learn about geography. Students were instrumental in assisting their teammates and, at times, peers in other groups. Students who had struggled at times during the school year were able to contribute in positive ways to their group, which often led to more engagement in their study of geography.

Mishra and Koehler's (2006) concept of Technological Pedagogical Content Knowledge (TPCK) was evident during the implementation of this curriculum. Being familiar, comfortable, and confident in technological knowledge is important, especially in dealing with technological problems and questions as they arose. For instance, when a student was unable to connect to the internet, I not only showed students how to fix this connection, but I also helped them become class experts so they could help their classmates in the future. GE, however, has a number of features with potential for classroom use that I was not as knowledgeable about as I would have liked, which likely impacted students' success using GE. Therefore, it is very important to develop a firm understanding of all that GE offers before implementing *VTE*. This increased knowledge would inevitably enhance this curriculum.

In the end, one of the fundamental goals of *VTE* was to engage and excite students in learning geography and, consequently, to help students develop an understanding of

how this subject is applicable to their lives. On the final question of the post-project survey, students were asked to name their favorite part of the project and tell why they enjoyed this part the most. Of the thirty responses, twenty-four (80%) students cited reasons that reflected engagement when describing why they chose their favorite part. For example, when Kara was describing why finding pictures for her brochure was her favorite part, she said because "it was fun to see how places you heard about looked." Other students also demonstrated the pride they took in their projects, as Nicole enjoyed working on the travel brochure most because "it was fun to show off all the work [her group] did." Similarly, Tommy liked the research component of *VTE* the most because "it was fun to gather knowledge up and to feel like an expert." Judging from these and other similar comments, *VTE* accomplished the goal of motivating students to learn about geography.

VIII. Conclusion

In order to improve teaching and learning in schools, specifically upper elementary social studies, it is important for teachers to be willing to take risks in the curricula they implement. While taking these risks can be quite challenging, the results can be an improved understanding of how learning takes place in the classroom in addition to enhanced student engagement and understanding. Implementing the project-based curriculum of *Virtually Traveling Europe (VTE)* was definitely time consuming and challenging, but through the process of developing and implementing this curriculum I learned invaluable information about my students and about my teaching style.

One lesson I learned from this experience was that while it is important to provide choice for students in order to engage them in the subject matter, in this case geography, there must be guidelines and limitations to these choices in order for students to be successful. This was especially evident with my fifth graders, as they often seemed to take as much time as was given to complete an activity. Too much choice can prolong a unit to the point where students actually lose focus and engagement because they become too concerned with trivial matters that are not as relevant to their success. Some possible revisions to *VTE* could alleviate this issue by narrowing the choices students make throughout the curriculum. I would also be interested in seeing *VTE* implemented in a classroom of older students to compare their efficiency to that of my fifth graders and also to learn how different aspects of this curriculum impact learning in other grades. I wonder how older students would apply their understanding of geography and Europe to develop the ultimate trip and how well they would use Google Earth (GE) in their presentations.

While I found *VTE* valuable as a teacher, I believe this curriculum was valuable to students as well. Each student found varying degrees of success in different aspects of the project, including their research skills, technological understanding, real-world applications of geography, and overall pride in their learning. Students learned important skills for working collaboratively, as many completed the *VTE* project with a feeling of accomplishment. Students learned the importance of teamwork and contributing positively to their groups, which led to greater success during the unit.

For many students, *VTE* reinforced how to effectively use books and the internet to acquire knowledge. Students were able to control their own learning by understanding where and how to find important information. Additionally, students discovered the potential and value of GE as another way to gather knowledge. Students learned how to organize their research in ways that not only made sense to them but also to their partners. I hope that through their experiences in *VTE,* students are able to apply their improved research skills to future project-based curricula.

Technology was another positive feature in this curriculum for students. Even though students had varying levels of success using GE, they learned the value and limitations of this tool. Most importantly, students came to understand how GE can be used as an educational tool. For example, over a month after the project was completed, one student talked about using GE to find countries in Asia for a map he was working on in class "because it's the easiest." The student he was talking to added that he used maps from one of the internet websites from *VTE*. As these two students demonstrate, the technology component of *VTE* had a lasting impact on students' learning strategies.

Other technological skills that students developed during this unit related to their laptop use in the classroom. An indirect lesson students learned was as simple as how to repair a lost internet connection on their laptops. Once I taught a few students how to do this, they became "experts" and were then able to assist and teach their peers when similar issues arose. As discussed in Chapter Seven, another unexpected skill many students learned was how to attach documents to emails so they could save and send work they did between school and home. In addition, students were able to send these emails to their teammates. This element that developed during the unit is one that I will build on when I implement *VTE* in the future in hopes of helping groups create more cohesive brochures by editing each other's work together in class.

Finally, *VTE* was successful in making geography personally relevant to the students. Whether as "experts" of their region in Europe or as audience members during the presentations, students seemed to enjoy the process of planning and taking a trip to Europe. Many students eagerly planned their brochures saying that they wanted to go on the trip they were planning. When asked to name which region in Europe they would want to visit at the end of the unit, students named regions that related to their personal interests, such as skiing, hiking, and shopping. For example, students who love history wanted to go see interesting historical landmarks in Western Europe, while students who love the beach were excited to visit southern Europe for its sandy beaches and warm and sunny weather. Exploring these places of interest on Google Earth served to enhance students' real-world applications of geography.

While students made relevant connections between geography and their own lives during this unit, I developed new insights about the role I found myself in as a teacher-

researcher, a role I found to be challenging yet rewarding. By constantly taking the position of an observer of my classroom and evaluator of my curriculum, I made discoveries that helped me reinforce and reinvent my teaching practices and even my teaching philosophy. I learned how to effectively utilize collaborative learning, active learning, and technology in my classroom while also learning when these practices may be less successful.

The role of teacher-researcher is one that can tremendously benefit all teachers. Even if teachers are not satisfied with the curriculum they develop and implement, the process of developing a unit based on research and interest is one that has a lasting impact. Personally, I have a better understanding of key components in curriculum design, specifically with effective practices in the geography classroom, such as active learning, collaborative learning, and technology. In the future, when I implement *VTE* again, I will have a better understanding for what can be improved, which is one of the principle objectives in developing a curriculum – the ability to adjust and revise in order to enhance student learning. I look forward to improving this curriculum every year.

Appendix

Tyler J. Hales

University of California, San Diego

Virtually Traveling Europe

Table of Contents:

Introduction to *Virtually Traveling Europe*

Dear Fellow Teacher,

Virtually Traveling Europe (VTE) is a project-based curriculum designed to engage upper elementary geography students through active learning, collaborative learning, and technology. Goals of this curriculum are to engage students in geography, to teach students productive research and geography skills, and to push students to be more thoughtful about the world around them. *VTE* can easily be adapted to study other areas of the world and is also appropriate for other grade levels.

VTE will be especially effective in student-centered and collaborative classrooms, where students are familiar with this type of learning environment. Being comfortable with this classroom approach provides students with experience and strategies to help them meet the challenges of *VTE* and provides teachers with the skills necessary to facilitate student learning. Teachers who understand how to foster productive collaboration (students working together and on-task) will have effective strategies to keep groups working well together.

The duration of *VTE* will depend on students' experience with conducting research. If this is the first time students have been required to research a large amount of information and expected to interpret this research, then this curriculum will take more time in order to insure that students understand the information they have acquired. With more experienced or skilled researchers, this phase of this curriculum can be shortened. *VTE* can range between four and eight weeks, with six weeks being the most likely time frame needed to implement this project.

There are a few different phases embedded in this curriculum. Teachers can adjust these phases to fit within their time restraints. This Appendix is structured chronologically around these phases, which are: Building prior knowledge, Introducing *VTE,* Researching, Organizing information, Creating the travel brochure, Planning the presentation, Presenting, and Assessing for understanding.

Although this project is time-consuming and challenging, the rewards are worthwhile because of the students' sense of pride and accomplishment in the work they have produced. Enjoy the process of this curriculum and have fun watching students learn and grow. Good luck!

	Activities	**Purpose**
PHASE 1: ***Introduction and Research*** **Duration:** ***Two-Three Weeks***	Welcome to the Agency!	Introduce Project
	Questions to Guide Travel Team Research	Focus Research
PHASE 2: ***Travel Brochure*** **Duration*:*** ***Two-Three Weeks***	Travel Brochure Checklist	Provide brochure guidelines
	Travel Brochure Rough Draft	Organize Europe Information
	Travel Brochure Final Draft	Display information
PHASE 3: ***Presentation*** **Duration:** ***One-Two Weeks***	Presentation Checklist	Provide presentation guidelines
	Planning, Practicing, Presenting	Teacher classmates
	Audience Presentation Notes: Learning About Europe!	Learn from classmates

Overview of: *Virtually Traveling Europe*

Why *VTE*?

