INVESTIGATING DIGITAL STORYTELLING
AS AN ASSESSMENT PRACTICE IN STUDY ABROAD PROGRAMS

by

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Signed: Melody Buckner
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DEDICATION

To Richard Ruiz,
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ABSTRACT

This study investigated digital storytelling as a meaningful and effective assessment instrument and practice for faculty-led study-abroad programs. The research was prompted by critiques from faculty and staff members citing study abroad programs in higher education lack the academic rigor of traditional course work and that study abroad sites are not “all it should or could be” (Bok, 2006; Engle, 1986; Hoffa, 2007; Van Berg, 2003, 2009). Through a qualitative research approach, a digital storytelling project was administered as an assessment tool over four summers in one study abroad program, and then expanded to three additional study abroad programs differing in locations and disciplines. The research questions explored ways in which digital storytelling not only influence the learning outcomes and experiences of students, but also touch on the building of students’ personal identity. The study revealed digital storytelling to be a method conducive to demonstrating and assessing personal and academic learning outcomes through a dynamic, introspective, reflective and organic process that concluded with a digital artifact. Digital storytelling as a tool and process allowed students to become more engaged and to take ownership in their own learning while participating in a study abroad program. This study contributes much needed research related to digital storytelling as an assessment practice for measuring not only identity building, but particularly, as a method for assessing academic learning outcomes in summer faculty-led study-abroad programs.
CHAPTER 1 -
INTRODUCTION AND DIGITAL STORYTELLING PROJECT

Introduction

My Personal Journey

My interest in the topic of digital storytelling as an assessment practice began in 2010, when I was working as an instructional designer in an outreach and global initiatives office at a university located in the southwestern part of the United States. The director of study abroad approached me to help with assessment practices in several of their programs. My journey into the use of digital storytelling for assessment purposes began with one faculty-led study abroad program focusing on special education classrooms in Mexico.

As an instructional designer, I assisted faculty with the integration of pedagogical theory and technology application into their curricula. I asked questions such as, “What do you want your students to learn?” and “How do your students demonstrate that they have learned it?” I found that many faculty members struggled with such questions. They typically identified overarching goals of cultural competences, language acquisition, and even some discipline specific outcomes. However, their assessment of the learning outcomes predictably modeled those used in traditional classrooms with the most common examples requiring students to either write papers or give presentations about their learning experiences. Some programs included written reflections, but none I encountered used storytelling or digital tools as an assessment method.

The absence of storytelling and digital tools being utilized in a study abroad experience came as a surprise for two reasons. First, when I talked to students about their study abroad journey, they would immediately pull out their smart phone and show me
pictures as they weaved the story of their experience. Second, by nature, travel lends itself to a myriad of pictures and video opportunities to record or document their journey and experiences. Many who travel and especially the current generation of college students prefers to record their experiences visually and sometimes audibly while traveling to new and different places. Such recordings help travelers remember and share their experiences with friends and family.

These observations led me to reflect on ways in which students could use multimedia and multimodal recordings of their study abroad experiences as methods for demonstrating learning outcomes in their programs. In researching the literature for a potential solution, I discovered the educational use of “digital storytelling” as a practice for building identity (Lambert, 2010; Ohler, 2013; Robin, 2006). Digital storytelling offered an attractive avenue for study abroad programs, as traveling is definitely a way for students to broaden their identity through experiential learning, as well as a method for demonstrating their learning through reflection and technology.

I piloted the digital storytelling project as an assessment instrument with the professor from the Verano, Mexico study abroad program in 2011. Following the pilot project, I recruited faculty from other summer study abroad programs and subsequently their interest in using digital storytelling in their programs started to grow. It was during this period of growth that heightened my own interest in the topic of digital storytelling as a means for assessment, digital literacy, and experiential learning. This interest developed into the focus of my research, which was to investigate and determine if digital storytelling project was actually an effective method for demonstrating learning outcomes in faculty-led summer study abroad programs. Both the study abroad director and the
faculty who participated in the digital storytelling project enthusiastically supported and approved this research idea. The study was subsequently sponsored by one of the University participating study abroad faculty and approved by the Internal Review Board.

My research spanned four summers of data collection across four different study abroad programs --- Verano Mexico (Special Education), Vivir Mexico (Mexican American Studies), Mediterranean Diet and Health (Nutritional Science), and Primate Studies Field School (Family Studies and Human Development) --- and traversed three continents: Europe, Africa, and the Americas. Most recently, in the summer of 2014, I was invited to join two of the study abroad programs (Verano Mexico and Vivir Mexico) to collect observation data. This opportunity gave me further insight into the benefits of the digital storytelling project overall and the study abroad experiences for students on so many different levels of learning.

The students I met on this journey were as diverse as the curricula in both age and background. It was an enlightening venture, not only because of the stories told by the students, but in the learning process that occurred around the travel and the content and technologies explored.

Research Rational

Study abroad is when students pursue academic learning opportunities outside of their own country. According to the National Association of Foreign Student Advisers (NAFSA), study abroad is a learning opportunity that enables students to develop critical skills that contribute in vital ways to preparing students for the competitive global environment which they will enter (http://www.nafsa.org). The field of study abroad in higher education has often been subjected to critique by faculty and staff members about
whether the academic rigor of course work is “all it should or could be” at study abroad sites (Bok, 2006; Engle, 1986; Hoffa, 2007; Van Berg, 2003, 2009). Moreover, because numerous study abroad practices offer experiences that are similar to taking a vacation, many students refer to their time in study abroad programs as “taking time off” (Vande Berg, Paige & Lou, 2012) rather than recognizing that they are paying for and earning academic credit for developing relevant and/or professional skills through these programs. This critique has prompted many stakeholders in the study abroad arena, including students, parents, administrator, accrediting bodies, and legislators to take a closer look at what and how students are learning as they travel abroad (Robinson, 2012).

Innovative and meaningful assessment practices that allow and/or require students to reflect upon their experiential learning while demonstrating the achievement of expected academic learning outcomes becomes essential if not crucial in addressing this critique.

The purpose of this study was to investigate digital storytelling as a meaningful and effective assessment instrument and practice for study abroad students and programs. The study revealed digital storytelling to be a method conducive to demonstrating and assessing personal and academic learning outcomes through a dynamic, introspective, reflective and organic process that concluded with a digital artifact. Digital storytelling as a tool and process allowed students to become more engaged and to take ownership in their own learning while participating in a study abroad program.

Significance of the Study

The literature on digital storytelling and study abroad has primarily focused on the formation and building of identity through experiential learning and personal experiences. Outside of the study abroad arena, literature on the use of digital
storytelling with pre-service teachers focused on determining its effectiveness in promoting engagement and reflection toward expected academic outcomes (Ivala, Gachago, Condy & Chigona, 2013). However, there was very little research on the use of digital storytelling to measure both personal identity and academic learning outcomes within the study abroad experiences. Therefore, this study contributes much needed research related to digital storytelling as an assessment practice for measuring not only identity building, but particularly, as a method for assessing academic learning outcomes in summer faculty-led study-abroad programs. More significantly, this study responds to the critical issue of academic credit earned for specific study abroad student learning outcomes. For example in the Verano Mexico study abroad program students were expected to demonstrate their knowledge of the similarities and differences among Mexican students in general and special education programs. Digital storytelling along with multimedia tools provided the study abroad students with an effective methodology to demonstrate that they had actually met the expected learning outcomes of the program.

Definition of Terms

The following are key terms defined to express the viewpoint of the researcher and to orientate the reader to this perspective.

1. *Traditional storytelling techniques* refer to an established or customary practice of sharing knowledge, interpreting experiences, or passing on the collective wisdom of the culture to others through the techniques of oral narration, written word, or illustrations. Not all, but most stories feature a beginning, middle, and end (Campbell, 1968; Pellowski, 1977).

2. *Digital storytelling* is a modern method for expanding upon traditional
storytelling techniques through a variety of digital modalities including digital photography and videography. The audience members participate either passively through viewing a video or interactively through commentary, discussions, or social media about the video (Ohler, 2013).

3. *Assessment practices* refer to the systematic gathering of information about student learning and the factors that affect learning, and undertaken with the resources, time, and expertise available for the purpose of improving learning. There are three basic steps in the assessment process: 1) articulate the learning goals of the course; 2) gather information about how well students are achieving the learning goals of the course and factors that influence achievement; and 3) use the information for improvement (Walvoord, 2004).

4. *Digital Literacy* is the ability to use, filter, and validate technological tools and the Internet strategically to find and evaluate information, collaborate, produce and share content, achieve academic, professional, or personal goals (O'Brien & Scharber, 2008).

The Digital Storytelling Project

*The Project*

The digital storytelling project is a multimedia reflective presentation prepared by students to demonstrate personal growth and learning outcomes from participating in faculty-led summer study abroad programs. The project was not to be a narrative slide show of the student’s travels, but rather a deeper reflection focusing on the learning that took place and how it affected them.

The combination of narratives and technology has been on the rise over the past
two decades. In Jason Olher’s book, *Confessions of a Digital Storytelling Teacher* (2013), he reflects on the use of technology in the classroom since the early 1980’s with the introduction of the personal computer. His insights into the use of digital storytelling were helpful in framing this digital storytelling project for assessment purposes. Some insights used in developing this project included: (1) use the technology to serve the story, not the other way around; (2) storytelling provides a powerful framework and set of practical processes for resolving issues, educating ourselves and pursuing goals or objectives; (3) storytelling helps us to remember; and (4) digital storytelling combines traditional and emerging literacies, engaging otherwise reluctant students in literacy development. It was important in working with students on this project to teach them the art of storytelling as well as introduce them to a modality of communication, which can be effectively shared with others. The major goal of the digital storytelling project was to give students a method and modality to find their own creative, reflective voice while demonstrating to others what they had learned on their study abroad experience.

*The Setting*

![Figure 1.1 - Vivir Mexico Students (Summer 2014)](image)
The target populations for this study were university students between the ages of 18 – 25 who were currently attending an institute of higher learning and planned on taking a faculty-led summer study abroad course for academic credit. However, the study abroad programs were not limited to this population of students. There was one doctoral student who participated in the study who was in her 40’s and a few other students in their late 20’s. Most of the students who participated in these programs had not traveled outside of the United States and if they had traveled abroad it was in the confines of a family vacation. There were almost six times as many females (52) than males (9) in these particular study abroad programs. From the group of 61 students, 17 volunteered to participate in this research study. Fifteen females and two males agreed to share their stories and be interviewed. This is a common representation of female to male ratio in study abroad programs, based upon findings from the 2013 Open Doors Report, which noted, 64.8 percent of U.S. students in 2011-12 were female, while 35.2 percent were male.

The four programs participating in this study are as follows:

- Mediterranean Diet and Health - A five-week hands-on Nutritional Science course that took place in Verona, Italy. There were twenty-six students and two instructors on this study abroad experience. Three females from this program participated in the summer of 2014.

- Vivir Mexico - A five-week course learning about the culture, history, and people of Mexico and the political and social bilateral issues faced by Mexico and the U. S. This program took place in Mexico City and Guanajuato. There were sixteen students and three instructors on this study abroad experience. Two females and one male from this program participated in the summer of 2014.
• Primate Studies Field School - A four-week tour through Rwanda, Africa to observe rare monkeys and apes while learning how to collect data in the field. There were nine students and two instructors on this study abroad experience. Two females and one male from this program participated in the summer of 2014.

• Verano Mexico - An eight-week service-based project, teaching and helping students in a public school environment in Guanajuato, Mexico. There were ten students and one instructor on this study abroad experience. Eight females from this program participated over the course of four years (2010-14).

Figure 1.2 Research Sites (Italy, Rwanda & Mexico)
Each program handled students’ time in the country differently based upon the faculty who led the program. For instance, the Mediterranean Diet and Health program in Italy only met during the week and allowed students to travel freely on the weekends, while the faculty in the Primate Studies Field School in Rwanda filled the entire schedule without much free time for students to explore the country independent of the program itinerary. Both of the Mexico programs had a fully scheduled calendar, but allowed for students to explore their surroundings in the evenings. This factor was considered in designing the research questions.

*The Research Questions*

In the context of university faculty-led study abroad programs:

- In what ways does a digital storytelling project influence the learning experience and the building of personal identity for students?
- What does digital storytelling offer as an assessment instrument and model for demonstrating expected learning outcomes for study abroad programs?

*The Methodology*

The choice of conducting a qualitative study for this research was based on the nature of exploring digital storytelling as an assessment practice. The strength of the qualitative study is providing data that is subjective, descriptive and gives a snapshot of a particular population. This qualitative study can be described as pragmatic, interpretive and grounded in the lived experiences of people (Marshall and Rossman, 2011). It is a process through inquiry that leads to the understanding of a situation. A qualitative study is based upon viewing the social worlds as whole and complex, realizing that context is
important, that the situation is emerging and evolving and the analysis is fundamentally interpretive in nature.

This study was conducted over four summers starting in 2011 and concluded in 2014. The study was piloted with one faculty instructor who conducted a summer study abroad program to Mexico in the summers of 2011-2013. The collaboration with this faculty instructor continued for three summers before the study was expanded in the final summer (2014) to include four other faculty instructors leading and participating in three different summer study abroad programs. The initial pilot study enabled the researcher to incorporate findings that improved the digital storytelling project each summer it was offered.

The population for this study was relatively small and the outcomes were based upon student and faculty perceptions of a specific treatment--the digital storytelling project in framing the demonstration of learning outcomes. The study was conducted to gain understanding of the students’ feelings, impressions and viewpoint of the digital storytelling project as a reflective tool for the demonstration of learning outcomes. The qualitative approach was the most applicable choice for this research as the behavior of students was collected through field observation, interviews and gathering of artifacts. The faculty instructors were also interviewed to gain their insight about the effectiveness of the digital storytelling project.

For this research, the students were given instructions on the digital storytelling project before they left on their study abroad experience. These instructions were provided in three different ways: (1) the researcher met in a physical classroom with each of the study abroad groups to describe the digital storytelling process and provide
handouts, (2) the instructions were added to each course site in the university’s learning management system and, (3) the researcher posted all instructions and resources to a public website. Along with the instructions, there was a rubric (See Appendix A) attached to the digital storytelling project to help successfully guide students through the process of composing and creating a digital story.

A pre-departure electronic survey (See Appendix B) was also administered to all students participating in the four study abroad programs to gather students’ preconceived ideas about the digital storytelling project and their understanding of the learning outcomes for the study abroad course.

Next all students were offered the opportunity through email correspondence to take an in-person survey and participate in a personal interview (See Appendix C) to gather data about their experience with the digital storytelling project. Finally, four faculty instructors (two faculty from the Primate Studies Field school and a faculty from each of the Vivir and Verano Mexico programs) were interviewed (Appendix D) to determine their perceptions about the entire digital storytelling project experience. All of the interviews were recorded and personally transcribed by the researcher.

The researcher traveled with two of the Mexico programs (Verano and Vivir) during the summer of 2014. Observation data was collected through field note taking, journal writing, photographs and videos of student behavior during the study abroad experience. This data was invaluable to the spirit of the research as it provided authentic “on the ground” insight into the daily interaction of students with faculty, course content and international environments.
The last phase of the study officially began with the analysis of the digital story artifacts based upon the rubric and the learning outcomes for the study abroad course. The process used to conduct the qualitative analysis was as follows: 1) preliminary examination of the entire data collection including surveys, artifacts, observation notes, and interview transcripts; 2) coding the data through segmentation and labeling; 3) development of emerging themes through the aggregation of similar codes; 4) connecting and interrelating themes that developed; and 5) construction of a narrative around the findings (Crewell, 2002).

The following procedures were utilized throughout the data analysis phase to check validity and credibility. The first procedure used was prolonged engagement. In this case, the researcher had been involved with the digital storytelling project for four years. The researcher conducted and transcribed the interviews, which included consistent member checking through sharing the transcripts of the interviews with the participants and discussing the interpretation. The transcriptions were coded by similar words or thoughts that were recurrent during the interview process. For example, *reflection or reflective activity*, were recurrent words or ideas that developed into a theme during the coding process. Once these themes started to appear they were assigned to one or both of the research questions as they aligned in assisting to answer that specific question. Not all emerging themes aided in answering both of the research questions.