VTE is a project-based curriculum that incorporates active learning, collaboration, and technology to engage students in understanding the real-world applications of geography through the authentic experience of planning a trip to Europe as travel agents.

What Researchers Have Said About Engaging Students in Geography:

- Project-Based Learning can lead to deeper understanding of subject matter.
    - (Spronken-Smith, et al, 2008; Wiggins & McTighe, 2005)
- Active Learning is important in geography class.
    - (Klein, 2003; Zemelman, Daniels, & Hyde, 2005)
- Collaborative Learning is an effective way to teach geography.
    - (Wink & Putney, 2002; Zemelman, Daniels, & Hyde, 2005)
- Technology, such as Google Earth, is an effective tool to utilize in the classroom.
    - (Mishra & Koehler, 2006; Patterson, 2007)

Constructs:

- Active Learning
- Collaborative Learning
- Technology
- Engagement

Goals:

1. Students will be excited to learn about geography.
2. Students will be thoughtfully engaged in their study of Europe.
3. Students will gain a deep understanding of Europe.
4. Students will understand how geography plays a role in their lives and how to apply this understanding to the real-world.
5. Students will become more informed and empathetic global citizens.

Setting:

- Upper-elementary to middle-school geography classrooms.
- About 215 minutes a week in class.
- Student-centered classrooms where students have experience researching and working in groups.

The classroom can be set up as a travel agency to excite the students and make them feel like they are real-life travel agents being hired for this project. To do this, I developed "The Hales Travel Company, Inc." and created the following posters that I hung around the room along with paper airplanes to give students the sense that they had entered a real travel agency.

In addition to transforming the classroom into a travel agency headquarters, arranging the desks into table groups also prepares the students for the upcoming assignment as a team of travel agents.

<u>The following pages are examples of:</u>

- Photo of "The Hales Travel Company"
- Room Sign – Headquarters: The Hales Travel Company, Inc.
- Individual Travel Team Signs that each group placed on their table each day – Northern Europe Team; Southern Europe Team, Western Europe Team, Eastern Europe Team
- Class seating chart

This is a photo of one of the fans on which I taped paper airplanes to create the environment of a real-life travel agency.

Headquarters:

The Hales Travel Company, Inc.


NORTHERN
EUROPE
TEAM


WESTERN
EUROPE
TEAM


SOUTHERN
EUROPE
TEAM


EASTERN
EUROPE
TEAM

Building Prior Knowledge

Overview:

Before implementing the *Virtually Traveling Europe* project, some activities can be done to both determine prior knowledge and build a foundation of new knowledge about the countries and basic facts of Europe. In Activity One, students fill out a KWL (Know, Want to know, and Learned) to make their prior knowledge about the continent explicit; teachers can use this information to find out what types of information students are interested in. This KWL will be helpful to refer back to at the end of the implementation of the curriculum to compare how much students have learned and to see if they have changed or added to their prior knowledge.

During Activity Two, students work on a variety of mapping activities to develop an understanding of what Europe looks like, both physically and politically. Areas to cover include important landforms and bodies of water, as well as capitals and the different regions of Europe. These activities should be similar to ones that have been done all year to work on these mapping skills. In addition, if a textbook is used in the classroom, students could use it to complete various homework assignments, such as chapter reviews, that introduce key elements of Europe.

As students demonstrate that they are learning where European countries are located, administering the map quiz (or challenge) of Activity Three will show how well they understand this continent's basic geography. Upon successful completion of this activity, students will be ready to embark on their virtual trip to the different regions of Europe.

Activity 1: Europe KWL Chart

Purpose and Overview:
The purpose of using a KWL – what students Know, Want to know, and Learned – chart is to make students' prior knowledge explicit in order to better understand what understandings (or misunderstandings) they are entering the unit with. A KWL chart is one way to incorporate background knowledge into the curriculum, but other strategies that students may be familiar with can easily be used, as well.

Duration:
About half of a class period.

Materials:

- Individual paper or journals for the students and chart paper or the whiteboard for the teacher.

Directions:
Students list what they think they already know about Europe and what they would like to learn about Europe. After students generate these lists, they can then share their lists with their neighbors to compare the similarities or differences they may have in their prior knowledge. As a class, discuss and create a class list of what they already know and what they want to know. This chart can be referred back to throughout the Europe unit as students learn more about the continent.

Activity 2: Europe Mapping Activities

Purpose and Overview:
The purpose of mapping Europe is for students to develop a baseline understanding of the physical geography of Europe. Through these activities, students learn where the countries of Europe are along with their capitals. In addition, students map major physical features, including mountain ranges, rivers, and seas. By creating this background knowledge of the location of European countries and how they relate to each other, students become prepared to research a specific region of this continent with the understanding of its relationship with other areas of Europe.

Duration:
One-to-two weeks, depending on the specific mapping activities assigned.

Materials:

- Blank maps of Europe; these maps can range from the entire continent to specific regions of Europe. In addition, they can be political or physical maps. Mapping activities that students have already experienced are beneficial for students to understand the process of labeling these maps.
- Various maps of Europe for students to use; these maps can include wall maps, atlases, textbooks, or computers.

Directions:
Students spend time labeling countries and capitals of Europe as well as labeling important physical features, such as the Alps, the Rhine River, and the Mediterranean Sea. These mapping activities can ask students to label every country and capital of Europe or only selected ones chosen by the teacher. Teachers can also choose the specific physical features they would like students to know. Students can work individually or with partners to complete these mapping activities. A portion of this activity can also be assigned as homework at the teacher's discretion. Students should understand that they will be quizzed on knowing the locations of selected countries and their capitals.

Activity 3: Europe Map Challenge

Purpose and Overview:
This map challenge is designed to assess students' understanding of the physical geography of Europe. After completing their map activities, students are quizzed on how well they understand this geography of Europe. Upon successful completion of this challenge, students will be prepared to embark on *Virtually Traveling Europe* with improved background knowledge of the continent.

Duration:
One class period.

Materials:

- *The Europe Map Challenge*

Directions:
Assign *The Europe Map Challenge* as an individual quiz for students to take in order to demonstrate their understanding of the physical geography of Europe. Students label twenty countries on a map and then match these same twenty countries to their capitals. Each correct answer can be worth either one or two points as the teacher chooses.

Name _____ Date _____ TG _____

The Europe Map Challenge!

On the map below, label the following places (write the **number** on the map):

1 = Austria
2 = Bulgaria
3 = Czech Republic
4 = Denmark
5 = France
6 = Germany
7 = Greece
8 = Iceland
9 = Ireland
10 = Italy
11 = Netherlands
12 = Norway
13 = Poland
14 = Romania
15 = Russia
16 = Spain
17 = Sweden
18 = Switzerland
19 = Ukraine
20 = United Kingdom

Capitals

Match each country with its capital. Write the letter on the line.

1.____ Austria	A. Amsterdam
2.____ Bulgaria	B. Athens
3.____ Czech Republic	C. Berlin
4.____ Denmark	D. Bern
5.____ France	E. Bucharest
6.____ Germany	F. Copenhagen
7.____ Greece	G. Dublin
8.____ Iceland	H. Kiev
9.____ Ireland	I. London
10.____ Italy	J. Madrid
11.____ Netherlands	K. Moscow
12.____ Norway	L. Oslo
13.____ Poland	M. Paris
14.____ Romania	N. Prague
15.____ Russia	O. Reykjavik
16.____Spain	P. Rome
17.____Sweden	Q. Sofia
18.____Switzerland	R. Stockholm
19.____Ukraine	S. Vienna
20.____United Kingdom	T. Warsaw

Bonus Question:

Budapest is the capital of what European country? _____

<u>Phase 1:</u> The Introduction to *Virtually Traveling Europe* and the Research

Overview:
This first phase of this curriculum is important to get students excited about their upcoming project by introducing them to their roles as travel agents working for the class travel company. In addition to learning about their first job as travel agents, students will begin researching their European region during this phase. With student research making up the core component of this phase, the Travel Agent Updates are valuable to check-in on students' progress with their research.

Activity 1: Welcome to the Agency!

- This handout explains the students' assignment as travel agents in *VTE.* This activity meets the constructs of engagement, active learning, and collaborative learning.
- Homework to accompany Activity 1 is for students to answer questions about their experiences with travel brochures and going on trips.