Triangulation was used, as the researcher gathered data from a variety of sources including: 1) survey tools (paper and electronically) and face-to-face interviews (students and faculty); 2) observations in the field; and 3) the collection of the digital storytelling artifacts created by the students. An audit trail was constructed during the data collection
in an Excel spreadsheet to provide a transparent logical pathway showing how data was collected, managed, and conclusions were drawn. Finally, peer debriefing was utilized with selected colleagues, this included Dr. Richard Ruiz, Dr. Chris Johnson, and Dr. Todd Fletcher and the other study abroad faculty who participated in the study to critically discuss the emergent findings (Marshall & Rossman, 2011).

Limitations and Role of the Researcher

There were several limitations based upon the generalizability of the findings for study abroad programs that must be disclosed in regard to this research study. It should be noted that study abroad programs are highly variable in nature with many personal and programmatic variables affecting the student experience (Wilkinson, 2000). In this respect, the variables not controlled with this study include the diversity of the student population, the administration of the digital storytelling project, the various countries visited and their impact upon the student experience. Therefore, the variations in the student perceptions were considered in the post study abroad interviews and digital storytelling projects could have been skewed based upon the individual student perceptions.

Other limiting factors to consider with this research were the number of settings and contexts. The research was conducted at a large public university located in the Southwestern part of the United States in coordination with the campus study abroad office. The research only encompassed four six-week faculty-led summer study abroad programs.

All of the students who participated in the faculty-led study abroad programs were required to complete the digital storytelling project. However, the students were not
required to participate in the research study. Potential students study participants were solicited through email to participate in a face-to-face survey and interview. This data collected from these two instruments were comprised of reflective responses about the students’ personal experiences and learning outcomes in relationship to the digital storytelling project. The researcher cannot conclude that the populations studied would representative of all students who participate in faculty-led study abroad programs, as it was not a random sampling.

For this study, the researcher was involved with all stages of the data collection including: the surveys, the observation phase, the students and faculty interviews, the transcription and coding of these interviews and the viewing of the digital stories. The participatory role of the researcher included engaging (and the personal involvement that occurred) with the participants for only the Verano and Vivir Mexico programs, otherwise minimum interaction occurred between the researcher and the students from the Mediterranean Diet and Health program in Italy and Primate Studies Field School program in Rwanda.

It is also important to note that the researcher worked with the study abroad faculty of the four programs on curriculum development and assessment practices in the role and position of instructional designer in a university department. This role and department position gave the researcher unique insights into the process and culture of the University’s study abroad programs.

*Outline of Articles*

This research addressed a variety of issues pertaining to digital storytelling guided by the following two research questions:
• In what ways does a digital storytelling project influence the learning experience and the building of personal identity for students?

• What does digital storytelling offer as an assessment instrument and model for demonstrating expected learning outcomes for study abroad programs?

I have chosen the three-article dissertation option to discuss the findings of my research. The specific digital storytelling topics presented in the three articles include:

1) Digital storytelling as an Assessment Practice
   a. This article will be submitted to the Journal of Educational Multimedia and Hypermedia. The stated mission of this journal is to contribute to the advancement of the theory and practice of learning and teaching using the powerful and promising technological tools that allow the integration of images, sound, text and data.

2) Digital Storytelling within Study Abroad
   a. This article will be submitted to the Journal of International Students. The goal of this journal is to feature narrative, theoretical and empirically-based research articles, student reflections, study abroad experiences relevant to international students and their cross cultural experiences in understanding higher education.

3) Advancing Digital Literacy through Digital Storytelling
   a. This article will be submitted to the British Journal of Educational Technology. The goal of this journal is to provide readers with the widest possible coverage of developments in educational technology world-wide and is a primary sourced for academics and
professionals in the expanding field of education, training and information technology.

Article One addresses the question, “What does digital storytelling offer as an assessment instrument and model for demonstrating expected learning outcomes for study abroad programs?” It takes an in-depth look at assessment practices in study abroad programs through the application of a digital storytelling project in four different programs to show educators how this practice was used in particular teaching and learning environments. The primary focus of this article is to understand and consider the use of digital storytelling as an assessment practice and includes a review of the literature on current assessment practices in study abroad programs. The article provides a discussion of the application of the digital storytelling project as an assessment tool and the results of this application through the lens of social constructivism (Vygotsky, 1978) lens. The article concludes with recommendations for use of digital storytelling as an assessment practice and the need for further research in this area.

Article Two focuses on the learning experiences of students traveling in a study abroad program to answer the question, “In what ways does a digital storytelling project influence the learning experience and the building of personal identity for students?” This article concentrates on the impact or effect of the digital storytelling project and if and how it made a difference in the learning experiences of students in study abroad programs. Experiential learning theory (Kolb, 1984) frames the research discussion around the learning experiences of the students and the reflections that took place through the implementation of a digital storytelling project in four faculty-led study abroad
programs. Over the course of four summer programs, students reflected upon what they learned and were required to demonstrate the knowledge gained through the digital storytelling project. The findings revealed that digital storytelling is an effective reflective instrument for creating an innovative and meaningful experience for study abroad students. The study highlights the affordances of digital storytelling as a method for demonstrating and accessing academic learning outcomes as a reflective practice for students engaged in study abroad programs. In conclusion, recommendations are made for the implementation and implications of further study of digital storytelling as an assessment practice.

Article Three is a discussion on the effects that the digital storytelling project had upon the digital literacy development of students who participated in the project. The article examines the research questions through the lens of educational technology tools. The discussion revolves around the impact that multimedia and multimodal choices have upon demonstrating learning outcomes and the effects on student learning. The theoretical framework for this article centers on New Literacies Studies (Street, 2003) and the New Media Literacy Studies (Gee, 2010), which are concerned with deriving meaning through the use of digital tools and media within a social and cultural context. These theories were instrumental in helping to frame the basis of the research questions in reference to digital literacy and the demonstration of learning outcomes through digital storytelling. The aim of this qualitative study was to use digital storytelling as a catalyst for assisting students in demonstrating their learning outcomes while participating in a study abroad program. The students were instructed about the process of storytelling and required to use a multimedia Internet tool called VoiceThread. They created storyboards,
scripts, took photos and/or videos and recorded their own voice through digital modalities. The final product was a digital story to be shared with their instructor and peers. The instruments used to evaluate the effectiveness of the digital storytelling assignment included: a digital storytelling rubric, observation of the integration of digital technologies, surveys and interviews. Over the course of four summers, several groups of study abroad students shared their experience about the digital storytelling assignment. The findings from this study not only informed the use of digital storytelling as an assessment practice, but also explored the development of digital literacy among university students.
Abstract

This article investigates the use of digital storytelling and reflection as a complementary aspect of an assessment practice for academic content acquisition and personal growth that employed the strategies of narratives, traditional storytelling and digital storytelling. In particular, this article explored and considered the use of digital storytelling as an effective means for demonstrating learning outcomes through a reflective process, and provided faculty with a method of assessment that could be used in teaching and learning environments in study abroad programs. Constructivism was the theory used to frame the learning and social construct of the students. The study discussed in this article was originally conducted in four university faculty-led summer study abroad settings from 2011 to 2014.
Reflection is the process of stepping back from an experience to ponder, carefully and persistently, its meaning to the self through the development of inferences; learning is the creation of meaning from past or current events that serves as a guide for future behaviour. M. W. Daudelin

Introduction

The current world situation is one of chaotic transformation where there is literally a sea of data that is changing and evolving exponentially. There now exists a global and technologically oriented environment in which citizens of the world are being pushed to think creatively, become cooperative problem solvers and effective communicators. In a pluralistic society, citizens must know how to interact, engage, and collaborate with others from multiple cultures using various types of technology. They must learn to match left-brain analytical skills with right-brain creative, innovative skills to be competitive and successful in today’s global market (Pink, 2006).

Nevertheless, in the United States, educational success continues to be measured through the use of tests that require students to recall facts taught to them in class -- an industrial-age model instead of an information-age model of measurement. According to Daniel Pink (2006), today’s students’ intellectual abilities are primarily being assessed in ways that emphasize the left-brain analytical skills while ignoring the right-brain creative skills. This reality begs the question, why is this practice still in use? The answer is accountability. Students earn, in this case, a grade, course credit, or a degree, based on meeting certain standards before the award can be granted. A second reason is convenience, as it is usually easy to administer a high-stakes objective assessment to a mass audience on left-brain analytic skills. Assessing right-brain creative skills is more subjective to evaluate and this presents a challenge. Digital storytelling has the potential to become an effective mechanism to assess not only right-brain creative skills, but also
the left-brain analytical skills. A focus on narratives directs attention toward the learning processes often ignored in research that centers on a narrow range of cognitive skills (McEwan, 1995).

I propose that narratives expressed through the technological modality of digital storytelling can be effective mechanisms used to assess not only right-brain creative abilities, but also the left-brain analytical proficiencies. Further, a focus on narratives exposes learning processes often ignored when designing research on a narrow range of cognitive skills (McEwan, 1995). For this article, digital storytelling is defined as a modern method for expanding upon traditional storytelling techniques including narratives through a variety of digital modalities including digital photography and videography. The audience can be engaged in a passive way through just watching a video or in an interactive way through commentary, discussions, or social media after watching the video (Ohler, 2013). Therefore, the research study discussed in this article investigated the potential use of digital storytelling as an effective assessment method for students to demonstrate both personal and academic learning outcomes. The theoretical framework used for this research was constructivism--how students learn or the way knowledge is assembled in ones’ own mind. Through reflection, students construct the meaning of their learning and demonstrate their outcomes with digital storytelling technological modality and techniques.

The study applied a qualitative approach for researching and collecting data from students participating in summer study abroad programs over the period of four years (2011 to 2014). The first three summers (2011 to 2013) of data collection were conducted in Mexico in collaboration with a faculty member interested in the use digital
storytelling for the Mexico study abroad program. During the fourth summer of research (2014), the study was expanded to three additional and different study abroad programs spanning another program in Mexico, in Italy and in Rwanda. The data collection instruments used for this study were surveys, field observations, interviews, and the students’ final digital stories. The research questions explored the influence of the digital storytelling process on the learning experience and the effectiveness of demonstrating learning outcomes through digital storytelling. The two key findings from this study confirmed that reflection on learning and the creation of a digital story to demonstrate what was learned presented an effective method for engaging students and assessing their learning progress. Based upon these findings, I conclude that digital storytelling can be utilized to engage students in a creative process as well as demonstrate learning outcomes, and support the idea of constructivism.

This article begins with a review of the literature about conventional assessment practices and digital storytelling. The next section describes the research questions and theoretical framework used in the study. It is followed by an outline of the qualitative method utilized for the research. Next the results are discussed, in presenting the potential of digital storytelling as an assessment practice. Finally, further implications and recommendations are made based upon the findings of the study.

**Literature Review**

Daniel Pink (2006) points out that there is a major shift happening in the world today as we move from the Information Age to the Conceptual Age. According to Pink in the Conceptual Age, it will be vital for students to utilize new ways to “create artistic and emotional beauty, to detect patterns and opportunities, to craft a satisfying narrative, and
to combine seemingly unrelated ideas into a novel invention...to empathize, to understand the subtleties of human interaction, to find joy in one’s self and elicit it to others” (p. 51). Traditional storytelling, which employs the modalities of oral narration, the written word, or illustrations, is part of the foundations of the new literacies movement (Street, 2003). Digital storytelling expands upon these modalities by adding multimedia techniques such as voice recording, digital photography, or video production.

Perhaps there is a need to go back to our ancestral roots to seek how the process of learning, retaining, and passing on collective knowledge and wisdom was understood and thus manifest in the development of particular techniques that supported the process. This turns attention to collaborative narratives that have been an entertaining and engaging way for people from cultures all over the world to express their experiences and give meaning to them (Pellowski, 1977). The use of narratives or storytelling across cultural societies were designed and have been used to teach, inspire, bring people together, or to pass along wisdom from one generation to another since the beginning of time (Campbell, 1968). Storytelling is a human trait that is universal, present, and recognizable across cultures and epochs (Alexander & Levine, 2008). There is power in using narratives or personal storytelling to convey or demonstrate knowledge. Through the process of storytelling, meaning is constructed, knowledge is retained, and the ability to pass along wisdom is enabled.

Narratives and Storytelling

Narratives historically have been the initial and principal way in which humans pass on the knowledge of the world around them – wisdom as developed from an accumulation of experiences within particular “worlds” which encompassed physical
spaces/environments and conditions. Stories, in fact help the people and the culture to survive and thrive by adapting to the changing conditions in a hostile environment.

Storytelling was the first form of education.

In *Wisdom Sits in Places – Landscape and Language Among the Western Apache*, Keith Basso (1996) quotes a bit of wisdom from Apache elder Nick Thompson, who said, “That is what we know about our stories. They go to work on your mind and make you think about your life…” (p. 58). Stories do work on your mind and make you think deeper. Stories help you define yourself, where you come from and what you know.

Gary Witherspoon (1977) in *Language and Art in the Navajo Universe* states, “When listening to and telling stories, it is important to remember that human beings actually create the world within which they live, think, speak and act. And even though they occupy the same globe, they traverse very different worlds” (p. 3). Through the telling of stories and creation of art, humans relate to one another. With language, man has the ability to express himself actively, creatively and become a powerful part of his universe. If he is void of language, then he is impotent, ignorant, isolated and static (p. 62).

Basso and Witherspoon describe narrative storytelling as a critical aspect of building identity -- our language and our stories become a vital piece of who we are, where we come from and ultimately assist in pointing us to where we are going in life.

According to McEwan (1995), narratives are a fundamental human capacity, thus the role of narratives in education clearly merits our attention. McEwan contends that narratives are an extended language configured in a way that embodies life. It has a rhythm springing from the patterns of human life and interaction. There is a structural
symmetry between the content and human existence. It helps to remember that knowledge has been gained within the context of someone’s life and as a product of that person’s inquiry. McEwan asserts that a focus on narratives in the framework of education offers the potential of making them an integral part of the curriculum and the teaching and learning experience.

McEwan identifies two types of narrative structures. He describes the first narrative structure as *a summation of human consciousness*, which relates to the growth of knowledge or the discovery of ideas gathered through the deployment of human projects and practices. The second narrative structure he defines is an *individual consciousness* of an individual’s educational growth and development. Bruner (1990) expands on the notion of narrative structure to explain that throughout our lives we tend to naturally create narratives to give coherence and meaning to the whole lived experience. Cumulatively, narratives of lived experiences represent constructed knowledge, not just the conveyance of information. Narratives allow us to put ideas into our own words, so we can make meaning of them. As we begin to learn we are forming our own unique narratives. Narratives give us a way of expressing our ways of knowing by helping to organize and communicate our own personal experiences. If we start to understand that the central focus of narrative is to create human meaning making and formation of identity, then we can grasp the significance of narrative in education. With this in mind, narratives can play a vital role in helping to construct the future of the curriculum, the process of learning and ways to inform the practice of teaching (McEwan, 1995).
Narrative as pedagogy

The work of Richard Hopkins (1994) is a good starting place when considering narrative pedagogy. In his book, *Narrative schooling: Experiential learning and the transformation of American education*, Hopkins proposes a narrative schooling grounded in the philosophy of John Dewey. Dewey stated that education is a continual restructuring of the learner’s experience with the process taking into account personal meaning and social context. Basically, the content being presented should connect with the learner’s prior experience and the learner must have opportunities to actively engage with the content based on their own personal lived experience (Dewey, 1938). Hopkins expands on Dewey’s idea by adding that the *narrative process* is one through which learners demonstrate meaning of their experiences and content is a critical aspect of narrative schooling. He writes, “Narrative is the indispensable process through which emplotment and meaning attribution flow…” (p. 10). Emplotment is the assembly of a series of events made into a narrative with a plot.