Activity 2: Questions to Guide Travel Team Research

- This handout is meant to guide students' research and help them organize their notes. This activity meets the constructs of engagement, active learning, and collaborative learning, and technology.
- The homework to accompany this activity is for students to bring in a current event from their region of Europe to help students understand the relevance of their research to real-world events.

Activity 3: Travel Agent Updates

- These mini progress reports are designed to check-in with students to find out the progress they are making with their research and group work. The three updates can be used as weekly warm-ups at the beginning of class or as exit slips at the end of a class.
- This activity meets the constructs of active learning, and collaborative learning.

Activity 1: Welcome to the Agency!

Purpose and Overview:
Being welcomed to the travel agency, students become immediately engaged in their roles as travel agents. In addition, this introduction to *VTE* explains the assignment to the students, while also allowing for class discussions about students' understanding of planning trips. The homework during this activity further builds students' knowledge of how to plan a trip as a travel agent.

Duration:
About one class period.

Materials:
- *Official Hales Travel Company, Inc. Document*

Directions:
As a means for leading into this assignment, the students in the class collaborate and discuss what they know about travel brochures. The teacher can prompt students about their knowledge of brochures by asking them what types of things they would expect to find on brochures. The goal of this discussion is for students to begin thinking about what they already know about travel brochures as well as to introduce the use of travel brochures to students who may not have prior knowledge of these documents.

Following this introductory discussion, students, or travel agents, are given an official travel agency document which outlines what the assignment entails, what will be included in the final product, and expectations for successful completion. Included in this document are the four regions (northern, western, southern, and eastern) to be studied and the countries in each region that students should focus on – in each region, there are three countries that students must cover and then each group will choose one of four remaining countries to include in their trip. As the teacher reads through assignment directions, he or she can ask students if they have visited any countries listed in the regions. Discussing these real-life experiences can be a helpful way to learn about prior knowledge students may have about these countries. When the teacher discusses how travel teams will try to "sell" their trip to their region by creating travel brochures and presenting them with Google Earth, the teacher provides samples of real brochures and student/teacher created ones to help students better understand what they will be working towards. Students may also need further explanation of what it means to "sell" trip. Travel teams will be expected to actively research their region together through the use of books, magazines, the internet, and Google Earth. Travel teams will be encouraged to creatively design their

travel brochures in ways that their team decides best portray their region while also covering the topics they have been asked to explore.

Once expectations have been addressed, the teacher reviews the questions that Travel Teams should answer and on which to focus their research. These questions are meant to guide their research and help students find relevant information to include on their brochures. The remaining time in this class can be spent having students collaborate and discuss the research questions and what they know about travel brochures.

Week 1 Homework Assignment: What should travel agents think about?

The homework assigned this week is meant to help students take an active role in better understanding how to plan a trip and what travel brochures look like. For homework to be due at the end of the week, students discuss with an adult (parent, relative, teacher, tutor, coach, etc.) about how they go, or how they might go, about planning trips and what they look for in places they go to on vacation. In addition, students look for travel brochures at home and write about what stands out on them (if they cannot find brochures, they write about what they think would be helpful to include on a brochure). All answers are to be written in complete sentences. This homework incorporates the core constructs of *Virtually Traveling Europe* through collaboration with an adult, active learning about what types of factors go into planning trips, and, possibly, technology if the adult uses the internet for planning trips. Students share their answers with their travel team before a brief whole group discussion about what the students learned; this should take place the day this assignment is due.

Homework Questions, to be answered in complete sentences:

Discuss with an adult and ask them:

1. How they would go about planning a trip? What resources would they likely use? (Internet, Travel Agent, Recommendations, etc.)

2. What kinds of things do they look for in a trip or vacation? (Weather, activities, hotel, etc.)

3A. Find out if you have any old Travel Brochures at home*. If so, look through them and discuss what you think is interesting and/or boring about them. What stands out? What types of things are included? Bring in the brochures if possible.

OR

3B. Investigate online travel sites and explain what sites you explored and what observations you made regarding the types of information provided on these sites.

> *If you cannot find any brochures, then write about what you think would be important and interesting to have on a brochure. Tell why you think the things should be included. What would you want to have on a brochure to make it stand out?

From the desk of

The Hales Travel Company, Inc.

TRAVEL AGENT:

_____

EUROPEAN REGION:

Come Visit Europe!

A family from San Diego has just won a two week vacation to Europe, but there are so many great places to visit that they don't know where to go! Fortunately, you and your team are expert Travel Agents (especially when it comes to planning trips to Europe) from the Hales Travel Company, Inc. The family knows they would like to go to one of four regions in Europe: Northern, Western, Southern, or Eastern. Within each of these regions, the family has thought of *three* countries they definitely would want to go to if they travel to that region. They have also added four other potential countries to visit, and they trust your judgment to choose *one* that you think would fit well with their trip.

The Four Regions of Europe:

Northern Europe	**Western Europe**	**Southern Europe**	**Eastern Europe**
United Kingdom Ireland Norway	Germany France Switzerland	Spain Italy Greece	Russia Romania Poland
Choose 1 of the following: Denmark Sweden Finland Iceland	*Choose 1 of the following:* Austria Netherlands Belgium Luxembourg	*Choose 1 of the following:* Portugal Croatia Slovenia Albania	*Choose 1 of the following:* Ukraine Czech Republic Slovakia Bulgaria

Your job:

In groups of four, you will work as a travel team to develop and plan the ultimate trip for this family. You will be assigned a European Region randomly and will then be expected to become experts about this area. Your Travel Team must answer specific questions the family has about each region. In addition, your team will find other interesting facts that you think will help show why your region is *unique and should be visited.* Using books, magazines, the internet, Google Earth, and more, your team will research these countries in order to be able to share this important information with the family. After becoming experts, it will be your job as a team to sell to the family a fantastic trip you have planned to your region in Europe.

Selling your region:

Once your team has researched extensively and feels confident in the information you have collected, it is time to create a **Travel Brochure** and plan a **Presentation** about your region. Your team will be responsible for browsing through a variety of examples of Travel Brochures before deciding on how to set up and create your own Travel Brochure or using a provided travel brochure template. You will sketch a rough draft of your

Travel Brochure on construction paper (12' x 18') outlining what you want to include on it; this draft will need to be approved by The Hales Travel Company's boss…Mr. Hales.

Your team will use poster board for the final draft of your Travel Brochure. Your team may add to this poster board however you choose: typed/handwritten descriptions, printed/hand-drawn pictures, copied/drawn maps, etc. Remember, the family is looking for an informative, neat, and creative brochure to help them decide where they want to visit, so take your time and work together as a team!

After your team has completed the Travel Brochure, it will be time to plan your Presentation. Along with your Travel Brochure, your group will use Google Earth to transport your audience to interesting sites and locations in your region. You will be expected to have rehearsed and practiced how you will incorporate this Google Earth Virtual Tour to bring your brochure alive! For each country, you will present one landmark with Google Earth: one should be a GEOGRAPHIC landmark (Mt. Soledad, Torrey Pines State Park, etc), one should be a HISTORIC landmark (USS Midway, Cabrillo National Monument, etc), one should be a CULTURAL landmark (Balboa Park, Petco Park, etc.), and one will be your Team's choice - this can also be a TRAVEL landmark (Hotel del Coronado, La Jolla Beach). Your team should be able to explain each landmark and why it was chosen to represent the country.

Expectations:
In order to convince the family to go on your proposed trip, your final project (Travel Brochure and Presentation) should meet the following requirements.

Travel Brochure should be:
- ORGANIZED
- NEAT
- INFORMATIVE (it should CLEARLY answer your research questions!)
- CREATIVE

Presentation should be:
- ORGANIZED (everyone should have specific roles!)
- REHEARSED (it should be planned and practiced!)
- INFORMATIVE
  - It should CLEARLY explain the Brochure
  - It should use Google Earth effectively
- INTERESTING (what is unique about your region and why should the family visit?)

In order to meet these requirements, each Team member is expected to work cooperatively and to play a significant role in the research of the region and the planning and execution of the Travel Brochure and Presentation.

GOOD LUCK AND HAVE FUN!

Activity 2: Questions to Guide Travel Team Research

Purpose and Overview:
The following pages are the guiding questions for students to use as they research their European regions. Students are expected to read through them individually, with their group, and then with the whole class. This process will help students understand how they are expected to focus their research. Students spend time reviewing these questions, which gives them a chance to ask any questions they may have. In addition, depending on students' prior experiences with conducting research, modeling and discussing effective research strategies are recommended.

Duration:
About two weeks.