One educational arena that has explored narrative pedagogy is the field of nursing. Diekelmann (2003) discovered over the course of a 15-year study with teachers, students and clinicians that *how* nursing practice is being learned is as important as *what* is being learned. She found the use of narrative pedagogy to be an effective process and practice during which teachers and students share and interpret their lived experiences to gather collective wisdom and address existing challenges. Bringing together both teachers and students to learn from each other was useful in this educational environment. Diekelmann found that when multi-perspective thinking is enacted, new possibilities for teaching and learning happens in both the classroom and in actual clinical situations.
Two themes emerged from Diekelmann’s study. The themes were presented under the following titles: 1) “Thinking as Questioning: Preserving Perspectival Openness” and, 2) “Practicing Thinking: Preserving Fallibility and Uncertainty.” In the first theme, students were not asked to specifically answer questions, but to persistently explore the meaning and significance of the practice. The underlying objective was to engage them in exposing the underlying assumptions embedded in their experiences. Through this exploration the teachers and students collaborated in new ways that preserved as well as facilitated and developed perspectival openness. In the second theme, the objective was to foster a shift in thinking from being a means to an end to cycles of interpretation. In this situation, uncertainty and fallibility are preserved. Students were not “told,” but “guided” into thinking and learning differently about content and practices. Through sharing of various viewpoints about how to solve a problem, students think through a situation and go beyond the problem to become deeper critical thinkers. This helps students learn the importance of generating many perspectives to understanding a situation and the complexity and uncertainty of each situation. By using narrative pedagogy to help students think differently, profoundly, and more perhaps collaboratively assisting them in developing a deeper meaning and understanding of the situation. They were then able to tell their story or achieve the learning outcomes of the experience.

Traditional storytelling and narratives have proven to be a fundamental structure of the human meaning making process. The narrative gives us a venue to acquire an epistemological perspective that we can understand and relate to on many levels. In terms of assessment or measures of learning, I pose the question: Which is easier and
aligned to natural or experiential learning--remembering a list of facts or learning those facts when woven into a story that ties them together for deeper meaning? To question even further: Which is more intriguing or engaging for the listener or learner, the list or the story? To continue this line of reasoning, in the next section I discuss the use of digital storytelling as a supportive tool for the learner’s academic and personal growth.

*Digital Storytelling*

Digital storytelling revolves around the art of telling a story through the use of digital media (examples are images, audio and video). The story needs to have a theme or topic coming from a particular point of view or perspective and possess meaning within the framework. The stories are usually under five minutes and comprise a variety of forms including personal experiences, historical events, meaningful content or instructions on a particular subject.

Digital storytelling roots go back to the 1990’s when Dana Atchley first coined the term as he was experimenting with the use of multimedia elements in the workshops he offered at the American Film Institute on storytelling performances (Robin, 2006). In 1994, he along with Joe Lambert and Nina Mullen started the San Francisco Digital Media Center, which evolved into the Center for Digital Storytelling, a non-profit, community art organization in Berkley, California. This Center still provides training and assistance to people interested in creating and sharing their personal narratives. Joe Lambert created “The Digital Storytelling Cookbook” from his experience with the Center for Digital Storytelling. This Cookbook constructs seven elements into a rubric so that students have a guideline with which to create their stories. The seven elements include: a point of view, a dramatic question, emotional content, visual, sound, economy
and pace. This approach is just one example of the use of digital storytelling for educational purposes.

**Educational Use of Digital Storytelling**

A research group in the College of Education at the University of Houston is currently exploring ways in which digital storytelling can be used for educational purposes. The University of Houston hosts a website that is exclusively dedicated to the educational uses of digital storytelling. The site defines digital storytelling as a process that revolves around the art of telling a story through the use of digital media (examples are images, audio and video). The central criterion of a story is that it needs to have a theme or topic coming from a particular point of view or perspective and possess meaning within the framework. Stories are usually under five minutes in length and depict a variety of themes and topics including personal experiences, historical events, meaningful content or instructions on a particular subject. ¹

Created almost ten years ago, this website has evolved into a resource for educators and students interested in integrating digital storytelling into educational activities that are both instructional tools for teachers and learning tools for students. Over the years, Bernard Robin, a professor who leads the educational uses of digital storytelling website has researched this area and discovered that digital storytelling as an educational tool creates a strong foundation for many 21st Century literacies including:

- **Digital literacy** – the ability to discuss issues, gather information and seek help;

¹ To gain an authentic sense of the digital storytelling experience, the following website offers individuals a tour of student created digital stories at the University of Houston: ([http://digitalstorytelling.coe.uh.edu/example_stories.cfm](http://digitalstorytelling.coe.uh.edu/example_stories.cfm))

40
• *Global literacy* – the ability to create messages from a global perspective;

• *Technology literacy* – the ability to use computers and other technologies;

• *Visual literacy* – the ability to communicate through visual images;

• *Information literacy* – the ability to find, evaluate and synthesize information (Robin, 2006).

When a student participates in the digital storytelling process, the following skills are developed: research, writing, organization, technology, presentation, interview, interpersonal, problem solving and assessment. However, Robins (2006) also points out challenges with creating digital stories. Some of these challenges include:

- Trouble formulating an educationally sound story;
- Access to technology tools necessary to create a digital story;
- Issues of copyright and intellectual property of others;
- Time factor to learn all the elements that go into digital storytelling (Robin, 2006).

Based upon the literature reviewed, digital storytelling could be a useful instrument for assessment, especially in regards to helping students reflect on their experiences and demonstrate learning outcomes in particular learning environments. This research study informs the use of digital storytelling as an assessment practice in study abroad programs.

**Research Question and Theoretical Framework**

To address the issue of earning academic credit for knowledge obtained during a learning experience the focus of this research asked the question: “What does digital storytelling offer as an assessment instrument and model for demonstrating expected
learning outcomes for study abroad programs?” This study investigated the use of digital storytelling as a required project in four study abroad programs. The digital storytelling project was designed to form a meaningful assessment practice for students by allowing them to create and tell a story of their own learning experience. The method was to engage the students during the learning process through the creation of content based upon their unique knowledge acquisition.

Constructivism (McDrury and Alterio, 2003) is the theoretical framework used for this study which views learning as a process, or a way of making sense of knowledge through the addition and synthesizing of new information within an existing knowledge structure. Chaille and Britian (1991) describe constructivism in the following way:

The learner is actively constructing knowledge rather than passively taking in information. Learners come to the educational setting with many different experiences, ideas and approaches to learning. Learners do not acquire knowledge that is transmitted to them, rather, they construct knowledge through their intellectual activity and make it their own (p. 11).

Reflection and storytelling in concert are ways in which students can construct their knowledge of events or content. They reflect upon their new learning and bring their own unique stories not only from the current information, but merged with knowledge of their past experiences. This idea points to the funds of knowledge theory (Gonzales, Moll, & Amanti, 2005) whereby historical accumulated- and culturally-developed knowledge is essential for individual functioning and well-being. The
student’s own distinctive background can be as critical or influential to the learning experience as the academic content being acquired.

In socio-cultural constructivism there is greater emphasis on the communication processes with the influence of social factors aiding in the construction of knowledge. Vygotsky (1978) stressed the importance of language and dialogue in the social contexts of learning when constructing knowledge. He recognized the importance of assisted and unassisted learning within the zone of proximal development (ZPD). ZPD is that area of learning where a student can problem solve independently to a certain point, but needs some guidance or collaboration from experienced or knowledgeable others to make it to the next level (Vygotsky, 1978).

Digital storytelling aligns with the Vygotskian perspective as the learning process is social and collaborative. It also values the prior experience of the student and promotes a reflective dialogue in which meaning is constructed. One aspect of Vygotsky’s thinking that relates to the digital story paradigm is the importance of culturally situated learning that stresses educational interactions as being guided by the surrounding culture. Everyone is affected by the interaction of his or her own social, historical, ideological, and cultural contexts. These factors, along with a reflective process, inform and guide how we go about constructing our world.

In framing the digital storytelling process within the socio-cultural aspect of constructivism the idea of dialogue is central to the learning process and guided by the cultural context. This is not just a simple contextual framework, but a rather a comprehensive framework that includes process and the complex issue of surrounding cultural tools including the role of discourse (McDrury and Alterio, 2003). The learning
process for effective digital storytelling includes a meaningful experience, a reflective process, making the experience relevant and a dialogue that promotes deeper thinking.

Noel Entwistle (2001) divides learning into two separate levels. There is surface learning, which is just the reproduction of knowledge to cope with certain requirements verses deep learning or transformative learning where students understand ideas for themselves. This becomes an appropriate theoretical framework for the digital storytelling process as it engages students to delve deeper into the meaning of their experience through the construction of storytelling around their own knowledge.

Methodology

Selecting a qualitative approach for this research was based on the nature of what was being explored—gaining an understanding of both faculty and students’ feelings, impressions and viewpoint of the digital storytelling project as a reflective tool for the demonstration of learning outcomes. The strength of the qualitative study was in collecting subjective and descriptive data of student behavior through field observation, interviews, and digital stories thus providing a snapshot of a particular population. In this instance, the population was relatively small and the outcomes were based upon student and faculty perceptions of a specific intervention—the digital storytelling project in framing the demonstration of learning outcomes.

The study population was primarily university students between the ages of 18 – 25 who were participating in a faculty-led summer study abroad program to achieve academic credit. However, the study abroad programs were not limited to this population of students. Most of the students were undergraduates; however, there were a few
graduate students who were in their late twenties and one PhD student in her 40’s who participated in the study.

The digital storytelling project was constructed as a reflective assessment assignment to assist students in demonstrating what they had learned during their study abroad experience. The project was not to be a slide show of the trip with a narrative of the events that took place, but rather a deeper reflection about the student’s total experience. One way the project was framed for students was to consider this question, “If an employer were to ask you about what you learned on your study abroad experience, what story would you tell?” Table 2.1 outlines each of the four study abroad program’s goals, learning objectives and assessment methods.

Table 2.1 - Study Abroad Learning Goals, Objectives and Assessments

<table>
<thead>
<tr>
<th>Study Abroad Program’s Learning Goals, Objectives and Assessments</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goals</strong></td>
<td><strong>Objectives</strong></td>
</tr>
<tr>
<td><strong>Verano Mexico</strong></td>
<td><strong>Guanajuato</strong></td>
</tr>
<tr>
<td>- To become familiar with cultural and historical origins of Mexico as a context for observing and participating in the Mexican education system.</td>
<td>1. Gain a broad knowledge base of the similarities and differences among students in general and special education programs in México.</td>
</tr>
<tr>
<td>- To become familiar with the teaching, learning and management strategies used in school or clinical setting.</td>
<td>2. Observe different types of curricular materials, activities, and strategies for children and adults in academic, clinical, and non-academic settings.</td>
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<td></td>
<td>3. Identify, observe, and record different classroom management strategies and routines.</td>
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<td></td>
<td>4. Determine, identify, observe, and record what type of supplemental and support services are available for the population and settings in which you are observing.</td>
</tr>
<tr>
<td></td>
<td>5. Obtain information regarding federal laws, and practice and identify similarities and differences across the continuum of services including general education, inclusion or resource (USAER), and self- contained (CAM) classrooms and other clinical settings.</td>
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<tr>
<td></td>
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<tr>
<td><strong>Vivir Mexico</strong></td>
<td><strong>Mexico City</strong></td>
</tr>
<tr>
<td>- Flexible topic seminar for undergraduate students across several domains in the field of Mexican American Studies</td>
<td>1. To conduct research on the possible topics: border studies; economics of international exchange; migration; Mexican education system; society and culture of Mexico; language variation in Mexican and Mexican American communities; labor.</td>
</tr>
<tr>
<td>- To become familiar with topics on</td>
<td>2. To exchange the research results through discussions, reports and papers.</td>
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</table>
Mexican American issues.

### Primate Field Study School
**Rwanda Africa**

- To experience and understand the dynamics of primate social relationships.
- To think critically and learn scientific methodology.
- To gain global competency by working in remote locations.

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<tbody>
<tr>
<td>1.</td>
<td>Have proficiency in the use of basic scientific methods and instruments for collecting primate behavioral data.</td>
</tr>
<tr>
<td>2.</td>
<td>Be able to design and carry out a basic observational field research project</td>
</tr>
<tr>
<td>3.</td>
<td>Be knowledgeable about the relationship between local ecology and primate social behavior</td>
</tr>
<tr>
<td>4.</td>
<td>Understand human family/social systems in the broader primate comparative perspective</td>
</tr>
<tr>
<td>5.</td>
<td>Have an improved familiarity with the cultures and peoples of Rwanda</td>
</tr>
</tbody>
</table>

### Mediterranean Diet and Health
**Verona, Italy**

- To introduce the Mediterranean dietary patterns.
- To discuss epidemiologic studies of the Mediterranean diet.
- Recognize this diet pattern as an Intangible Cultural Heritage of Italy, Greece, Spain and Morocco.

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<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td>Provide students with information about the health benefits of foods associated with a Mediterranean diet and for the prevention of chronic diseases.</td>
</tr>
<tr>
<td>2.</td>
<td>Review and discuss the influence of bioactive compounds present in Mediterranean foods on metabolic pathways.</td>
</tr>
<tr>
<td>3.</td>
<td>Provide students with an opportunity to learn about the food industry in Northern Italy, and dietary patterns of the Mediterranean area.</td>
</tr>
<tr>
<td>4.</td>
<td>Acquire hands-on experience with food preparation supervised by local food instructors.</td>
</tr>
<tr>
<td>5.</td>
<td>Experience the cultural diversity of Italy and influence of Mediterranean culture.</td>
</tr>
</tbody>
</table>

The requirements of the digital story were given to the students in a rubric format.

The construction and the major framework of the digital storytelling rubric were informed by the Digital Storytelling Cookbook by Joe Lambert (2010), which contains the seven elements of digital storytelling. Other resources considered during development were: the 21st century fluencies (http://globaldigitalcitizen.org/21st-century-fluencies), the Educational Uses of Digital Storytelling (http://digitalstorytelling.coe.uh.edu/) and Jason Ohler’s (2013) insights into the use of digital storytelling. Particularly helpful in constructing the rubric for assessment were Ohler’s six elements of digital storytelling:

1) The **purpose** of the story is transparent to the viewers and a clear focus is
maintained throughout the story.

2) A progressive story flow that starts with a *dramatic question* to capture your audience’s attention has a clear plot and a resolution at the end of the story.

3) Displaying the gift of your *voice* achieved through a clear and consistent audible sound attained though good pitch, tone, and timing that connects with the audience.

4) *Emotional* content including a soundtrack if appropriate, and that is apparent throughout the narration of your story.

5) A point of view projected through *content* creation that expresses your opinion, personal reflection, and learning outcomes of your experience.

6) The *economy* of the story in terms of language, pacing and maintaining the attention of the audience.

Table 2.2 Assessment Rubric for Digital Stories

<table>
<thead>
<tr>
<th>Category</th>
<th>Excellent</th>
<th>Good</th>
<th>Satisfactory</th>
<th>Needs Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Establishes a purpose early on and maintains a clear focus throughout.</td>
<td>Establishes a purpose and maintains focus for most of the story.</td>
<td>There are a few lapses in focus, but the purpose is fairly clear.</td>
<td>It is difficult to figure out the focus and purpose of the story. (5 pts.)</td>
</tr>
<tr>
<td>20 points</td>
<td>(20 pts.)</td>
<td>(15 pts.)</td>
<td>(10 pts.)</td>
<td></td>
</tr>
<tr>
<td>Dramatic Question</td>
<td>Story has a clear beginning, middle and end. Plot is well developed by</td>
<td>Story has a beginning, middle and end. Plot is moderately developed</td>
<td>Story has a clear beginning, middle and end. Plot is minimally developed.</td>
<td>Story resembles picture slide show that lacks plot, conflict or resolution. (5 pts.)</td>
</tr>
<tr>
<td>20 points</td>
<td>setting up a conflict/dramatic question in the beginning that holds the</td>
<td>with a conflict/question that sustains viewer attention throughout</td>
<td>Has minimally interesting conflict/resolution.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>viewer’s attention throughout and ends with a resolution. (20 pts.)</td>
<td>the majority the story and ends in a resolution. (15 pts.)</td>
<td>(10 pts.)</td>
<td></td>
</tr>
</tbody>
</table>
### Voice (15 points)
- **Employs one’s own voice to narrate the story and connect with the audience. Voice quality is clear and consistently audible throughout the story. Pace and rhythm is appropriate to the story line and holds audience attention.** (15 pts.)
- **Voice quality is clear and consistently audible throughout the presentation. Pace and rhythm is appropriate to the story line and holds audience attention.** (10 pts.)
- **Voice quality is clear and audible throughout most of the presentation. Pace is at times too fast or too slow to fit the story line and sustain audience attention.** (7 pts.)
- **Voice quality is not always clear. Pace is consistently too fast or too slow. Does not employ proper pitch, timbre and intonation to connect with audience and sustain interest.** (3 pts.)