Materials:

- *Questions to Guide Travel Team Research*
- An assortment of reference books and books about countries of Europe (see librarian)

- The following are examples of websites used in this classroom and provided on my webpage (www.tylerhales.webs.com):
    - *http://online.culturegrams.com/*
    - *http://www.worldatlas.com/*
    - *https://www.cia.gov/library/publications/the-world-factbook/index.html*
    - *http://www.lonelyplanet.com/europe*
    - *http://www.virtualtourist.com/travel/Europe/TravelGuide-Europe.html*
    - *http://www.visiteurope.com/home.aspx*

Directions:
Advise students to take their notes on the lines provided in order to help them organize their research. Students will also need to be reminded to write information in their own words and not copy sentences directly from their sources. Students may also need reminders to be sure that they are using the guiding questions to focus their research. Instruct students to begin their research using books in order to develop skills and comfort in these resources. Eventually, specific websites should be provided to focus students' internet research and ensure that students use appropriate and reliable sources. Students can also explore Google Earth as another research tool. As students continue their research, it is helpful to remind them to begin to organize their information. Students can also be assigned to research their European region at home.

Week 2 Homework Assignment: Continuing active research with technology

In order to help their group and complete research in a more timely fashion, students are encouraged to work on researching their European Region at home, with a goal of one-half to one page of notes per night primarily using the websites provided on the teacher's website (see "Guidelines and expectations of research") or books from the library or home to help guide their research. Students are expected to come to each class ready to share this research with their group. In addition, students are asked to find a current event from their region of Europe to bring in by the end of the week. This assignment will help students get a better feel for what is happening in their region and what life is like there because they must explain the significance of the current event to their region, while also comparing their event to that of their partners. Students will share these current events with their group the day they are due. All current events will then be collected and pinned to a Current Event bulletin board. In looking at this board, students can know what is going on in their region and get ideas for planning their trip.

This photograph is an example of the classroom current events board with all of the current events that students in each class and from each group brought to class to share. Students routinely looked at the current events from their region and other regions of Europe as they conducted their research.

Questions to Guide Travel Team Research!

As you and your Travel Team embark on researching your region, be sure to answer the following questions in as much detail as possible in order to provide the family with all they want to know about Europe. For each topic of questions, there is space provided to take notes. The answers to these guiding questions should appear on your Team's Travel Brochure in any way your team feels is creative and interesting. Remember, you are trying to convince this family to explore your region of Europe, so try to discover for them what makes your countries so unique and exciting!!

Basic Facts about each Country:

Capital:

Language(s):

Size/Area:

Population:

Life Expectancy:

Per Capita Income:

Currency:

Government:

Flag:

4 topics to cover for each country:

Your research and Brochure should be sure to cover the following topics in order to provide the family with the best understanding possible of your region, should they decide to travel on your proposed trip.

1) Geography
2) History
3) Culture
4) Travel

Geography:

1) Name two to three geographic landmarks and why they are significant. (Mt. Soledad, Torrey Pines State Park, etc)
2) Describe each country's absolute (exact – Latitude/Longitude) and relative (compared to other places – San Diego is South of Los Angeles) location. How far away are the countries from each other (how far are they from San Diego?)? What physical features can be found in or around these countries (lakes, mountains, rivers, beaches, etc.)? (La Jolla Shores, Palomar Mountain, Coronado)
3) What is the climate of these countries? How is the climate impacted by the location and physical features of each country? (Mediterranean Climate: Warm and Dry)

History:

1) Name two to three historic landmarks and why they are significant. (USS Midway, Cabrillo National Monument, etc)
2) Name two historic events that helped shape these countries. (Mexican-American War)
3) Provide a current event for each country. (Rainy Weather = Flooding)

Culture:

1) Name two to three cultural landmarks and why they are significant. (Balboa Park, Petco Park)
2) Describe the culture of each country, considering the following: languages, food, music/entertainment, activities, clothes, religions, technology, etc (think of the ABCs!)

Travel:

1) Where are some potential places to stay, and how might the family get around? (Hotel del Coronado, La Jolla Beach and Tennis Club; Rental Car, MTS)
2) Activities to do? What to pack? (Golf, Beach, Zoo, Sea World, Hike; Shorts, Sandals, Sunglasses)
3) What makes these countries/this region unique and an interesting place to visit? Why would you recommend vacation there and when? (Great weather, lots to do…)

Additional Fun Facts and Notes:

Activity 3: Travel Agent Updates

Purpose and Overview:
These *Travel Agent Updates* are used as brief progress reports that can be exit slips at the end of class or warm-ups that students complete when they enter class. These updates help to show how students are feeling about their progress on the project and to gain better insight into their thoughts. The three updates can span a two-to-three week period as students research their region and begin to plan their travel brochure. The purpose of these reports is to see how students think they are working and collaborating with their team as well as to find out how students feel they are contributing. Also, these updates show what students are enjoying and what stands out about the project in their minds. The goal of these updates is to see students' interpretations of how engaged they are, how their group is collaborating, what the active learning looks like, and if technology is playing a role in these constructs. These comments will help to evaluate and understand where students are having problems and where they may be excelling or more engaged. The *Travel Agent Updates* can also ensure student accountability with their group as students explain their contributions to the group. When evaluating students' overall effort and contributions on the project at the end of the unit, these progress reports will help measure students' work.

Duration:
Once or Twice a week for two-to-three weeks.

Materials:
- *Travel Agent Update #1*
- *Travel Agent Update #2*
- *Travel Agent Update #3*

Directions:
Each student fills out the Travel Agent Update in as much detail as possible (complete sentences are not necessary). This report can be completed at the end or beginning of three classes over the two-to-three week period that students research their region and begin to plan their travel brochure. These updates can be used as warm-ups to begin class or exit slips to end class. The three different updates can be useful for understanding how students progress through the curriculum.

Name:_____ TG:____ Travel Team:_____ Date:_____

Travel Agent Update 1

What have *you* done so far to contribute to the success of your group? What has been your favorite part of this project so far?

How is your team doing overall? What information does your team have plenty of and what does your team need to find more about?

What's next? What is your team's plan to move forward with finishing research, planning the trip, and creating the brochure?

Name:_____ TG:____ Travel Team:_____ Date:_____

Travel Agent Update 1

What have *you* done so far to contribute to the success of your group? What has been your favorite part of this project so far?

How is your team doing overall? What information does your team have plenty of and what does your team need to find more about?

What's next? What is your team's plan to move forward with finishing research, planning the trip, and creating the brochure?

Name:_____ TG:_____ Travel Team:_____ Date:_____

Travel Agent Update 2

What have *you* done this week to contribute to the success of your group?

What has been your favorite part of this project so far and WHY?

How is your team doing overall? What is going well for your team? Any problems/issues?

What's next? What is your team's plan to move forward to complete your brochure?

Name:_____ TG:_____ Travel Team:_____ Date:_____

Travel Agent Update 2

What have *you* done this week to contribute to the success of your group?

What has been your favorite part of this project so far and WHY?

How is your team doing overall? What is going well for your team? Any problems/issues?

What's next? What is your team's plan to move forward to complete your brochure?

Name:_____ TG:_____ Travel Team:_____ Date:_____

Travel Agent Update 3

Tell me about the most interesting thing you have **learned** about Europe and **how** you learned this.

What has been your favorite part of this project so far and **WHY**?

How is your team doing overall? What is going well for your team? Any problems/issues?

What's next? What is your team's plan to move forward to complete your brochure? What will *you* do?

Name:_____ TG:_____ Travel Team:_____ Date:_____

Travel Agent Update 3

Tell me about the most interesting thing you have **learned** about Europe and **how** you learned this.

What has been your favorite part of this project so far and **WHY**?

How is your team doing overall? What is going well for your team? Any problems/issues?

What's next? What is your team's plan to move forward to complete your brochure? What will

you do?

<u>Phase 2:</u> The Travel Brochure

Overview:
Phase 2 of *Virtually Traveling Europe* focuses on student collaboration as travel teams must work together to share their research and develop a plan for creating their travel brochure. Students first brainstorm as a group what their brochure should look like*, and then they compare notes and information before creating their rough draft and eventually their final draft.

*Included in this Appendix are sample travel brochure templates that can be used to expedite the travel brochure process and help students focus their attention more on the content of the brochure rather than the organization of it. All of these templates were ones create by students.

Activity 1: Travel Brochure Rough Draft

- In this activity, students create a rough draft of their travel brochure using either a template they created or one of the sample ones provided. Students work together to organize their research into this format.
- The *Travel Brochure Checklist* describes the expectations for the travel brochure and the specific elements groups should include on their travel brochure. It is used to help students focus their planning and organizing of their brochure.
- This activity meets the constructs of engagement, technology, active learning, and collaborative learning.
- Homework for this activity is for students to continue to research as needed.