### Soundtrack, Emotion/Tone (15 points)
- **Music, if used, is evokes the emotion of the story line and enhances the story. The emotion of the story is conveyed effectively through voice narration and images.** (15 pts.)
- **Music, if used, is appropriate to the emotion of the story line and enhances the story. The emotion of the story is moderately conveyed through voice narration and images.** (10 pts.)
- **Music, if used, is adequate to the emotion of the story line and enhances the story. The emotion of the story is somewhat conveyed through voice narration and images.** (7 pts.)
- **Music, if used, overshadows the story. Emotion of the story line is not satisfactorily conveyed via either music or voice.** (3 pts.)

### Personal Reflection (15 points)
- **Content clearly reflects your experience, the stages and learning outcome and effectively demonstrates personal and professional growth.** (15 pts.)
- **Content clearly reflects your experience, the stages and learning outcome and demonstrates a moderate degree of personal and professional growth.** (10 pts.)
- **Content conveys your experience and the scope of your learning outcomes to a minimal degree. Content demonstrates a minimal amount of personal or professional growth.** (7 pts.)
- **Content does not clearly explain your learning outcomes and does not demonstrate any personal or professional growth.** (3 pts.)

### Economy (15 points)
- **Conscious use of economizing of language for proper pacing of story and maintenance of audience attention. The length of the story is appropriate** (15 pts.)
- **Moderately good economical use of language for proper pacing of story. The length of the story is appropriate.** (10 pts.)
- **Pace of presentation is a little too rapid or too slow. The length of the story is not appropriate.** (7 pts.)
- **Pacing of story is too fast or too slow to maintain audience attention. The length of the story is not appropriate.** (3 pts.)
The data was collected through several mechanisms including: an electronic pre-survey prior to departure, observations by the researcher during the trip, post-surveys, post-program interviews, and the collection of student digital stories. The pre- and post-survey results were compared to determine student and faculty perceptions about the actual process of the digital storytelling project and the effectiveness of digital storytelling as an assessment tool in demonstrating learning outcomes for study abroad programs. The digital stories obtained through the project were reviewed and evaluated based upon the rubric and the learning outcomes of the course. The formal evaluation of the project did not become part of the data; however, the researcher did review the stories for demonstration of specific learning outcomes. The observations and interviews transcripts were coded and analyzed for emerging themes.

Various methods or procedures were used to check validity and credibility during the analysis phase of the research. The first procedure, *prolonged engagement* reflected the researcher’s involvement with the digital storytelling project over the four years. During the fourth summer the researcher was engaged in field observation of the implementation of the digital storytelling project in the two Mexico study abroad programs. Another procedure was a *member check*, whereby the researcher shared the data and the interpretation of the data with the participants for verification of accuracy. A final procedure involved the *triangulation* of data from a variety of sources including: 1) survey tools and interviews; 2) field observations; and 3) the collection of student created digital stories.
Results

This study set out to determine if the methodology of digital storytelling was an effective assessment tool by answering the question, “What does digital storytelling offer as an assessment instrument and model for demonstrating expected learning outcomes for study abroad programs?” There were several themes that arose during the analysis phase of the research in answering this question. The three major themes reflections, journals and scripts, and the role of a rubric were especially prevalent. It is also worthy to note here that both students and faculty favored digital storytelling as an assessment tool over traditional assessments methods, such as written reflections or live presentations to their peers.

Reflections, Journals and Scripts

Reflections were key in helping students demonstrate their learning outcomes through the digital storytelling project. The reflection process assisted students in recalling not only their personal experiences, but also their learning journey. One student stated:

It (the digital storytelling project) really helped me to reflect on everything we did and [SIC] asked myself, “What was the real intention behind this trip? Why did we go to the museum? Why did we volunteer at Resplandor?” It is more than just busy work, there is a certain meaning behind it, and so that is what the digital storytelling project made me think about.

– Monica, 2014
In her digital story, Monica was deeply reflective about her personal learning journey. She talked about the history and culture of Mexico and the indigenous past she saw all around her. She related what she was learning about Mexico into her own identity and said that being in Mexico helped to fill a void in her identity. She closed her digital story with this testimony, “I found a City so rich in culture whose humbleness has greeted me with open arms.” Monica’s digital story also helped her demonstrate several of the topics that were outlined as learning objectives (border studies, migration and the culture of Mexico) and related them to her own personal growth and identity (learning through personal experiences about the country and culture from which her parents emigrated).

To view Monica’s digital story, go to:
https://www.youtube.com/watch?v=mdQeEwahcxo.

Journal writing proved to be an effective means for students to reflect upon their learning experiences. Some students embraced journal writing, while others needed prompts and points. The following student comments demonstrate prompts for reflection writing as unnecessary (Melissa) and necessary on a daily basis (Tiffany):

I journal when I travel, because when you get back from a trip you immediately start forgetting everything. So if you don’t do things like this you are going to forget all the little things and eventually the big things. It was nice to put pictures to the story, because with the pictures it jogs your memory. You remember exactly what was happening when this photo was taken.
…the journals were a good way for us to remember things. We were instructed to write down significant things and go back to remember. I did not go back and look at every entry, but I did write every day until the day we got back to the United States. It is a good part of the reflection process to be able to go back and look at a daily journal. I think it is a good match to journal every day and then reflect upon your writing for the digital story...you need to be held accountable for what you are learning everyday. Some people tried to go back and remember what had happened in previous days and it was hard for them.

– Tiffany, 2014

Keeping a journal about a learning experience can be beneficial to the creation of the digital storytelling project especially if the story is going to be used to demonstrate outcomes of the learning experience. Not every program required students to keep journals; however, keeping a journal or some type of daily reflection did appear to benefit the students during the creation phase of the digital storytelling project. Most students complained about the daily assignment of keeping a journal or daily prompts, but they found that these written reflections assisted them in recalling events that happened while they were traveling.

Script writing, although not as critical, proved to be helpful in assisting students with the digital storytelling project. The first two summers (2011 – 2012) of the Verona Mexico program scripts were required and were reviewed during the study abroad
experience. The next two summers (2013 – 2014) this same program did not require the scripts for two reasons: the project was completed after the students returned home and in response to earlier feedback about the script reviews being counterproductive and punitive in nature. Students whose scripts were reviewed felt the comments were not constructive in guiding them to telling their own learning journey, but rather pushed them toward creating a story for the purpose of demonstrating only the learning outcomes of the program.

It is significant to note that overall, most students in all the study abroad programs studied did write a loose script even when it was not reviewed. The following are some comments from students who did engage in script writing:

I had so much to say that I had to write out my script and edit it a couple of times and find just the right words. This improved my writing skills.
– Monica, 2014

I actually did write a script. My writing part took less time than the visual compilation. I really wanted to choose the pictures that were my favorite or captured a specific moment or sparked a memory.
– Jen, 2013

The hardest part for me was the script and making it more story like. We have this style of writing that students do, where we write everything in a certain way,
so it was hard for me to make this more informal like you are telling someone a story.

– Sky, 2014

The following are student comments from those who did not write a script:

I did not write a script, I just took chunks out of my journal...I am not going to say this or I am going to change this and sort of modifying the script.

– Genesis, 2014

I did not write a script for this project, I was just talking off of my passion. I knew what I wanted to talk about, but I did a lot of takes (on the recordings).

– Jimaral, 2014

In reviewing the digital stories, it became clear that script writing helped students engage in *reflecting* about their study abroad experience, whereas for students who did not use script writing their digital storytelling became more of a vacation slide show presentation and not a reflective exercise. Several digital stories at the following website make this evident: [http://www.melodybuckner.com/#!digital-stories-03/c1uud](http://www.melodybuckner.com/#!digital-stories-03/c1uud).

Monica wrote out a script while Jimaral talked of his passion. Jimaral’s story has a causal familiar feel to the presentation, almost like he is right in the room with you, while Monica’s story goes much deeper into her transformative experience on the study
abroad trip. Even though Jimaral re-recorded his story many times, had he taken the opportunity to write and refine his story before recording, this process would have helped him reflect deeper on his learning experiences.

*Role of a Rubric*

A rubric plays a critical role in the assessment of a project. It also provided transparency to students about the standards from which they were to be evaluated. The digital story is a type of creative project that can enhance the students’ learning experience; however, a rubric may also pose restrictions that hinder both creativity and the learning process. During both the Verano Mexico 2011 and 2012 summer study abroad programs, there was a strong emphasis on the rubric and thus assessment of the digital storytelling project. Initially, students’ reflections on their authentic learning in the study abroad experience posed a challenge. The study’s findings presented a situation in which it took a forced effort on the part for the reviewer to “make” students tell their stories in light of achieving the learning outcomes rather than letting the students weave their own unique learning experience through storytelling. The student’s comment below confirm this point:

…how it (digital storytelling project) was brought up and it was very restricting, like I did not really have a lot of options...it being so restrictive kind of takes a toll on you. I can’t be as creative as I want to be. I can’t really share the things, because the people are looking for certain, specific things...The focus was on diversity and the things you had done or things you were contributing to rather than your overall experience...You don’t put limits on them and more restrictions
because that is in a way telling them this is how I want you to do it. Grading
effected the enjoyment of the assignment.
– Ann, 2011

However, when the rubric was introduced and implemented as a tool to guide
them in the creation process, the following student comment revealed a positive
consequence:

…you are out of your comfort zone and you are learning so much…it is a
different type of knowledge. …it is good to know initially when you go into it that
there are expectations about the product you are going to have to produce at the
end and be thinking about it. All of us were thinking about it and taking pictures
and reflecting on things that were happening in the moment.
– Rebecca, 2014

While the assessment rubric elements did not change for the entire research
period, the perception of how it was being implemented shifted during the last two
summers (2013 – 2014) from directing students to what they must include in the digital
storytelling project to guiding students through the exploration of their own storytelling
of their unique study abroad experience. Importantly, the digital storytelling project
assisted faculty in assessing what in one instance was an increase in a specific vocabulary
learned through an authentic means of acquired language and explanation of the
experience. For the 2014 Primate Field Study program in Rwanda, Africa, the students demonstrated this type of learning outcome through their digital stories. To view the learning outcomes and the stories, go to: http://www.melodybuckner.com/#!digital-stories-04/c1x1a. One comment from a lead faculty confirmed the benefits of this shift:

In regards to the field study, the language and experiences that are shared in the personal narratives show their expertise through the new vocabulary to express their thoughts in this discipline. The vocabulary comes up spontaneously, so I don’t use it as a formal assessment, because I don’t want to spoil the favor of the assignment by putting this vocabulary as a requirement. It is a bonus for me to see them demonstrate their knowledge without being a formal requirement.

– Netzin, 2014

Overall the rubric proved to be a helpful guide in assisting students through the various components of the digital storytelling project. It should to be noted that when the rubric was used in a restrictive manner the students were frustrated and felt their creativity was limited. When the rubric was used as a guide, the students were aware of what was expected from them and creativity flourished rather than diminished.

Traditional or Digital Storytelling Assessment

In this study, digital storytelling was not used as a replacement to the traditional assessment rather it was used as a complementary assessment tool. Students were still required to perform either oral presentations or submit written reports depending on the
study abroad program. This provided critical comparative data gathered through student comments on the use of these different types of assessments.

Two prevalent opinions surfaced about oral presentation versus digital storytelling. Students commented that an oral presentation allowed the speaker to feed off of or react to the energy of the audience because some people thrive in front of a crowd. In contrast, other students commented that the digital story gives the speaker time to process and redo the presentation to get it “just right” and is much better for those who are not comfortable speaking in front of a group. The following student comments were:

The digital story is not like a PowerPoint standing at the front of the class presenting your stuff. It was cool to kind of make it your own...The digital story gave me more room to think over what I wanted to do and put it all together. Where as when you give a presentation you are put on the spot and for me that is hard to do. I need time to process things through and put it together, so that is what I liked about storytelling.

– Kendra, 2014

The digital storytelling experience is very intimate so doing an oral presentation would not be very appropriate or comfortable. So the digital storytelling process allows for you to be comfortable, as you are by yourself. Other people are going to see it but you get to use your discretion of what you put into it. So I do think it is a very good format.... and an oral report can kind of be boring. A lot of people
do not do oral reports well…you are just sitting there watching or you are the person up there wishing that it was over.

– Rebecca, 2014

I would prefer giving a live presentation over digital storytelling, because of having the real audience. Speaking in front of people that you know you can have an impact on…that you are having a non-verbal conversation with and they are thinking things over in their minds. And the way you speak to them is so different versus just speaking to yourself. You receive feedback from the audience and adjust your message accordingly versus just creating it yourself and recording it. It is more lively, because there is this real interaction going on.

– Summer, 2014

The digital storytelling project is great for students who work that need the flexibility. Increased distribution is great verses getting it one time in a classroom. So when the class is done it is over and nobody is ever going to look at again. It gets tossed in the trash and I just spend 10 hours putting together this great presentation and it is done forever.

– Melissa, 2014

The most common student feedback on the paper verses the digital story was the longevity and sharing aspect of these modalities. Students talked about how they would
share a digital story with others and would even enjoy looking back at it; however, they asserted that they would not do the same with a written paper. It also appeared to be a more creative outlet for expressing a reflection than a standard written assessment. The following are student comments generated around this theme:

The digital storytelling project is something that I would enjoy coming back to watching. I would be much more likely to look at throughout the years and have it be something special to me than a paper. I would file a paper away and maybe read it once or twice but it would not be as enjoyable as hearing myself talk about the experience when it is fresh in my mind and having pictures there to guide me through the story.

– Lauren, 2013

The digital story forces you to reflect a little bit more and to go a little bit deeper than you would in a paper. And papers tend to be boring and we have all written so many of them. I think you approach the digital story with a little more exuberance and energy because it is something that you have not tackled before. It is a new challenge, where as a paper is something you have done before. There is a certain novelty to it.

– Rebecca, 2014
The digital story is like a story…rarely in the academic world do you get the opportunity to say what you really want to say. In most of my classes it is write a paper on this subject and you might not even have an interest in that topic. The digital storytelling really allows you to take ownership of your education. It was like here is an assignment and you make it what you want it to be…there was so much liberty in it and that is what I loved about it.

– Monica, 2014

It made me think about telling my own story in my own voice and captivating people that way than just the typical writing. It makes you think about how you are conveying your thoughts more because you are actually speaking it and have the emotion behind it.

– Jenna, 2014

The faculty also had positive comments’ regarding the written assessment verses the digital storytelling project:

Visual literacy, learning and technology have really taken off and students are more engaged and motivated to be able to tell their story and to share with others. It is a solid reminder that the ability to share with others is easier than sending a paper…it is a short clip that demonstrates what they have learned and experienced more powerfully than they could ever do in a written format… It creates a sense
of perspective that can become very personal that would not normally happen in a paper or presentation.

– Dr. Fletcher, Verano Mexico

The digital storytelling project was fun for the students and they were able to engage other people. They also have something that is a little more permanent or more of a record of what they actually did than showing someone what they wrote. They can show their family.

– Dr. Ruiz, Vivir Mexico

These comments aid in demonstrating that the digital storytelling project adds a depth and dimension that traditional assessment lacks. The project enabled the students to engage with the assignment, show it outside of the course and come back to re-experience it in the future. These are not traits that happen with a traditional oral presentation or written report. Through the use of media, the assessment becomes more personal and meaningful to the students and faculty. Dr. Fletcher’s comment reaffirms the power of the digital story:

I think it is the sign of the times. This is one way for students to demonstrate what they have learned during their study abroad experience…. It gives me a snapshot of what they internalized and learned. It is one of the most effective assessment tools I used.
Discussion

On their return from their study abroad learning experience students were asked to take a short survey and talk to the researcher about their experience with the digital storytelling project. Table 2.3 contains the results from the short survey.