Activity 2: Travel Brochure Final Draft

- In this activity, students transition from their rough draft of their travel brochure to their final draft, which is created on a large piece of poster board. Students work together to organize their research into this format and also write their final draft information to be included on this brochure. This activity meets the constructs of engagement, active learning, collaborative learning, and technology.
- Homework for this activity is for students to continue to research as needed while also writing their final draft information and finding pictures and maps for the brochure.

Activity 1: Travel Brochure Rough Draft

Purpose and Overview:
Before creating their final draft of the travel brochure on the poster board, it is important for students to plan out this brochure through a rough draft. The brochure rough draft helps groups organize their information and understand what they will need to do before creating their final draft. The purpose of the *Travel Brochure Checklist* is to guide students through the process of designing and creating their travel brochure. The checklist explains the expectations of this project in a straightforward way so that students can easily confirm that they have included all required information on their rough draft. By using this checklist, students understand what they must do in order to be successful in this part of the project.

Duration:
One-to-two weeks.

Materials:
- Research, including *Guiding Questions*
- *Travel Brochure Checklist*
- 12" X 18" construction paper
- Rulers

Directions:
To help students better understand what to include on their travel brochure, each group is given the *Travel Brochure Checklist* to guide them as they create their rough draft. While going through the checklist, the teacher can address his or her expectations and carefully explain each item and why it belongs on the brochure. For example, groups should be sure to explain key elements of the geography, culture, and history of each country in their region, with pictures and maps to supplement this detailed information. Showing a sample brochure while going through the checklist will help students visualize what the travel brochure might look like. The students can have the freedom to format their brochure in any way they feel best shows off their region, or they can use one of the sample travel brochure templates, but they must be able to check off each item on the checklist before being approved to move on to the final draft. This detailed rough draft will help students better organize their information and will also help them prepare for their final travel brochure. Once they have gone through the checklist as a group, they then do so again with the teacher, who will either approve or make further suggestions on the rough draft. Once the rough draft is approved, students will be ready to begin their final brochure on poster board.

Name:_____ TG:_____ Travel Team:_____ Date:_____

Travel Brochure Checklist

As your Travel Team discusses and plans your ultimate trip to your region of Europe, be sure to follow these guidelines for what should be included on your Travel Brochure. Before Boss Hales approves your Travel Brochure rough draft, your Team should carefully and thoughtfully talk through this checklist to see that your Brochure successfully covers each of the following areas necessary for a brochure to be interesting and effective.

Does your Brochure Include:

✓	A title and title Page (Does your title make readers want to open and read the rest of the brochure?)	_____
✓	Various maps to show/explain the region	_____
✓	Places to go/see (landmarks, activities, etc)	_____
✓	Background information about the region (history, culture, geography)	_____
✓	Photos of the region	_____
✓	All four countries	_____
✓	Important things to know (currency, language, etc.)	_____
✓	Interesting/Fun Facts	_____
✓	Places to stay	_____
✓	Ways to get around	_____
✓	What to pack (depending on weather, activities)	_____
✓	A sample trip itinerary for the 2 weeks	_____
✓	Does your brochure make people want to visit?	_____
✓	Is information clear and organized?	_____
✓	Does everyone have a job to do?	_____

Sample Travel Brochure Templates

Option 1: ***Three-fold, country-based template***

Inside pages of brochure:

Country 1	**Country 2**	**Country 3**
Flag/Map/Pic	Flag/Map/Pic	Flag/Map/Pic
Quick Facts	Quick Facts	Quick Facts
Pic/map	Pic/map	Pic/map
Geo	Geo	Geo
Pic/map	Pic/map	Pic/map
History	History	History
Pic/map	Pic/map	Pic/map
Culture	Culture	Culture
Pic/map	Pic/map	Pic/map

Back pages of brochure:

Title ***(Cover Page)***	**Sample Travel Plan** map ***(Back Page)***	**Country 4**
	Days 1-3	Flag/Map/Pic
Countries	Places to stay, what to do, how to get around	Quick Facts
		Pic/map
	Days 4-7	Geo
Flags	Places to stay, what to do, how to get around	Pic/map
		History
	Days 8-10	
	Places to stay, what to do,	Pic/map
Map	how to get around	Culture
	Days 11-14	Pic/map
photos	Places to stay, what to do, how to get around	

Option 1 Enlarged:

Cover Page

Travel Brochure Title

Intro/grabbing sentence

Countries

Flags

Photos

Map

Country 1

Flag/Map/Pic

Quick Facts

Pic/map

Geography

Pic/map

History

Pic/map

Culture

Pic/map

Country 2

Flag/Map/Pic

Quick Facts

Pic/map

Geography

Pic/map

History

Pic/map

Culture

Pic/map

Country 3

Flag/Map/Pic

Quick Facts

Pic/map

Geography

Pic/map

History

Pic/map

Culture

Pic/map

Country 4

Flag/Map/Pic

Quick Facts

Pic/map

Geography

Pic/map

History

Pic/map

Culture

Pic/map

Itinerary

Travel Plan map

Days 1-3
Places to stay, what to do, how to get around

Days 4-7
Places to stay, what to do, how to get around

Days 8-10
Places to stay, what to do, how to get around

Days 11-14
Places to stay, what to do, how to get around

Option 2: ***Four-fold, country-based template***

Inside pages of brochure:

Country 1	**Country 2**	**Country 3**	**Country 4**
Flag/Map/Pic	Flag/Map/Pic	Flag/Map/Pic	Flag/Map/Pic
Quick Facts	Quick Facts	Quick Facts	Quick Facts
Pic/map	Pic/map	Pic/map	Pic/map
Geo	Geo	Geo	Geo
Pic/map	Pic/map	Pic/map	Pic/map
History	History	History	History
Pic/map	Pic/map	Pic/map	Pic/map
Culture	Culture	Culture	Culture
Pic/map	Pic/map	Pic/map	Pic/map

Back pages of brochure:

Descriptions of Landmarks	**MAP OF REGION**	Descriptions of Landmarks	
	MAP		**Title Page**
Sample Trip Itinerary	Sample Trip Itinerary	Sample Trip Itinerary	

Option 3: ***Four-fold, topic-based template***

Inside pages of brochure:

Travel Itinerary with Map Key to places to travel to and why Days 1-3 Days 4-7	**MAP of REGION** MAP Map key of symbols	**MAP of REGION** and landmarks	Days 8-10 Days 11-14

Back pages of brochure:

History of Region	**Cultural Facts/ Important Things to Know about Region**	**Title Page**	**Geography of Region**

Option 4: ***Three-fold, topic-based template***

Inside pages of brochure:

Geography of Region	**History of Region**	**Culture of Region**
Country 1	Country 1	Country 1
Country 2	Country 2	Country 2
Country 3	Country 3	Country 3
Country 4	Country 4	Country 4

Back pages of brochure:

Map of Region	**Map of Region**	
MAP		**Title** **Countries** **Flags** **Map** **photos**
Key of Important/Interesting places to see	Key places to travel and stay	

Activity 3: Travel Brochure Final Draft

Purpose and Overview:
Students create a giant travel brochure final draft in order to apply their understanding of their European region in a fun and creative way. The information they include and the way in which they organize this information, demonstrates what features of the region stand out to the students. In addition, the incorporation of the travel brochure helps students focus their research in order to prepare to present the virtual tour of their region.

Duration:
About one-to-two weeks.