Table 2.3 – Student Survey Results

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would recommend digital storytelling as a tool for reflection for other class assignments or projects.</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The digital storytelling experience fostered a greater degree of reflection about my experience than a more traditional assignment, such</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The VoiceThread tool used for creating my digital story was easy and intuitive to use.</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The digital storytelling assignment had a positive impact on my learning experience.</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I enjoyed the digital storytelling assignment I completed during my study abroad experience.</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Overall, students had a positive perception of the digital storytelling project. They preferred a creative tool for a reflective project to the traditional assignment, although a few expressed that it was not as academically rigorous as writing a paper. The technology for creating the digital story did not pose a problem for most students, but there were some discussions about being driven to just one application, instead of allowing for choice. Students also confirmed that the reflective process was inherent in
the nature of the digital storytelling project and most expressed its positive impact upon their learning experience.

This suggests that digital storytelling can be a valuable, and perhaps a transformative tool for a broad range of curricula and discipline based content. Storytelling can be a powerful mechanism for teaching and learning as stories help make meaning out of our experiences (Bruner, 1990). These experiences in turn are the key to transformative learning. Stories can also help students build strong connections to former knowledge and improve memory (Schank, 1990). Parker Palmer (1998) states that teaching and learning spaces should honor the “little stories” of students, while telling the “big stories” of the discipline. Digital storytelling provides this learning space by empowering students with the opportunity to express themselves in a variety of media. One notable feature of digital storytelling is that with a little bit of guidance and creativity anyone can create their “little story” and make it available for the world to see, hear and learn from.

Implications and Recommendations

Based upon the findings in this study, the digital storytelling project demonstrated that it was an effective reflective media tool that inspired creativity among students in demonstrating their learning outcomes. Although, it is not intended to replace other methods of assessment, it is an additive tool that allows students to create their own stories about their unique learning experiences. The lessons learned around the implementation of the digital storytelling project can be helpful for educators interested in pursuing a similar project.
Two implications for further research is to: (1) extend the use of the digital storytelling project to more study abroad programs and even to other learning environments, including service learning projects or the traditional classroom where constructivism is an integral part of the learning environment; and (2) to validate the effectiveness of demonstrating learning outcomes through the use of digital storytelling.
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CHAPTER 3 -
ARTICLE #2
DIGITAL STORYTELLING WITHIN STUDY ABROAD

Abstract

Criticism has been prevalent around the academic rigor of coursework within study abroad programs. As such, stakeholders of the study abroad experience are taking a closer look at student learning outcomes from these programs. This critique suggests that more attention be given to the development of innovative and meaningful assessment practices being implemented into these programs in order for students to demonstrate their learning outcomes. The purpose of this study was to investigate and identify the affordances of digital storytelling as a response to the critique. The focus of this study was to implement a digital storytelling assignment in four faculty-led summer study abroad programs. Over the course of four summers (2011 – 2014), digital storytelling was implemented as a tool to help students reflect upon what they learned while also demonstrating knowledge gained. This article discusses the findings of the research and recommendations for implementation and further study of digital storytelling as an assessment practice in study abroad programs.
Introduction

Within the field of study abroad there has been criticism about the academic rigor of course work at study abroad sites (Van Berg, 2009). Many stakeholders of the study abroad experience including students, parents, administrators, accrediting bodies, and legislators are taking a closer look at what and how students are learning as they travel and study in foreign countries (Robinson, 2012). Numerous study abroad programs offer experiences that are similar to taking a vacation rather than developing skills, thus often students refer to their time in these programs as “taking time off” (Vende Berg, Paige & Lou, 2012). However, students are not only seeking, but also making an investment in the economic and academic benefits offered through these programs. Hence, the critique necessitates the need to assist students in the learning process and create more rigorous academic outcomes in these programs. Thus, it is imperative to implement innovative and meaningful assessment practices for students to reflect upon their learning and demonstrate the achievement of academic learning outcomes in study abroad experiences.

This research is significant in exploring the critical issue of awarding academic credit for what students are actually learning during and after a studying abroad program. The study identified the implementation of digital storytelling as an effective pedagogical practice and method for demonstrating and assessing personal and academic learning outcomes through an introspective and reflective process; a practice that encouraged students to become fully engaged in their own learning while participating in a study abroad program.
Literature Review

We are living in a digital age where information is readily available to us at the push of a button or the touch of a screen. The ways in which people communicate with each other has changed drastically in the past decade with the onset of digital technologies. People are eager to make connections to people through new modalities such as texting and social networks. Friedman (2006) states that the world has changed or flattened though the means of digital technologies over the past twenty years, enabling us to connect much easier than ever before in the history of the world. Nevertheless, despite the myriad mechanisms we use to connect with each other, “telling stories” remains as an effective method to convey messages. Storytelling is a primary form of how we engage and communicate our thoughts and feelings to others. Behmer (2005) asserts that forms of storytelling have changed over time, but the purpose remains the same--to communicate meaning for the purpose of teaching and learning (p. 19).

Digital storytelling takes the ancient art of oral storytelling with the use of modern technology allows the author to weave a tale through the use of images, graphics, music and voice (Porter, 2005). Therefore digital storytelling is a multimodal way in which to engage the twenty first century learners (Robin, 2006). More educators are beginning to use digital storytelling to engage students in demonstrating their reflections through multimedia. Since digital storytelling uses this multimodal method, it has the potential to drive deeper learning and facilitate richer reflections among students (Barrett, 2006; Genereux & Thompson, 2008; Nordmark et al., 2010).

In regards to study abroad programs it is assumed that students gain international knowledge, such as intercultural competences, language acquisition and a global
perspective when studying abroad. In our current global society, it is well known that exposure to an international experience will help students become better citizens of the world. A report on study abroad programs from the Michigan State University Center for International Business Education and Research points out the valuable assets that students gain from participating in these programs including: intercultural understanding, enhanced discipline specific learning outcomes, service learning orientation, a tolerance for ambiguity, communication skills, language development and maturity (Lashbrooke, et al, 2002). However, these skills can be difficult to assess and the evidence that students have gained any of these valuable skills may become apparent much later in their lives. The difficulty in assessing learning outcomes in study abroad programs this report revealed was that the varied teaching and learning taking place is vast and hinders the development of a one-size fits all research scope. Another factor cited by the report is how to measure the learning that is gained through the experience versus instruction.

There are two approaches in measuring outcomes, one is through quantitative assessments and the other is through qualitative methods. Each has its benefits and drawbacks. Both approaches have been used in study abroad programs dependent on what kind of content is to be assessed. In a study to assess students’ cultural and language learning in a study abroad program in Spain, Tajes & Ortiz (2010) used a qualitative approach. They incorporated an analytical framework, which included the five conditions: Social, Legal, Economic, Political and Technological within a learning community originally developed by Ortiz (2004). To assess students’ learning, they utilized a pre and post assessment that consisted of a series of multiple-choice questions, and then compared the results for verification of learning outcomes. This method was
productive in showing students’ previous knowledge of the culture, and then compared their growth of knowledge at the end of the program.

A qualitative approach to the use of digital storytelling is Rodriguez’s 2010 work on a study abroad experience that focused on the formation of identity through personal experiences. The mode of storytelling, Rodriguez notes in her study, is appealing as students who are studying abroad struggle to reassert their subjectivity and agency as they confront different ways of life allowing for a social critique which is the center of critical education. She found that digital storytelling offered students an opportunity to engage “real” people in particular settings and then tell their stories in brief ways that might otherwise go unheard in other modalities.

A mixed methods approach — using both quantitative and qualitative methods to assessment was used in a social work practice study abroad program conducted in Mexico. Poole & Davis (2006) used a concept mapping method developed by Trochim (1989) to assess students in five stages: idea generation, sorting, rating, data analysis and interpretation. The Concept System software was utilized to conduct multivariate statistical techniques that translated complex qualitative data into maps that showed interrelationships among the ideas and to depict conceptual meanings. This method of concept mapping assisted in revealing congruencies between student learning expectations and the course objectives.

While many articles exist on assessing the overall effectiveness of study abroad programs, there was much less addressing the assessments methods used to demonstrate student-learning outcomes. According to Poole & Davis (2006), this could be due to the nature of study abroad programs being so diverse that it is difficult to conduct rigorous
objective assessments without losing the rich subjective meaning of the cultural experience for student growth and development.

Outside of the study abroad arena, digital storytelling has been used in traditional classrooms since the introduction of the personal computer in the 1980’s. Jason Olher (2013) reflected upon his many years of using digital storytelling in his classroom with insights that could easily be applied to the study abroad environment. A few of these include: 1) learning communities are storytelling communities; 2) stories help make sense out of chaos; 3) stories are power metaphors for educating ourselves; 4) digital stories allow today’s students to pursue academic content in their own language or modality; and 5) stories also help us remember. He gives insight into the assessment of digital storytelling through a rubric based on specific goals of a particular assignment. However, he does issue a caveat that the use of a rubric can add a structure that can become too restrictive for a creative, subjective process.

In the area of higher education, digital storytelling has been researched with pre-service teachers to find if it was effective in promoting engagement and reflection for academic outcomes. A study by Ivala, Gachago, Condy & Chigona (2013) found that digital storytelling expanded opportunities for students to engage and dive deeper into the content. Two significant contributing factors were: (1) motivation to interact with the content as the student perceived control over their own learning, and (2) the promotion of high levels of reflection about the content. The study found that digital storytelling should be embedded into the curriculum and not simply used as an addition or fad for the assessment of learning.
However, a review of the literature revealed very little research was found on the specific use of digital storytelling to measure both personal and academic learning outcomes within the study abroad environment. Therefore, the purpose of this study was to conduct research related to digital storytelling as an assessment practice for measuring not only personal growth but also as a method for assessing academic learning outcomes in summer faculty-led study-abroad programs. This study explored whether the use of multimedia tools, including the digital tool VoiceThread was an effective way for students to accomplish this task.

Theoretical Framework

The framework for this research methodology is supported by Kolb’s model of experiential learning. This learning model is connected to the ways in which a student processes and reflects upon those experiences. The learner gains knowledge in two ways: grasping or perceiving the knowledge, and then by transforming or processing the knowledge (Kolb, 1984). The digital storytelling project gives the learner a mechanism with which to accomplish both of these connections to knowledge. For learners to effectively demonstrate their learning outcomes they must first have a concrete experience, and then reflect upon the experience before conveying that experience to others through the digital story.

Kolb takes a holistic approach by combining both cognitive and behavioral theories together to emphasize how experiences including cognitions, environmental factors and emotions influence the learning process (Kolb, Boyatzis & Mainemelis, 2000). This mode of learning is portrayed as a cycle with the following elements: for grasping the experience there is the *Concrete Experience* and *Abstract Conceptualization,*
while transforming the experience has *Reflective Observation* and *Active Experimentation*. Within this cycle, a person has a concrete experience thus providing the information to serve as a basis for reflection. These reflections help the person to form abstract concepts, and then these concepts assist in developing new beliefs or ideas, which the person then actively tests. Through these tests, the person gathers information and the process begins all over again.

There are many connections from this theory to the digital storytelling process. Digital stories are the product of experiential learning. The students have a unique experience, for example an event that takes place during their time studying abroad. Through a reflective practice, the students then form a story around the event and in the process form an abstract concept of what they learned from the event. In this case, the creation and sharing of the digital story moves the students to the active experimentation phase where the discussion assists the students in moving deeper into learning from the event. The cycle continues as the students’ watches and comment on their peer’s digital stories. Students can relate to the other stories, but expand their thinking about the same experience as it is viewed from a different lens or perspective.

Experiential theory provides a framework for research with digital storytelling as an assessment practice. The process of digital storytelling allows for students to construct and demonstrate their knowledge through their own experience with the use of multiliteracies including writing a script, taking digital photos or videos, and recording their voice. The practice of digital storytelling transforms learning and assessment practices in the educational system towards alignment with the needs of students as they prepare to function in a digital world. James Gee (2013) expresses this view in his book,
The Anti-Education Era, stating, “Getting smart is now a 24/7 enterprise because intelligence comes from cultivating our lives and all our experiences in the service of learning and growth. Digital media today can make learning in and out of school engaging, social and life enhancing” (p. 215).

Research Question and Method

This article focuses on both the learning experiences and the telling of those learning experiences from students traveling in a study abroad program. The key research question explored was, in what ways does a digital storytelling project influence the learning experience and the building of personal identity for students? Experiential learning theory (Kolb, 1984) frames the research around the learning experiences of the students and the reflections that take place through the digital storytelling project. The investigation of digital storytelling as a reflective instrument for creating an innovative and meaningful experience for study abroad students is central to the discussion.

This qualitative study can be described as pragmatic, interpretive and grounded in the lived experiences of people (Marshall and Rossman, 2011). It is a process through inquiry that leads to the understanding of a situation. As a qualitative study it is based upon viewing social worlds as whole and complex, realizing that context is important, that the situation is emerging and evolving and the analysis is fundamentally interpretive in nature and of what was being explored. The strength of the qualitative study is providing data that is subjective, descriptive, and gives a snapshot of a particular population. In this instance, the study population was relatively small and the outcomes were based upon student and faculty perceptions of a specific treatment, which was the digital storytelling project in framing the demonstration of learning outcomes--to gain
understanding of the student’s insights, impressions, and viewpoints of their ability to
demonstrate learning outcomes through the digital storytelling project.

The study was conducted over the course of four- to six-week summer study
abroad programs through the study abroad office at a university located in the
Southwestern area of the United States. The study participants were college students
between the ages of 18 – 25 enrolled in an faculty-led summer study abroad course for
academic credit. Four programs participated in the study:

- Mediterranean Diet and Health - A five-week hands-on Nutritional Science
course that took place in Verona, Italy. There were twenty-six students and
two instructors on this study abroad experience.
- Vivir Mexico - A five-week course learning about the culture, history, and
people of Mexico and the political and social bilateral issues faced by Mexico
and the U. S. This program took place in Mexico City and Guanajuato. There
were sixteen students and three instructors on this study abroad experience.
- Primate Studies Field School - A four-week Family Studies course in Rwanda,
Africa to observe rare monkeys and apes while learning how to collect data in
the field. There were nine students and two instructors on this study abroad
experience.
- Verano Mexico - An eight-week service-based project, teaching and helping
students in a public school environment in Guanajuato, Mexico. There were
ten students and one instructor on this study abroad experience.

Students were given instructions on the digital storytelling assignment before they
left on their study abroad experience. There was a rubric attached to this assignment to
help successfully guide students through the process of composing and creating a digital
story. A pre-departure electronic survey was also administered to gather students’
preconceived ideas about the digital storytelling project and their understanding of the
learning outcomes for the study abroad course. The last phase of the study officially began with the analysis of the digital story artifacts based upon the rubric and the learning outcomes for the study abroad course. Sixteen of the thirty-nine students volunteered for a personal interview to gather data about their experience with the digital storytelling project. Finally, interviews with an instructor from each program were conducted to determine their perceptions from the entire digital storytelling project experience.

The qualitative analysis process was as follows: 1) preliminary examination of the entire data collection including surveys, artifacts, observation notes, and interview transcripts; 2) coding the data through segmentation and labeling; 3) development of emerging themes through the aggregation of similar codes; 4) connecting and interrelation themes that developed; and 5) construction of a narrative around the findings (Crewell, 2002).

The following procedures were utilized throughout the data analysis phase to check validity and credibility. The first procedure was prolonged engagement. In this case, the researcher had been involved with the digital storytelling project for four years with the Verano Mexico study abroad program. Another procedure was the member check through the sharing of data and the interpretation with the participants. Triangulation was used, as the researcher gathered data from a variety of sources including: 1) survey tools and interviews, 2) observations, and 3) collection of the digital storytelling artifacts created by the students. An audit trail was constructed during the data collection to provide a transparent logical pathway showing how data was collected,
managed and conclusions were drawn. Finally, peer debriefing was utilized with selected colleagues to critically discuss the emergent findings (Marshall and Rossman, 2011).

The Digital Storytelling Project

The digital storytelling project grew out of an idea for students in study abroad programs to use creative methods and digital tools for demonstrating their academic and personal learning outcomes. The idea was first conceptualized for the Verano Mexico program, which used the digital story project as part of an assessment practice for each of the four summers of the study period. The other three programs incorporated the digital storytelling project into their assessment practice during the summer of 2014. Most of the results used and analyzed for this study were collected during the summer of 2014. However, interviews were conducted with four participants in the Verano Mexico program during 2011 (1 student), 2012 (1 student) and 2013 (2 students).