Materials:

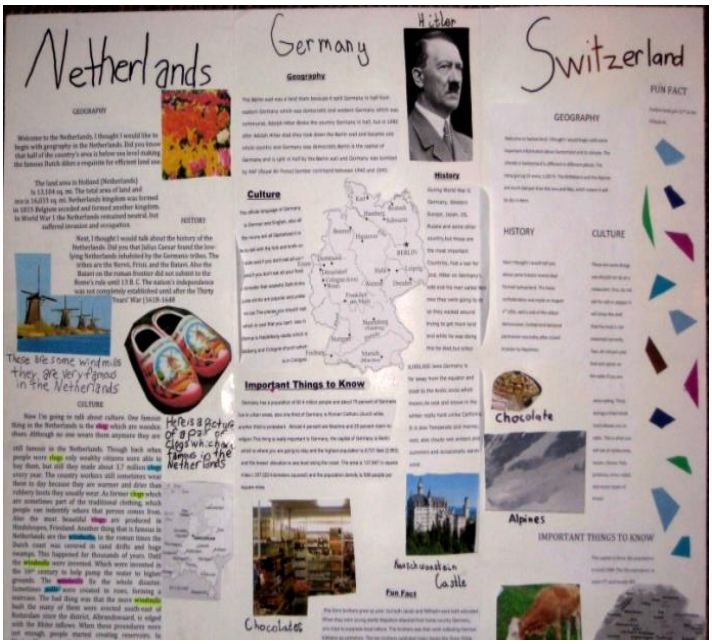
- Travel Brochure rough draft
- Research, including *Guiding Questions*
- *Travel Brochure Checklist*
- Poster board
- Marker, colored pencils, etc.
- Ruler
- Computers/laptops and printer

Directions:
After groups' travel brochure rough drafts are approved, they may begin their travel brochure final draft in which they blow up their former draft onto a piece of poster board. Groups are encouraged to collaborate about how to create uniform documents on computers to add to their brochure. It is helpful to stress to students the benefits of using similar fonts and styles as they type information for the brochure in order to make it look more cohesive. For homework during this part of the phase, student should be expected to type (or handwrite) their contributions for the travel brochure so that they can share these documents with their partners in class. By writing this information at home rather than in the classroom, students are able to take more advantage of class time to edit each other's work and arrange items on the brochure such as text information, maps and pictures. Groups are also encouraged to use the *Travel Brochure Checklist* to guide their work on the final brochure. Once groups complete their final travel brochure, they are ready to begin planning the presentation of their European region in the final phase of *VTE*

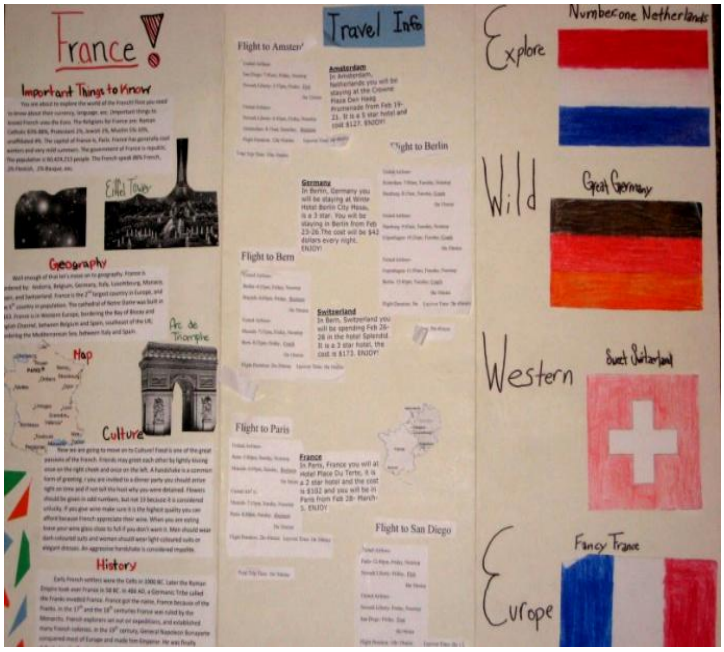
Examples of Final Travel Brochures

Option 1 Template:

Inside pages of brochure

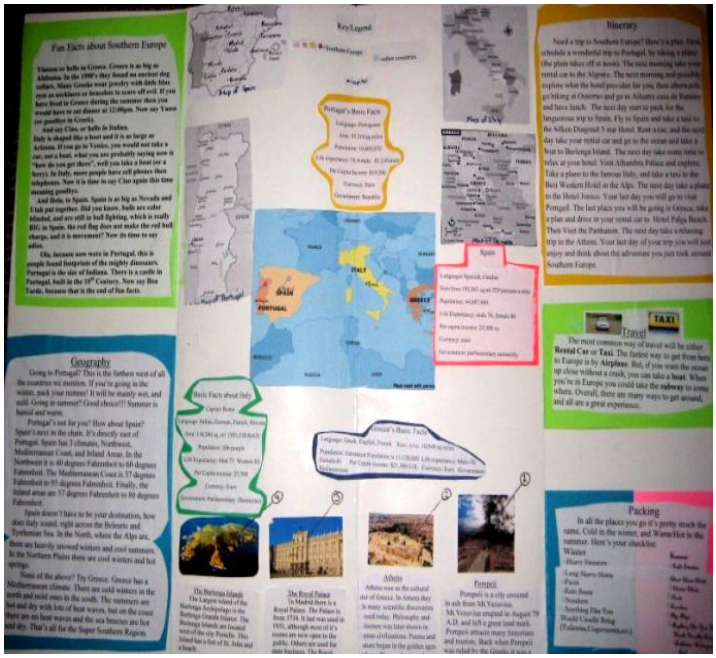


Back pages of brochure

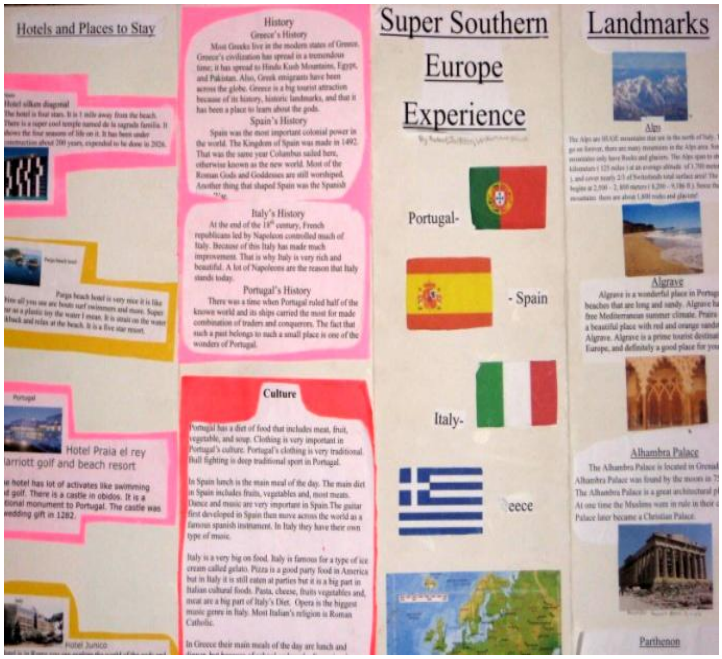


Option 3 Template Variation:

Inside pages of brochure



Back pages of brochure



<u>Phase 3:</u> The Presentation

Overview:
The purpose the presentation in Phase 3 is for students to demonstrate their understanding of their European region by guiding the class on a virtual tour. Students work together to plan their presentation so that each group member has a specific role, and then students have time in class to practice this presentation before they actual tour their classmates around.

Activity 1: Presentation Plan and Practice

- Groups spend about a week planning and practicing their presentation, with a focus on meeting the expectations of the *Presentation Checklist*.
- The *Presentation Checklist* describes the expectations of the group presentation and the specific elements groups should cover as they tour the class around their European region. It is used to help students focus their planning and organizing of their presentation.
- This activity meets the constructs of engagement, technology, active learning, and collaborative learning.
- Homework for this activity is for students to plan and practice their parts of the presentation.

Activity 2: The Presentation

- This 15-20 minute presentation is the culminating activity of *VTE*, as groups virtually tour their classmates around their region of Europe using Google Earth.
- Using the handout *Learning About Europe!*, students fill out notes about interesting and important information during other groups' presentations in order for them to be productive and active listeners and to enhance their understanding of Europe.
- This activity meets the constructs of engagement, technology, active learning, and collaborative learning.

Activity 1: Presentation Plan and Practice

Purpose and Overview:

In order to present their region of Europe effectively it is important that groups have ample time to plan and practice this presentation. The *Presentation Checklist* helps students prepare for their presentation as a guide that outlines the expectations of this activity, as groups plan how to make their presentation clear, interesting, and informative, with all members having specific roles. Among the most important aspects of the presentation are that each group member makes a contribution, the group uses Google Earth well, and the group clearly teaches the class about their region. The overall goal of this planning and practice is to ensure that all students are prepared to successfully discuss their region of Europe.

Duration:

About one-to-Two Weeks.

Materials:

- *Presentation Checklist*
- Laptops or computers with access to Google Earth (can be downloaded for free if necessary.
- Travel Brochure (as guide for information to be presented)
- Research and *Guiding Questions*

Directions:

After completing the travel brochure, each group receives the *Presentation Checklist* to help them organize their presentation. While discussing the features and expectations of this checklist, modeling examples of engaging and interesting presentation styles as well as less effective ways to present can help students gain a better understanding for how to present their region effectively. Students spend about one week planning how to best utilize Google Earth to show and describe their four chosen landmarks and explain other important information about their region within the fifteen-to-twenty minute timeframe. Each student must be prepared to talk about one landmark from one of their countries of their region and then use various aspects of Google Earth to virtually tour the audience around this landmark. Meeting with each group to find out what landmarks they plan to show with Google Earth and why they chose each one will be an essential way to help guide the students as they plan their presentation. After approving their choices, it is helpful to pinpoint each landmark and save the locations on Google Earth on the laptop that will be connecting to the projector in the room. For homework, students will plan and practice their part of the presentation.