The digital storytelling project was constructed as a reflective assessment assignment to assist students in demonstrating what they had learned during their study abroad experience. The project was introduced to the students as one with the expectation of a deeper reflection about their total experience and not as a slide show of the trip with a narrative of the events that took place. One way the project was framed for students was to consider this question, “If an employer were to ask you about what you learned on your study abroad experience, what story would you tell?”

Before the students left on their study abroad program, a meeting was held in a traditional classroom setting, with a few students who joined via a Skype connection. The conversation centered on an overview of the digital storytelling project. The discussion began by defining digital storytelling and the concepts around the art of storytelling. A
formal definition was introduced and examples of digital stories were shown to students. The resources used to facilitate this discussion were the Center for Digital Storytelling from Berkeley, California (http://storycenter.org/) and the Educational Uses of Digital Storytelling from University of Houston in Texas (http://digitalstorytelling.coe.uh.edu/).

Once students understood the concept of digital storytelling, the conversation progressed to the requirements of the project. The requirements were given to the students in a rubric format. The six elements of the rubric were: 1) the purpose of the story is transparent to the viewers and a clear focus is maintained throughout the story; 2) a progressive story flow that starts with a dramatic question capturing your audience’s attention, has a clear plot, and a resolution at the end of the story; 3) the gift of your voice is achieved by having clear and consistent audible sound attained though good pitch, tone, and timing that connects with the audience; 4) emotional content including a soundtrack if appropriate, that is apparent throughout the narration of your story; 5) a point of view through content creation that expresses your opinion, personal reflection, and learning outcomes of your experience; and 6) the economy of the story in terms of language, pacing and maintaining the attention of the audience.

The technology being supported for the project was also discussed during this meeting. The students were introduced to the application software, VoiceThread. VoiceThread is a free Internet application available on the Internet. It is an interactive collaboration and sharing tool enabling users to add images, document and video while also allowing listeners to add voice, text and video comments around the content. It is important to note that for the last two summers of the research study students were
allowed to use other software applications or programs besides VoiceThread (e.g. iMovie) to produce their digital stories.

Finally, the timeline for developing the digital story project varied from group to group. During the first two summers that the project was implemented with the Verano Mexico program students the digital stories were created and presented before the students returned to the United States. This proved to be stressful on the students and did not allow adequate time for reflection. So starting in the third summer, the students were given two weeks after returning from Mexico to complete and submit the digital storytelling project. This treatment was continued for all of the programs participating in the project during the summer of 2014.

Findings

Several themes emerged in answer to the research question, what effect does digital storytelling have on the learning experience of students? Prevalent themes emerging from the analysis of the personal interviews were sharing and peer reviews – the desire for others to see and comment, and secondly, time allowance after the study abroad experience for creating the digital story. While these themes surfaced mainly from personal interviews, they were validated by the digital stories, surveys and observations of the researcher. Time was another prevalent theme.

Sharing and peer reviews were perceived as a positive aspect of the digital storytelling project. Most students wanted to share their project, not only with each other, but with their family, friends, and even potential employers as expressed by one student who wrote:
So as soon as I finished I showed it to my parents and my family. It was one of those projects where I could show my family and they did want to see everything I had done.

– Jen, 2013

Students were open to receiving and giving feedback on their stories. However, peer reviews of the digital stories were not feasible due to access and usability issues. Most students created their stories in VoiceThread and the process required to share a VoiceThread presentation proved to be awkward and time consuming. Students were frustrated by the process and for the most part were not able to share their stories with peers or receive peer feedback.

However, during the 2014 summer program, one study abroad group posted their digital story links on the program’s Facebook page allowing easy to access to the stories. The following are student comments on this innovative solution:

We all posted to Facebook and were watching each other’s digital stories and commenting.

– Rebecca, 2014

It makes more sense to share the VoiceThread on Facebook, where people can find it easily…people are kind of lazy.

– Jenna, 2014
I posted it on Facebook to our little group, because they sort of knew what it was about, but I did not post it to everyone I knew.

– Genesis, 2014

Adding the digital story to a social media site that the program was using for communication proved to be an excellent resolution to the accessibility issue. The usability problem with VoiceThread was addressed in several ways. The obstacle to sharing stories through VoiceThread points to the necessity for more time and training of the students prior to departure in becoming familiar with the VoiceThread tool. Technical assistance during the final stages of the story creation period would also support students through any usability issues.

Time was another theme that became apparent during the analysis phase of the research. Students were very vocal about the time they were allowed to produce the digital story. Most wanted more time to reflect and create, but others felt the time allotted was sufficient and were resentful that they had to complete a project after they got back home as reflected by this student:

It was stressful and hard to complete the assignment when I was trying to adjust back to the time. We had either a 7 to 10 days to complete the assignment, but it was never clear. It would have been less stressful if we had more time, maybe a month, but then that would overlap with the next semester.

– Sky, 2014
During the 2011 and 2012 summer programs, students were required to both produce and present their digital stories before they left the country where their study abroad experience was taking place. The major challenges were that there was not enough time for reflection, access to technology was difficult and students felt it took away from the experience in the country. This is reflected in the following comments from one student and one faculty respectively:

Since we did it right before our study abroad program ended I just felt like it was rushed. Everyone was trying to do it in the last two days and trying to get it done. They had talked to us a few days before, but our schedule was so packed that we were not getting home until really late and was like recording it at 1:00 or 2:00 in the morning, because that when it was quiet in the house and I could do it. We had to do the project during the experience and present it the very last day of class.

– Lane, 2012

It put a lot more stress on them if they had to create the digital storytelling before they left Mexico and the stories would not be so polished, because they did not have time. I also think learning wise it is a benefit to them to have more time. And I do understand that some students think the program is over and wonder, “Why am I still doing an assignment…I am really to move on.”

– Dr. Todd Fletcher, 2011-14 (Verano Mexico)
Student and faculty comments and experiences prompted a change—as the digital storytelling project timeline was extended and due after the students returned home from their study abroad experience. The following comments reflect the change:

Doing the digital story during the study abroad trip would have taken away from my experience. I would not have wanted to do it during that week at all…. after my trip was over I did not feel like doing it, but now that I did it I am glad that I did it.

– Lauren, 2013

I feel like it was positive because I had to reflect on everything I did and I did not have the worry of doing it while I was in Mexico. It was easier for me to come home and be out of that environment and then reflect upon what I did or how it affected me or how I am now…it was good. It was more of a growing project.

– Summer, 2014

I am glad we had time once we came back, because it was too much to think about while we were there and all the other combination of assignments we were being asked to do. It was nice to have a little bit of time once we were back to think and process…”what did I really get out of this, what did I learn, what did I take away?” I appreciated that.
Time was a factor in how the students demonstrated their learning outcomes through the digital storytelling project. The extra time once the students were back from their study abroad experience gave them more time to reflect and construct a more “polished” product. Nevertheless there were some students who were “done” with their study abroad course upon returning home and their digital stories were more like a slide show of the trip without the deep reflection.

Conclusion

Several conclusions arise from the study findings. Most significant was the importance of integrating student’s sharing their reflective learning process. Without the motivation to reflect and share upon their study abroad experience many students would not have taken the time to think deeply on and about their learning experience. These observations assist in validating Kolb’s Experiential Learning Theory (1984), where learning is connected to the way students processes and reflect upon those experiences. It was important for students to reflect and share both during their study aboard trip and to take the opportunity to reflect and share upon their experiences once they were back home. Both of these reflection times were imperative to the depth of learning outcomes that were demonstrated through the digital storytelling project.

The social context of sharing their digital stories was an important finding. Students had difficulties sharing their VoiceThread presentations with their peers through the mechanism supplied by the project, but one group was so determined to share their stories that they found an alternative method of sharing through social media. This
method of sharing and commenting on the digital stories was exciting and added insight to the study abroad experience as they were able to see the trip from their peer’s viewpoint. This demonstrates the application of social constructivism as students were in a social setting of a study abroad program where they constructed and shared knowledge, therefore creating a culture of digital stories with shared meaning. This was definitely a bonding and learning exercise for this group of students.

Time was a major consideration with student in reflection and content creation. It was demonstrated through this study that requiring the project to be done within the study abroad timeframe and experience was stressful and did not allow time for adequate reflection. Permitting students to create the digital stories after the program concluded proved to be a successful strategy even though there was some resentment about having to complete an assignment once they were back home. Overall, students were pleased with the results and appreciated the value in to having an artifact to share from their study abroad experience. Allowing students time for reflection and creation is critical to the success of digital storytelling being used as an assessment practice in study abroad programs.

This study provided a framework for the use of digital storytelling in four different faculty-led summer study abroad programs. The study validates digital storytelling as an effective assessment tool as it allows students to demonstrate the achievement of learning outcomes as well as personal growth through a reflective pedagogical practice using technology that promotes creativity and digital literacy. The use of digital storytelling assisted in addressing the criticism of study abroad programs by providing an assessment tool that is both innovative and meaningful to students and
others who are interesting in the evaluation of learning outcomes. It is recommended that more research be conducted to realize digital storytelling as not only an appropriate practice for other study abroad programs, but as an effective assessment tool in other learning environments.
References


CHAPTER 4 -
ARTICLE #3
ADVANCING DIGITAL LITERACY THROUGH DIGITAL STORYTELLING

Abstract

Digital literacy has become a vital part of our world and must be one of the cornerstones of our educational curriculum. It is essential that students have the ability to effectively and critically navigate, evaluate and create information utilizing a variety of digital technologies. One important aspect of digital literacy is the art of digital storytelling. The aim of this qualitative study was to use digital storytelling as a catalyst for assisting students in demonstrating their learning outcomes while participating in a university study abroad program. The students were instructed about the process of storytelling and required to use a multimodal Internet tool called VoiceThread. The students created storyboards, scripts, took photos and/or videos and recorded their own voice through digital means. The final product was a digital story submitted to their instructor and shared with their peers. The instruments used to evaluate the effectiveness of the digital storytelling assignment included a digital storytelling rubric, observation of the integration of digital technologies, surveys, and interviews. Over the course of four summer study abroad programs (2011 to 2014), several groups of students shared their experience with the digital storytelling project. The findings from this study not only inform program development about the use of digital storytelling as an assessment practice, but also explore the growth of digital literacy among university students who participated in the project.
Introduction

Digital literacy has become a buzzword circulated in many academic circles. But what does it mean to be digitally literate in our technologically driven world and even more important what does it mean for our future? A quote from John Dewey (1944) resonates a response, “If we teach as we taught yesterday, then we rob our children of tomorrow” (p. 167). One definition of digital literacy that fits into the current age of technology is the ability to use, filter, and validate technological tools and the Internet strategically to find and evaluate information; collaborate with others; produce and share original content; and achieve academic, professional, or personal goals (O’Brien & Scharber, 2008). This research contemplated the effects that a digital storytelling project had upon the digital literacy of students who participated in the project.

This article examines research questions pertaining to the effects of digital storytelling as an assessment practice through the lens of educational technologies. The discussion revolves around the impact that multimedia (focused on the technology itself) and multimodal (the individual’s choice of communication modes to express an idea), choices have upon demonstrating learning outcomes and the effect on student learning. The theoretical framework for this article centers on both New Literacies Studies (Street, 2003) and the New Media Literacy Studies (Gee, 2010), which are concerned with deriving meaning through the use of digital tools and media within a social and cultural context. These theories were instrumental in helping to frame the basis of the research questions in reference to digital literacy and the demonstration of learning outcomes through digital storytelling. The focus of this article is to review the findings of students’ experiences as they developed their digital literacy while creating a digital story for
demonstrating learning outcomes. This will be accomplished through a discussion of the literature and the theoretical framework, an explanation of the methodology used for the student, a description of the findings through the emerging themes with a final discussion and conclusion.

The digital storytelling project grew out of an idea for students in university study abroad programs to use creative methods and digital technologies to demonstrate their learning. The initial study abroad program, Verano Mexico explored the use of digital storytelling as part of the program assessment plan. The three subsequent programs: Vivir Mexico, Primate Field School in Rwanda, Africa and the Mediterranean Diet in Verona, Italy, incorporated the digital storytelling project into their assessment practices during the summer of 2014. Data was collected from the Verano Mexico program for four summers (2011 to 2014), while data collection happened only in the summer of 2014 for the three other programs. Most of the results used and analyzed for this study were collected during the final summer (2014) of research from all four programs.

The digital storytelling project was constructed as a reflective assignment to assist students in demonstrating what they had learned during their study abroad experience through the means of digital technology. This was not to be a slide show of their trip with a narrative of the events that took place or a written summary of their experience, but rather a deeper reflection about the their total experience.

The students were introduced to the concept and technologies of digital storytelling before they left on their study abroad trip. They were provided with an introduction to digital storytelling, the concepts around the art of storytelling and the technologies that were required to complete the project. The students were shown
examples of digital stories from the Center for Digital Storytelling from Berkeley, California (http://storycenter.org/) and the Educational Uses of Digital Storytelling from the University of Houston (http://digitalstorytelling.coe.uh.edu/). Also discussed during this session were the essential technologies and software. The students were required to use some type of technological device that could digitally record photos both in audio and video form, as well as have the ability to transfer the media to a computer. The VoiceThread software, a free product available to individuals on the Internet was used for this project. A demonstration of VoiceThread was provided and the students were given an opportunity to use the software in the session.

Once students understood the concept of digital storytelling and the technologies involved, the conversation progressed to the requirements of the project. The requirements were given to the students in a rubric format. The six elements of the rubric included: 1) the purpose of the story is transparent; 2) the story has a dramatic question with a clear plot and resolution; 3) your voice is achieved by having clear and consistent audible sound; 4) emotional tone including a soundtrack if appropriate, is apparent; 5) a point of view through personal reflections that expresses the learning outcomes of your experience; and 6) the economy of the story maintains the attention of the audience.

The process for developing the project was outlined to include the following: 1) take photos, videos, and audio recording while on your experience; 2) keep a daily reflection about your learning experience; 3) jot down ideas, themes, or questions that might be used for your story; and 4) write a script or create a storyboard of your ideas. Students undertook these tasks during their study abroad experience in the host countries. Once students returned home, they were encouraged to: 1) review all the media they had
collected, 2) read daily reflections, 3) finish writing the script or storyboard, 4) create the final product by uploading the media to VoiceThread and adding the audio, 5) share the project link with the professor and students in the program, and 6) view and comment on their peers’ project.

All resources for the project were made available to the students in three ways: (1) a handout that was given during the introduction session, (2) resources were posted in the University’s learning management system, and (3) all of the resources were accessible on a website (http://www.melodybuckner.com/#!/studyabroad/cx4z). The idea and design of the digital storytelling project was built upon the current literature and theoretical framework presented in the next sections.

Literature Review

David Thornburg (2013) constructs primordial metaphors on how people learn and communicate knowledge using the campfire, the watering hole, the cave, and life. He starts with the campfire, as a sacred place where stories unfolded. The backdrop was the sounds of the night and the storyteller’s voice sharing wisdom with the next generation who in turn shared the story with future generations. The flicker of the flames became the focal point for many years as storytelling was used as a mechanism for teaching. The gift of sharing stories and passing on our wisdom essentially became embedded into our way of being. Many times metaphors were used to tackle topics much too confrontational to be addressed head on in the daylight.

According to Thornberg, good stories encompassed both cognitive and affective realms manifest in meaning-making elements. A story could tell a truth or teach a belief while evoking the emotions of the audience. Another element of a good story is that
multiple interpretations are derived from the same tale. This is one reason why adults and children can enjoy the same story as each takes away different elements or meanings. A quote from the poet, Robert Frost (1942) adds another metaphoric form of the campfire experience, “We dance round in a ring and suppose, but the Secret sits in the middle and knows” (Poem #681).

Thornburg (2013) likens the computer screens of today with the campfires of yesterday. Perhaps he should have added the flicker of the television or the movie screen, but no matter the modality humans are drawn to the flickering light of storytelling for teaching and learning as well as for entertainment.

The metaphor of the watering hole, for Thornburg, refers to the location where peers share their stories and make connections among each other, while the cave is the metaphoric place where individuals seek solitude and an environment to reflect upon what they have heard and learned. His final metaphor is the “space” called life, where what has been received and learned through stories is applied to everyday life situations.