Name: **Travel Team:**

Europe Presentation Checklist

As your Travel Team discusses and plans your presentation about your European Region, be sure to follow these guidelines for what should be included in the presentation. Your Team should carefully and thoughtfully use this checklist to make sure that your Presentation meets the following requirements.

- ✓ Each group member has a role in the presentation _____
- ✓ The group presents one landmark from each country using Google Earth _____
- ✓ Each group member is responsible for presenting one of these landmarks with Google Earth _____
- ✓ Presentation is organized _____
- ✓ Presentation is clear _____
- ✓ Presentation is informative _____
- ✓ Presentation is rehearsed _____
- ✓ Presentation "sells" your region _____
- ✓ Presentation is 15-20 minutes, **NO MORE!** _____

Remember to **make eye contact** and **speak loudly** to the audience!

Activity 2: The Presentation

Purpose and Overview:
The objective of this presentation is for students to both teach their region of Europe to their classmates and to sell their trip to an imaginary family. Students' understanding of their European region is evident in how well they apply this knowledge in touring the audience around key features of Europe. The incorporation of Google Earth in these presentations helps students visualize these distant places as if they actually traveled there. During the presentation, students in the audience take notes about the geography, culture, and history being presented.

Duration:
About two class periods (depending on how many groups are in the class)

Materials:

- *Presentation Checklist*
- Laptops or computers with access to Google Earth (can be downloaded for free if necessary.
- Projector that connects to laptop in order to display Google Earth in the front of the room.
- *Learning about Europe!*

Directions:
Each group has fifteen to twenty minutes to present their European region with Google Earth. Every member of the group is expected to explain one landmark on Google Earth and the reasons that landmark is important for its country. Students are free to take advantage of any features of Google Earth – such as Street View, 3-D buildings, and Panorama Views – they feel best illustrate their region. In their virtual tour of their European region, students are expected to meet the requirements of the *Presentation Checklist.*

During the presentations, students in the audience use the *Learning about Europe!* handout to take notes on the key geographic, historic, and cultural aspects of the region being presented. Students also note interesting facts they learn about the other regions of Europe. Following the presentations, students may ask clarifying questions to add details to their notes. After all groups present, students can have five to ten minutes of class-time to browse their classmates' travel brochures and add to their notes as they wish. Students then turn these handouts in to be checked for how well they actively listened to each presentation.

Name:_____Date:_____Class:____

Learning about Europe!

As you listen to each presentation, take notes about each European region.

REGION:_____

Geography Facts:

History Facts:

Culture Facts:

Miscellaneous Interesting Facts:

Name *at least* one thing you really liked about the presentation:

REGION:_____

Geography Facts:

History Facts:

Culture Facts:

Miscellaneous Interesting Facts:

Name *at least* one thing you really liked about the presentation:

REGION:_____

Geography Facts:

History Facts:

Culture Facts:

Miscellaneous Interesting Facts:

Name *at least* one thing you really liked about the presentation:

Evaluation in *Virtually Traveling Europe*

Overview:
The evaluation in *VTE* is a multi-faceted approach designed to take into account and reflect the different features of this project. Students are assessed both individually and within each group on their work and effort on travel brochure and presentation. These assessments are then combined in the Europe Project Final Evaluation. Additionally, the Post-Project Survey is another way to gauge students' understanding at the end of the unit.

Activity 1: Travel Brochure Score Sheet

- This rubric is designed to help evaluate the many elements of the travel brochure and assess how well the groups met the expectations from the Travel Brochure Checklist.
- This rubric incorporates the constructs of active learning, and collaborative learning.

Activity 2: Presentation Score Sheet

- This rubric is designed to help evaluate the many elements of the presentation and assess how well the groups met the expectations from the Presentation Checklist. This sheet is filled out as groups present their European region.
- This rubric incorporates the constructs of technology, active learning, and collaborative learning.

Activity 3: Post-Project Survey

- This survey is intended to be another source of evaluation of student's understanding of both Europe specifically and geography as a whole. The survey also allows for students to provide feedback about their feelings towards *VTE*, which can be helpful to make adjustments and revisions before implementing this curriculum again.
- This survey incorporates the constructs of technology, active learning, and collaborative learning, and engagement.

Activity 4: Europe Project Final Evaluation

- This rubric evaluates individual students by combining the Travel Brochure and Presentation scores in addition to each student's overall effort and contributions throughout the project.
- This rubric incorporates the constructs of technology, active learning, and collaborative learning.

Activity 1: Travel Brochure Score Sheet

Purpose and Overview:
This *Travel Brochure Score Sheet* was designed to help teachers evaluate students' work on their European travel brochures. The criteria for this score sheet are based on the *Travel Brochure Checklists* each student received. The final score on this sheet should be added to the final Europe Project Evaluation.

Duration:
After final travel brochures are completed.

Materials:
- *Travel Brochure Score Sheet*
- Students' completed travel brochures
- *Travel Brochure Checklist*

Directions:
The *Travel Brochure Score Sheet* should be used once groups have completed their final travel brochures. Each aspect of this score sheet relates to an expectation from the *Travel Brochure Checklist* and is assigned a score according to the quality of work of the brochure. These scores range from zero to four, or "incomplete" to "exceeds expectation." Special notes can be made within each category to signify excellent or poor work. This score sheet is meant to assist the final evaluation of students and does not need to be handed back to students.

Travel Brochure Score Sheet

The Hales Travel Company, Inc.

0 = Incomplete 1 = Below expectations 2 = Meets expectations 3 = Exceeds Expectations

Brochure Includes:

✓ A title and title Page _____

✓ Background information about the region (history, culture, geography) _____

✓ Places to go/see (landmarks, activities, etc) _____

✓ Important things to know/Interesting/Fun Facts _____

✓ Travel Information _____

✓ Various maps to show/explain the region _____

✓ Photos of the region _____

✓ A sample trip itinerary for the 2 weeks _____

✓ Information is clear/accurate and organized _____

✓ Brochure makes people want to visit _____

TOTAL Points _____

Activity 2: Presentation Score Sheet

Purpose and Overview:
This *Presentation Score Sheet* was designed to help teachers evaluate students' work in their presentations of Europe. The criteria for this score sheet are based on the *Presentation Checklists* each student received. The final score on this sheet should be added to the final Europe Project Evaluation.

Duration:
During groups' presentations.

Materials:

- *Presentation Score Sheet*
- *Presentation Checklist*
- Stopwatch to time presentations (optional)

Directions:
The *Presentation Score Sheet* should be used as groups present their European regions. Each aspect of this score sheet relates to an expectation from the *Presentation Checklist* and is assigned a score according to the quality of work of the brochure. These scores range from zero to four or "incomplete" to "exceeds expectation." Special notes should be made within each category to describe what each student presents and the effectiveness of the student's presentation. Groups' specific use of Google Earth should also be noted to indicate how successfully students used this tool. How well groups incorporate and use Google Earth in their presentation is a way to assess how well the students individually understand key places in Europe. To effectively use Google Earth to virtually tour their region, students are expected to choose important places within their region and explain why they chose that place and how it is significant and unique to that region. Also, how well students demonstrate a comfort and understanding of this technology through the ease of their tour will be an effective way to evaluate their effectiveness using Google Earth and teaching their classmates. This score sheet is meant to assist the final evaluation of students and does not need to be handed back to students.

Presentation Score Sheet

0 = Incomplete 1 = Below expectations 2 = Meets expectations 3 = Exceeds Expectations

✓ Each group member has a role in the presentation _____

✓ Each group member presents an specific aspect of the region, such as a country or a topic _____

Student:

1)

2)

3)

4)

✓ The group presents one landmark from each country using Google Earth _____

Country	Landmark - Why
1)	
2)	
3)	
4)	

✓ Each group member is responsible for presenting one of these landmarks with Google Earth _____

Student	Landmark
1)	
2)	
3)	
4)	

✓ Presentation is organized _____

✓ Presentation is clear _____

✓ Presentation is informative _____

✓ Presentation is rehearsed _____

✓ Presentation "sells" your region _____

✓ Presentation is 15-20 minutes (Time = _____) _____

TOTAL Points _____

Activity 3: Travel Agent Post-Project Survey

Purpose and Overview:
This survey is designed for multiple reasons. This survey shows the students' understanding of the importance of geography and culture as a whole, understanding of Europe (particularly their region) and how it relates to where they live, and newly acquired knowledge since they filled out the KWL. The survey also gives students the opportunity to provide feedback about what they liked best and least about the project and why.