Thornburg’s metaphors are highly relevant to and applicable in describing the digital storytelling experience as occurring in metaphoric “technological spaces”: the watering hole as the popular social media sites in our culture; caves as the solitary places referring to the creation of videos or blogs where people use the Internet to reflect and speak what is on their mind; and finally, the metaphor of life is when the knowledge conveyed through technology is applied in the physical world to enhance one’s personal life and the lives of others.

The pedagogical practice of morphing from teacher-centered learning to student-centered instruction is important in working with digital storytelling. The creation of
one’s own story draws upon the experience and knowledge of the students and creates a social awareness for a community of learners. This type of pedagogy draws upon 21st Century fluency by suggesting learning be active and engaging (Crockett, 2011). Creating narratives promotes creative and critical thinking skills in students both in and out of the classroom environment.

Storytelling can be used more effectively when the teller uses a narrative lens such as personal stories or narratives to convey knowledge. We construct the meaning of life and knowledge through the story telling process. Digital storytelling enables the teller to weave their narrative with a palette of various media. However, there is caution that the narrative should not be eclipsed by the gleam of technology (Garcia and Rossiter, 2010). In this research, Garcia and Rossiter pose the question, “Why does a narrative orientation matter to our educational applications of digital storytelling?” Their findings consider three answers. First, today’s students need to be able to express themselves through narratives. Storytelling, meaning making, big picture thinking, and pattern recognition are an essential skill for 21st century students. Next, students need to have an interpretive space to create their own meaning. They need to have the ability to take knowledge and make it their own through the constructive, interpretive, and contextual nature of a narrative. Finally, the learning outcomes for digital storytelling include the five literacies of the 21st century skills – digital, global, technology, visual, and informational along with empathy, self-understanding, and community building. The overall findings from this study show that educators must have an appreciation of narrative orientation to effectively employ digital storytelling as a tool for teaching and learning.
The use of digital technology has grown by leaps and bounds over the past two decades and its rapid growth will continue to amaze even the most innovative thinkers. In his book, *Confessions of a Digital Storytelling Teacher* (2013), Jason Olher reflects on the use of technology in the classroom since the early 80’s with the introduction of the personal computer. His insights include: 1) ensure that the students use the technology to serve the story and not the other way around; 2) digital stories allow today’s students to pursue academic content in their own language or modality; 3) digital stories combine traditional and emerging literacies, engaging otherwise reluctant students in literacy development; 4) digital story creation offers an effective means to teach media literacy and skills that are transferable to other endeavors; and 5) digital storytelling helps students develop creativity and innovation skills needed to solve important problems in imaginative ways.

Ohler’s insights into the use of digital storytelling are helpful in framing the digital storytelling mode of learning for assessment purposes. Unfortunately, many people believe that the simple use of technology in education should somehow make students smarter, but this is like saying that when students use a pencil it makes them smarter. Yet, as this debate wages on our students are becoming more engaged with digital devices both for recreational use and as an academic tool. Currently, our educational system is not keeping up in assisting faculty in how to use these technologies for assessment purposes or showing students in how to use these technologies for demonstrating skills, creativity, and literacies for real world practices. For our students to be competitive in the global economy, educators need to recognize that learning how to understand, use and create new media is an important relevant skill (Pink, 2006).
Ohler (2013) gives three compelling reasons to utilize new media. The first is that new media still consist of old media. Reading and writing is very much a part of the new literacies production process and can provide a way to motivate students to engage in traditional literacy. Secondly, new media has become part of what it means to be literate. Teaching new media needs to be approached in a proactive, instead of in a reactive way that will eventually lead to a scenario of playing catch up. Finally, more learning opportunities are becoming readily available outside of the formal educational structure. Students can bypass parts of traditional school to find other sources of information, education and social interaction. The educational system is at a critical crossroad in having to decide whether to become part of the technical ecosystem and guide students through the perils of technology or letting them find their own way.

New media includes Web 2.0 technologies and these technologies have made the process of creating digital stories more accessible to the general population. There are a few ways to define Web 2.0 technologies. For the purpose of this review, an article on Web 2.0 Storytelling (Alexander & Levine, 2008) helps to define the term. There are three factors used to define Web 2.0: 1) micro content – small amounts of information created in technology that is easy to access, use and transparent to the content; 2) social software – a platform structured around people interaction rather than the traditional computer hierarchies; 3) findability – the ability for the general public to find the content. A fourth factor that could be added to this list is cost factor. However, most Web 2.0 technologies are free or low cost to the users (Alexander & Levine, 2008).

Both Alexander and Levine believe that digital storytelling and the application of Web 2.0 technologies can be used in higher education as a composition platform for
situations where students use stories to better communicate an important subject or as a curricular object for a nonlinear approach to demonstration of a subject. However, they do caution about engaging with technologies that are rapidly emerging and evolving as fast as the pace of the creative human mind. Basically, when one lives on the cutting edge, one will tend to get cut and bleed. If an investment is made in a new technology, the technology may change or vanish as quickly as it appeared, leaving teachers and students stranded in a project without support or resources. Yet this caution should not deter educators from using the technologies offered via Web 2.0. Instead they should branch out exploring new technologies and strategies for engaging students to tell and share stories about themselves and the knowledge gained along their life journey (Alexander & Levine, 2008).

The use of technology to teach digital literacy and provide a mechanism for students to demonstrate learning outcomes, is becoming an essential skill set for students as they advance in their education and become productive citizens in a globally networked society. This is demonstrated through a study of pre-service teachers in a teacher preparation program at a mid-western American university. These students used digital storytelling as one approach to building an e-portfolio through reflection and self-assessment. The study focused on digital storytelling and if it enhanced self-efficacy and improve digital literacy skills. Other effects on education addressed in the study were: 1) traditional methods and new teaching approaches; 2) new learning objects for e-portfolios; 3) enhanced language, visual, and media literacy; and 4) meeting technology standards (Li, 2006).
The results of the study showed that students gained knowledge and improved skills in all areas throughout the digital storytelling project. Therefore, the researchers found that digital storytelling was an effective approach in the enhancement of teaching and learning new literacies. It also showed the importance of having pre-service teachers implement the technology, in order to learn the technology. By producing a digital storytelling piece for their own e-portfolio students were engaged in a series of cognitive learning processes. They learned the technology, reflected upon their educational knowledge base, and discovered how to integrate educational technology into other educational environments. In the future, this study offers a model of how to implement digital storytelling into teaching others about technology as literacy (Li, 2006).

Technology and the Internet can be one strategic channel for advancing teaching and learning through the practice of digital storytelling. However, educators must be cautious when introducing technologies and the Internet into the classroom. There are many inequalities in the use of technology and the Internet that reflect upon our society. A critical eye must be used before we apply strategies involving technology and the Internet in the classroom environment. A major factor to consider is the digital divide that exists in both the classroom and in our society. The divide is both political and economic in nature.

Technologies are emerging in schools and there is an increasing reliance on computers and the Internet. However, there has been little consideration for the potential impact upon effective and equitable teaching and learning practices. We may have computers in every classroom, but we don’t have teachers in every classroom who know how to use them, nor do the students always come with prior knowledge of technology.
A common assumption is that current students are “Digital Natives” and they already know how to use computers. While they may know how to play games, participate in social media, and “surf the Internet” they often do not know how to utilize educational or business technology to its fullest potential? As educators we have the responsibility to prepare students to effectively use technology and the Internet to become a productive, contributing citizen in our society (Gorski, 2005).

There is a current chasm between technology and effective teaching practices. Questions need to be addressed on what is the most effective way to teach these lessons and how does technology fit into this schema? Many educators discover a “cool” technology and try to make it fit into the lesson, when in reality the lesson should come first, not the technology. Technologies need to be understood and evaluated in the greater context of the educational and societal framework before they are employed in the classroom. The use of digital storytelling needs to be examined through the lens of the narrative and the storytelling process, not driven by the technology vehicle.

One key factor that needs to be addressed with the use digital literacy is the importance of the teacher in the equation. Research has shown that the importance of integrating technology into the curriculum is only effective if the teachers possess the expertise to use technology in a meaningful way (Sadik, 2008). Teachers must have the ability to support student learning by encouraging them to organize and express their thoughts, knowledge, and experiences in a significant ways (Robin, 2006). Training teachers to use technology and becoming confident in their level of ability is a key factor in the success of the promotion of digital literacy in the classroom.
Theoretical Framework

New Literacy Studies (NLS) is a label that has been given to research occurring over the past twenty years. Most of the research has been in the form of ethnography, looking at the movement of literacy from an individual focus towards a collective interactive and social practice (Gee, 1998).

Brian Street (2003) describes New Literacy Studies as a way to consider the nature of literacy, focusing not so much on acquisition of skills, as in dominant approaches, but rather on what it means to think of literacy as a social practice. NLS suggest that in practice, literacy varies for one context or culture to another and so do the effects of different literacies in different conditions. NLS also defines literacy as a social practice, not just a technical skill. It is viewed as being entwined in socially constructed epistemological principles. Street argues that literacy is always a social act even from the outset. The way we acquire knowledge is that it becomes a social practice that affects the nature or understanding of literacy held by both teachers and students in relationship to their position of power.

The larger theory of New Literacy Studies defined by Coiro (2008) includes the following elements: 1) new skills, strategies, dispositions and social practices required by new technologies for information and communication; 2) central to full participation in a global community; 3) regularly changing as technologies changes; and 4) multifaceted and benefits from multiple points of view. Each of these elements fold well into the process of creating digital storytelling for the assessment of learning outcomes both in study abroad programs and in service learning activities. Another definition of New Literacy Studies from a broad sense of the term states:
The new literacies of the Internet and other information and communication technologies (ICB) include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other information and communication technologies to identify important questions, locate information, critically evaluate the usefulness of that information, and synthesize information to answer those questions, and then communicate the answers to others (Leu, Kinzer, Coiro & Camack, 2004).

Where we once used pencil and paper to share information, we now use a multitude of information and communication technology to convey our thoughts and ideas. What is even more exciting is the spread of communication. We don’t just write our ideas down to be stuffed into a notebook, we publish them to the world for others to read and make comments. New literacy is about empowering everyone within the reach of technology to communicate, share ideas, and receive feedback.

As new literacies swirl around us, the practice of digital storytelling can assist in bringing them into focus in order to use them to their fullest potential. There are certain skills, strategies and dispositions that students need to learn to effectively utilize these
new literacies. Students will increasingly encounter new literacies every time they read, write, or communicate through the Internet (Leu, Kinzer, Coiro & Camack, 2004).

Let’s use the example of a student creating a digital story for an online class. The student will use the following new literacies to achieve this goal: 1) an Internet browser for uploading digital media and a search engine for finding information; 2) critical thinking skills to evaluate the accuracy of the information found on the Internet; 3) a word processor or presentation tool to create the storyboard; 4) media production software to create the digital story; 5) knowledge on how to submit the assignment to the teacher, class or the world; and 6) the ability to use social media to interface with other students about the digital story.

This is only one dimension that the New Literacy Studies addresses. There is another view that is even more important to consider, this being the concept of multiliteracies. The New London Group (2000) defines multiliteracies as a set of open-ended, flexible literacies required to operate in different contexts and within different communities of practice. Students can use these multiliteracies to create meaning and demonstrate learning outcomes with digital storytelling. When looking at the Internet and Web 2.0 technologies, there is the use of multiple media forms, according to Lemke, students will need to understand how literacies and cultural traditions combine different semiotic modalities to realize that the total experience is more than the parts mean separately (Lemke, 1998). Students will also need to be proficient contributors to the Internet community adding to this growing body of knowledge. Finally, students will find that they encounter information from various social contexts. When students start to share information on a global scale there are new challenges that arise, such as how to
interpret and respond to others from multiple social and cultural contexts (Leu, Kinzer, Coiro & Camack, 2004). One major theme that is very important with New Literacy Studies is to teach students to be critical thinkers and enable them with the ability to analyze the information they will encounter as they are exposed to these various new literacies.

Method and Results

This was a qualitative study, which provided data that was subjective, descriptive, and gave a snapshot of a particular population – students in faculty-led study abroad summer programs. In this instance, the population was relatively small and the outcomes were based upon student and faculty perceptions of a specific treatment, the Digital Storytelling Project. This study was conducted through a study abroad office at a university located in the Southwestern area of the United States. The study was limited to four programs: Verano Mexico (2011-2014), Vivir Mexico (2014), Primate Field School in Rwanda, Africa (2014) and the Mediterranean Diet in Verona, Italy (2014). Students, the majority falling into the age range of 18 to 25, enrolled in the four- to six-week programs. The research focused on the student behaviors and perspectives and the student created digital products. The data were collected through field observation, interviews and digital artifacts. Four faculty instructors from the summer programs were also interviewed to gain their insight about the effectiveness of the digital storytelling project.

The process used to conduct the qualitative analysis was as follows: 1) preliminary examination of the entire data collection including surveys, artifacts, observation notes, and interview transcripts; 2) coding the data through segmentation and
labeling; 3) development of emerging themes through the aggregation of similar codes; and 4) connecting and interrelation themes that develop; and 5) construction of a narrative around the findings (Crewell, 2002).

The themes that emerged around digital literacy pertained to the following issues: 1) the limitations and opportunities of technology in a study abroad setting; 2) the desire for others to digitally share their experiences with the instructor and peers; 3) the power of multimedia to assist in producing a creative project to demonstrate learning outcomes; 4) digital storytelling as a replacement or as a complementary tool to oral presentations and written reports for assessment.

Limitations and opportunities of technology

There are some limitations and opportunities when considering a technology to use for a project. It is important to not let the technology get in the way of the pedagogy. In this case, the telling of the story was more important than learning how to use expensive, complicated editing software. The application chosen for the digital storytelling project was VoiceThread. This Internet application allows the users to post media and make comments around the media for a complete presentation. There were several reasons for choosing VoiceThread. The first two reasons were affordability and access. This is a free application that is accessible to anyone with an Internet connection. It does not have to be downloaded to a computer and works on both PC and Mac computers. It also has a mobile application for viewing and editing. A third reason for choosing VoiceThread was for the commenting feature that allows for faculty and peer reviews and feedback.
There were several of lessons learned about technology during the research and analysis phase of this study. First, even the simplest technology can be difficult to master for some students. The student participants of this study were considered to be “digital natives” and it was assumed that these students are “tech savvy.” This is not an assumption that should be made when assigning a project involving technology. It is important not only to demonstrate the new technology to the students, but also to have at least one hands-on assignment a low stakes assessment provided as an introduction to the use and purpose of technology. When asked about challenges with the digital storytelling project one faculty made the following suggestion:

Just the initial hurdle of a new technology, so if we could do a fun little digital story project before we leave the country to walk them through the entire process. That would be helpful. – Netzin, 2014

The following are student comments on the challenging issues of technology:

Figuring out the technology and it was very time consuming. I sort of put it off starting it because I had a little trouble with the technology and I did not feel like doing it. So those were things that were obstacles for me.

– Lauren, 2013
Learning the software was challenging. It was a little bit confusing and clunky at first. It took me a while to figure out the recordings.

– Monica, 2014

I was not completely comfortable with the technology I was using, but as I went along it got better and better, but originally it might have been an obstacle.

– Ellen, 2014

I thought at first it was going to be horrendous because I am not a technology person, but it ended up being easier than I thought.

– Rebecca, 2014

Another lesson learned was about choice or agency. Even though not all students are “tech savvy,” many of them are familiar with various technologies that offer options for editing and creating movies. There were many questions as to why VoiceThread was the only application they could use for the digital storytelling project. Students wanted to be able to control their creative project with tools they had used in the past and commented:

I was not allowed to use other means. For example, I have a Mac laptop and I like to use iMovie. I tried to incorporate music into my digital story that is because I
use Garage Band a lot and I like to produce my own music too. But I could not do this with VoiceThread because I was not familiar with it at that time.

– Ana, 2011

I think I remember thinking that if I had done it in iMovie it would have been much smoother.