Duration:
About one class period (following completion of all presentations)

Materials:

- *Travel Agent Post-Project Survey!*

Directions:
Administer this *Travel Agent Post-Project Survey!* after all groups have presented their European regions. Students should take about one class period to complete this survey individually (teachers can determine if they want students to write in complete sentences). It is important to remind students to answer each question honestly and to the best of their ability. This survey can be a helpful source in assessing students' understanding at the end of the unit, and it can be used in evaluating students' individual score on the *Europe Project Evaluation.* Student feedback can also be beneficial in revising the curriculum for future implementations.

Name: TG: Travel Team: Date:

Travel Agent Post-Project Survey!

1. Define geography as best as you can:

2. Define culture as best as you can:

3. Why do you think geography is or isn't important to study?

4. How can using computers help the study of geography?

5. In what ways is your region of Europe similar to San Diego?

6. In what ways is your region of Europe different than San Diego?

7. What resource (book, website – be specific, Google Earth, etc.) did you find most useful during this project and WHY?

8. What do you now know about Europe? Try to name *at least* ten things you learned about this continent.

9. If you could travel to any region in Europe, where would you want to go and **WHY**?

10. What was your favorite part of this Europe project and **WHY**?

Activity 4: Europe Project Final Evaluation

Purpose and Overview:
This project rubric is designed as a both a formative and summative evaluation of the students' overall work on this project. The evaluation looks at both individual work as well as group work. Individually, students are assessed based on how well they contribute to the success of the group, their effort during the project, and how well they demonstrate an understanding of their region in Europe. In order to demonstrate understanding, students are expected to clearly and accurately write in the brochure and talk during the presentation about important, significant, and relevant information relating to the geography, culture, and history of their region of Europe.

Duration:
Following the completion of all travel brochures and presentations.

Materials:
- *Travel Brochure Score Sheet*
- Students' completed travel brochures
- *Presentation Score Sheet*
- *Travel Agent Post-Project Survey*
- *Europe Project Evaluation*

Directions:
Using the *Europe Project Evaluation,* each group is evaluated based on how well members work together and how hard the group works to complete the assignment. Also, the travel brochures and presentations are assessed for clarity, neatness, and creativity using the *Travel Brochure and Presentation Score Sheets*. Students should be able to show that they have learned what makes their region unique and interesting. The *Travel Agent Post-Project Survey* can be used to help assess individual students' success in *VTE.* By incorporating a combination of group assessments and individual assessments, students' final scores reflect their individual contributions to the group as well as their participation in the success of the group. This blend of individual and group scores prevents individuals from being negatively affected by poor effort of teammates, while also requiring accountability from each individual. Students receive this final evaluation as an assessment of their work on this project.

Name: TG: Travel Team: Date:

Europe Project Evaluation:

Individual Score:

	Below Expectation		Satisfactory		Exemplary
Contribution to Research:	**12**	**14**	**16**	**18**	**20**
Contribution to Travel Brochure:	**18**	**21**	**24**	**27**	**30**
Role in Presentation:	**12**	**14**	**16**	**18**	**20**
Overall Helpfulness within the group:	**6**	**7**	**8**	**9**	**10**
Overall Effort:	**6**	**7**	**8**	**9**	**10**

Total Individual Points: / 90

Group Score:

Group worked cooperatively:	**6**	**7**	**8**	**9**	**10**
Travel Brochure is creative:	**1**	**2**	**3**	**4**	**5**
Travel Brochure is cohesive:	**6**	**7**	**8**	**9**	**10**
Travel Brochure meets checklist requirements:	**12**	**14**	**16**	**18**	**20**
Presentation meets checklist requirements:	**8**	**10**	**12**	**13.5**	**15**
Presentation shows understanding of region:	**6**	**7**	**8**	**9**	**10**
Presentation uses Google Earth effectively:	**6**	**7**	**8**	**9**	**10**
Overall Group Effort:	**6**	**7**	**8**	**9**	**10**

Total Group Points: / 90

OVERALL SCORE: /180

References

Arafeh, S., & Levin, D. (2002). *The digital disconnect: The widening gap between internet-savvy students and their schools*. Retrieved 10/4/2009 from http://www.pewinternet.org/Reports/2002/The-Digital-Disconnect-The-widening-gap-between-Internetsavvy-students-and-their-schools.aspx Aug 14, 2002.

Baker, T., & White, S. (2003). The effects of G.I.S. on students' attitudes, self-efficacy, and achievement in middle school science classrooms. *Journal of Geography, 102*(6), 243-254.

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist,* 26(3 & 4), 369-398.

Bransford, J. D, Brown, A.L., & Cocking, R.R. (2000). *How people learn: Brain, mind, experience, and school.* Washington, D.C.: National Academy Press.

Council of Chief State School Officers, Washington D.C. (2000). Geography framework for the 1994 and 2001National Assessment of Educational Progress. Washington, D.C.: NAEP Geography Consensus Project. National Assessment Governing Board.

Deci, E. (1995). *Why we do what we do.* New York: Putnam's Sons.

Doering, A., & Veletsianos, G. (2007). An investigation of the use of real-time, authentic geospatial data in the K-12 classroom. *Journal of Geography, 106*, 217-225.

Harris, J., Mishra, P., & Koehler M. (2009). Teachers' technological pedagogical content knowledge and learning activity types: Curriculum-based technology integration reframed. *Journal of Research on Technology in Education, 41*(4), 393–416.

Hofer, M., & Swan, K. (2008-2009). Technological pedagogical content knowledge in action: A case study of a middle school digital documentary project. *Journal of Research on Technology in Education, 41*(2), 179-200.

Klein, P. (2003). Active learning strategies and assessment in world geography classes. *Journal of Geography, 102*(4), 146-157.

Lenhart, A., Madden, M., & Hitlin, P. (2005). *Teens and technology: Youth are leading the transition to a fully wired and mobile nation.* Washington D.C.: Pew Internet & American Life Project.

Lewinski, M. (2008). *World geography and cultures.* Shoreview, Minnesota: Pearson Education, Inc.

Liben, L. (2008). Understanding maps: Is the purple country on the map "really" purple? *Knowledge Quest 1094-9046, 36*(4), 20-30.

Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017-1054.

Moore, J. (1999). *North America.* Monterey, CA: Evan-Moor Educational Publishers.

Mowell, B. (2003). Edible Geography: International Foods In the World Geography Classroom. *Journal of Geography, 102*(4), 140-145.

National Geographic Education Foundation (2006). Final Report: National Geographic-Roper Public Affairs 2006 Geographic Literacy Study. Washington, DC: Author.

National Geographic Society (1995). NGS MapPack transparency set and activities. Washington, DC.

National Geographic Society (1995). NGS PicturePack transparencies. Washington, DC.

Patterson, T. C. (2007). Google earth as a (not just) geography education tool. *Journal of Geography, 106*(4), 145-152.

Salter, C. L., Hobbs, G., & Salter, C. S. (1998). Key to the national geography standards: Geography for life: National geography standards 1994. Indiana, PA: National Geographic Society.

Schultz, R., Kerski, J., & Patterson, T. (2008). The use of virtual globes as a spatial teaching tool with suggestions for metadata standards. *Journal of Geography, 107*(1), 27-34.

Shearer, C. (2003). Geography Education: Learning the "why of where". *Principal, 82*(3), 32-5

Smith, D. (1999). David J. Smith's mapping the world by heart: An innovative approach to learning geography. Cambridge, MA: Tom Snyder Productions.

Spronken-Smith, R., Bullard, J., Ray, W., Roberts, C., & Keiffer, A. (2008). Where might sand dunes be on mars? Engaging students through inquiry-based learning in geography. *Journal of Geography in Higher Education, 32*(1), 71-86.

West, B. (2003). Student aptitudes and the impact of GIS on thinking skills and motivation. *Journal of Geography, 102*(6), 267-274.

Wiggins G., & McTighe J. (2005). Understanding by design. Alexandria, VA: Association for Supervision and Curriculum Development.

Wink, J., & Putney, L. (2002). A Vision of Vygotsky. Boston, MA: Allyn & Bacon.

Winter, C. (2009). Geography and education I: The state of health of geography in schools. *Progress in Human Geography, 33*(5), 667–676

Zemelman, S., Daniels, H., & Hyde, A. (2005). *Best practice: Today's standards for teaching & learning in America's Schools*. Portsmouth, NH: Heinemann.