– Lane, 2012

I used the iMovie for my digital story...I did not use VoiceThread because I already knew how to use iMovie, so I just will stick with that technology and if I need to learn something new then it is never going to happen at least with iMovie I knew how to move everything. I knew how I wanted it to turn out and I didn’t know how to make that happen with VoiceThread.

– Genesis, 2014

I had never heard of VoiceThread and I already familiar with iMovie and how it works, because I have done little picture slides, so I thought I would stick with iMovie.

– Kendra, 2014
Students require guidance when it comes to technology, but they also need to be given some choice in the decision on which technology will work the best for the end product they want to produce. In some cases, students were reverting back to a technology that they felt comfortable using and not wanting to learn a new technology, while others felt that technology such as iMovie gave them a better product. In response to student concerns regarding choice and agency, the faculty in the study abroad programs and the researcher decided during the last summer (2014) of the study to allow students to choose the technology they wanted to use to create the final product. However, the only technical support offered by the program would be VoiceThread, as this would put too much responsibility on the faculty and staff to support a multitude of technologies. This gave the students agency without adding more work for the administrators of the study abroad programs.

Sharing digital stories

Most students perceived sharing their study abroad experience as a positive part of the digital storytelling project. However, access and usability were major factors in the success of this aspect of the learning experience. Most students wanted to share their project, not only with the other students who participated on the study abroad, but with their family, friends, and even potential employers, as shown in these comments:

So as soon as I finished I showed it to my parents and my family. It was one of those projects where I could show my family and they did want to see everything I had done. – Jen, 2013
I liked since it was digital it had an advantage, the discussion could continue for so much longer because you are sharing it online with other people.

– Monica, 2014

I would have made it the same for anyone viewing it from my professor to an employer or a friend or my family. I would not have changed what I said or the content just for an audience.

– Rebecca, 2014

Students were open to receiving comments on their stories and even willing to make comments on their peers’ stories. There were several reasons this did not happen. The main reasons dealt with access and usability issues. In order for students to share a VoiceThread presentation, a box must be checked to share and allow others to comment, and then they need to generate a link that is shared with others. The students must copy this link and distribute it to anyone they want to view their presentation. This process proved to be awkward and time consuming. Students got frustrated and just put the link in the learning management system’s dropbox for the faculty to view and grade; therefore, it did not get distributed among their peers. However, there was interest in getting feedback from their peers as the following comments show:

It would have been nice to see what my peers had to say and learning from their own VoiceThread.
Students in the Verano Mexico program initiated a solution using social media during the summer of 2014 that helped to eliminate the accessibility issue. The students posted their digital story links on the Verano Mexico Facebook page. Comments from their innovative solution were:

– Anna, 2011

I would definitely like to receive comments and if everyone else was doing it and if I thought they would read my comments, then I would definitely comment on things. – Lauren, 2013

I would be open to anyone’s comments because it makes the story more worthwhile and interesting to listen to other people’s viewpoints.

– Jimaral, 2014

I would like to hear what others are thinking about and it is interesting to hear from their perspective and voice or read what they wrote because everyone thinks about things differently and has a different take on stuff.

– Melissa, 2014
We all posted to Facebook and were watching each other’s digital stories and commenting.

– Rebecca, 2014

It makes more sense to share the VoiceThread on Facebook, where people can find it easily…people are kind of lazy.

– Jenna, 2014

I posted it on Facebook to our little group, because they sort of knew what it was about, but I did not post it to everyone I knew.

– Genesis, 2014

Adding the digital story to a social media site that the course was using for communication proved to be an excellent resolution to the accessibility issue. The usability problem with VoiceThread can be addressed with training before the students leave the country or through specific directions on how to share the presentation.

Multimedia and multimodal

The multimedia or multimodal aspect of the digital storytelling project emerged as a significant theme. In terms of multimedia, this describes the multiple ways that students use media (the technology), whereas multimodal is the multiple ways student chose the communication channel or mode to make meaning. For example, choosing a
photo with voice over instead of a video to communicate will translate a different experience for the listener. In general, students found the addition of media and the choice of mode to be a positive experience when creating digital stories. It helped in making the experience richer and more meaningful as stated by these students:

This is the power of digital storytelling and multimedia, your pictures and your voice and what you are saying are so powerful as they bring back memories in a way that a paper would just not elicit.

– Ana, 2011

I do like the more visual auditory…multimedia format presentation that helped me engage better in the information.

– Jen, 2012

I used music in my story and that was the hard part, I had to choose a song that is soft…that was part of the process, too. I probably went through 10 songs. I choose a song from an album that I was constantly listening to over there… it was a good relationship.

– Genesis, 2014

In the faculty interviews, the instructors reflected upon the effects of using different modes for assessing student:
It goes back to what kind of modality people feel comfortable operating in. Putting people in an uncomfortable situation where they learn will help them to grow, but there is often resistance to the uncomfortable situation.

– Todd, Verano Mexico

I think as many different types of modes that you can have in assessing outcomes is a good thing. Having this other way to express themselves was really good for the students.

– Richard, Vivir Mexico

The negative issues coming out of this theme included learning the technology and the extra time needed to create the project.

*Traditional assessments*

The final theme revolves around *oral or written assessments* and how they compare to the digital storytelling project. Students had two opinions when discussing oral presentation versus digital storytelling. The first opinion was that an oral presentation allows the speaker to feed off of or react to the energy of the audience and the fact that some people thrive in front of a crowd. Whereas the digital story gives the speaker time to process and redo the presentation to get it “just right” and is much better for those who are not comfortable speaking in front of a group. The following are student comments speaking to this theme:
The digital story is not like a PowerPoint standing at the front of the class presenting your stuff. It was cool to kind of make it your own...The digital story gave me more room to think over what I wanted to do and put it all together. Where as when you give a presentation you are put on the spot and for me that is hard to do. I need time to process things through and put it together, so that is what I liked about storytelling.

– Kendra, 2014

The digital storytelling experience is very intimate so doing an oral presentation would not be very appropriate or comfortable. So the digital storytelling process allows for you to be comfortable, as you are by yourself. Other people are going to see it but you get to use your discretion of what you put into it. So I do think it is a very good format.... and an oral report can kind of be boring. A lot of people do not do oral reports well...you are just sitting there watching or you are the person up there wishing that it was over.

– Rebecca, 2014

I would prefer giving a live presentation over digital storytelling, because of having the real audience. Speaking in front of people that you know you can have an impact on...that you are having a non-verbal conversation with and they are thinking things over in their minds. And the way you speak to them is so different versus just speaking to yourself. You receive feedback from the
audience and adjust your message accordingly versus just creating it yourself and recording it. It is more lively, because there is this real interaction going on.

– Summer, 2014

The digital storytelling project is great for students who work that need the flexibility. Increased distribution is great verses getting it one time in a classroom. So when the class is done it is over and nobody is ever going to look at again. It gets tossed in the trash and I just spend 10 hours putting together this great presentation and it is done forever. – Melissa, 2014

The most common theme around the paper verses the digital story was the longevity and sharing aspect of these modalities. Students talked about how they would share a digital story with others and would even enjoy looking back at it; however, they would not do this with a written paper. It also appeared to be more creative outlet for expression of reflection than a standard written assessment. Some student comments generated around this theme were:

The digital storytelling project is some thing that I would enjoy coming back to watching. I would be much more likely to look throughout the years and have it be something special to me than a paper. I would file a paper away and maybe read it once or twice but it would not be as enjoyable as hearing myself talk about
the experience when it is fresh in my mind and having pictures there to guide me through the story.

– Lauren, 2013

The digital story forces you to reflect a little bit more and to go a little bit deeper than you would in a paper. And papers tend to be boring and we have all written so many of them. I think you approach the digital story with a little more exuberance and energy because it is something that you have not tackled before. It is a new challenge, where as a paper is something you have done before. There is a certain novelty to it.

– Rebecca, 2014

The digital story is like a story…rarely in the academic world do you get the opportunity to say what you really want to say. In most of my classes it is write a paper on this subject and you might not even have an interest in that topic. The digital storytelling really allows you to take ownership of your education. It was like here is an assignment and you make it what you want it to be…there was so much liberty in it and that is what I loved about it.

– Monica, 2014

It made me think about telling my own story in my own voice and captivating people that way than just the typical writing. It makes you think about how you are conveying your thoughts more because you are actually speaking it and have the emotion behind it.
Faculty comments were also positive in regards to the digital storytelling project versus the traditional assessments:

Visual literacy, learning and technology have really taken off and students are more engaged and motivated to be able to tell their story and to share with others. It is a solid reminder that the ability to share with others is easier than sending a paper…it is a short clip that demonstrates what they have learned and experienced more powerfully than they could ever do in a written format…. It creates a sense of perspective that can become very personal that would not normally happen in a paper or presentation.

– Dr. Todd Fletcher, Verano Mexico

The digital storytelling project was fun for the students and they were able to engage other people. They also have something that is a little more permanent or more of a record of what they actually did than showing someone what they wrote. They can show their family.

– Dr. Richard Ruiz, Vivir Mexico

These comments aid in demonstrating that the digital storytelling project adds a depth and dimension that traditional assessment lacks. The project allowed the students to
engage with the assignment, show it outside of the course and come back to re-experience it. These are not traits that happen with a traditional oral presentation or written report. Through the use of media, the assessment becomes more personal and meaningful to the students and faculty. Dr. Fletcher’s comment reaffirms the power of the digital story:

I think it is the sign of the times. This is one way for students to demonstrate what they have learned during their study abroad experience…. It gives me a snapshot of what they internalized and learned. It is one of the most effective assessment tools I used.

Discussion

The advancement of digital literacy through the digital storytelling project was successful with the group of study abroad students used in this research in terms of pushing students outside of their comfort zone in learning a new technology to complete a required assessment. Students explored a new technology through the use of VoiceThread to create their digital stories. There were students who did not want to use VoiceThread and through their own agency found other forms of technology with which to produce the digital storytelling project. Most used iMovie, but there were other technologies (e.g. Prezi and MovieMaker) students utilized to achieve the same outcome. During the first three years of the study there were tensions around requiring students to use one technology, VoiceThread to create the digital story. The lifting of the required technology took away that tension however there were other issues facing students. One
issue was the lack of support for the technology they chose, and a second issue was the ability to share comments around the digital story.

Interestingly, one study abroad group solved this last issue of sharing comments around stories in an innovative way. The development of a Facebook page was originally use to help students get to know each other, share personal information and communicate information about what was going on within the program. The students started to share their digital stories with each other on the Facebook page rather than through the learning management system or through the VoiceThread application. This became a catalyst for overcoming the obstacle students had in finding each other’s digital stories. Excitement built among these students as not only their peers in the program viewed their stories, but friends and family had easy access as well.

Conclusion

It has been said in many different venues, our world is changing so fast that we need to prepare students for jobs that don’t even exist yet. So how do we go about accomplishing this seemingly impossible task? One avenue we can take is by training teachers how to effectively incorporate new literacies into the content, including the use of digital storytelling as an assessment practice. Students don’t need separate classes for these new literacies. What they need is seamless integration of today’s literacies into their current learning environments. We need to inspire today’s students to think about how they can take the technologies of today and use them to show what they have learned and how the learning has transformed them.

To encourage these learning environments and engage students we need to offer options that encourage creativity and get students to act and think deeper. These
environments should offer students the opportunity for meaningful contribution, constructive feedback and a place to share with the learning community. Too often traditional schools fail to construct creative spaces or disregard out of school learning sites that breed innovation and creativity (Sheridan & Roswell, 2010). Schools are building their curricula on paper-based literacy instead of multimodal, nonlinear literacies available in the digital environment. As we progress more into the digital world students become less engaged in the old style of instruction and are enraged that the educational system is not keeping up with their needs (Rhodes & Robnolt, 2009). Basically, new tools elicit new practices and educators need to rethink how to reach out to today’s students and facilitate new ways of teaching and learning (Sheridan-Rabideau and Rowsell, 2010).
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CHAPTER 5
SUMMARY OF FINDINGS AND RECOMMENDATIONS

Introduction to the Findings

In the beginning of this study the use of the digital storytelling was explored primarily as an assessment instrument to assist students in demonstrating their learning outcomes for the academic content presented during their study abroad experience. However, as the research gained momentum, the digital storytelling project evolved organically into a personal reflective tool helping students to not only reflect on their learning experience, but to expand upon their personal identity often in highly impactful ways, such as Ana, whose study abroad experience involved returning to the country from which her family emigrated. This was clearly evident in students’ digital stories.

As the research continued to evolve over the four-year study period, other themes in addition to personal reflection surfaced during the analysis phase. These themes included: (1) digital storytelling as an assessment practice; (2) digital storytelling for enhancing the study abroad experience; and (3) digital storytelling for the improvement and development of digital literacy became the topics for the three-article dissertation. Further, significant crossover themes that tied together the results of the entire research revolved around reflection, tradition assessments and multimodal literacies. The following sections will discuss the findings of these crossover themes.

Finding #1: Reflections

Reflection was the consistent theme linking the three article topics. Reflection was one of the key factors in helping students to articulate and demonstrate their learning outcomes through the digital storytelling project. The role of reflection assisted students
in engaging in a process of recall, not only of their study abroad learning journey, but also their personal experiences in another country. One student, Monica from the Vivir Mexico program stated in her personal interview that the “digital storytelling project really helped me to reflect on everything we did and I asked myself, “What was the real intention behind this trip? Why did we go to the museum? Why did we volunteer at Resplandor?” She further elaborated that the project was “more than just busy work”, because there was a certain meaning behind it and that “the digital storytelling project made me think about.”

Monica’s digital story was deeply reflective about her personal learning journey. She talked about the history and culture of Mexico she was learning and experiencing while in the country. She related what she was learning about Mexico to and into her own identity. She said that being in Mexico helped to fill a void in her identity. At the end of her digital story she said, “I found a City so rich in culture whose humbleness has greeted me with open arms.” While Monica’s digital story provided her with a venue to demonstrate the required learning objectives of the program, she was able to go further and related them to her own personal growth and identity.

Typically reflections were produced in written forms through journaling or essay writing. Digital storytelling became a new modality for students to display their reflections while developing and enhancing their digital literacy. The digital storytelling project opened up new dimensions to students both vocally and visually, making the reflective process a multimedia production shared more easily and widely with others as shown in their direct comments from the interviews:
So as soon as I finished I showed it to my parents and my family. It was one of those projects where I could show my family and they did want to see everything I had done.

– Jen, 2013

Since it was digital it had an advantage, the discussion could continue for so much longer because you are sharing it online with other people.

– Monica, 2014

I would have made it the same for anyone viewing it from my professor to an employer or a friend or my family. I would not have changed what I said or the content just for an audience.

– Rebecca, 2014

Overall, students increased their digitally literacy by learning how to use technology to share their stories as they brought their reflections to a multimodal form of delivery.

Reflection arose as the major cornerstone theme during the study. Many students struggled with the reflective process for a variety of reasons including lack of time, poor writing skills or fear of technology, but as the digital story emerged they were quite satisfied with the final product. Here are two comments from students regarding the reflection process:
Other than the digital story I did not take a whole lot of time to sit back and reflect, so it allowed me to definitely go through all my pictures and remembered all the things we did because we did so much. I probably spend 4 to 8 hours looking through my pictures and reflecting upon the trip...The only time I would reflect would be if I ran into a friend and they asked me how was your trip. I did not take my own personal time to reflect on my experience.

– Ellen, 2014

...the fact that I have done it and now have this presentation that I can remember and look back years later because this is going to be my main form of remembering Verano Mexico. It is nice to have it done personalized and objective and academic as possible. – Jen, 2013

Finding #2: Assessment

The comparison of traditional assessments such as writing a paper, giving a live presentation or creating a digital story was a recurrent theme among students and inherent in the discussion across the three articles, and is the discussion focus of Article One – Digital Storytelling as an Assessment Practice.

Nevertheless in this study, the digital storytelling project did not replace the traditional written or presentation forms of assessment, but rather it was integrated as a complementary assessment. Depending on the study abroad program, students were still required to perform either oral presentations or submit written reports in addition to the
digital storytelling project. The positive outcomes for the study lay in the comparative benefit made between the different types of assessments.

Student opinions were divided on the advantages and the disadvantages of the digital storytelling project in terms of a live presentation versus a recorded one. Some students thrived on the energy and reaction of the audience, while others preferred the ability to redo and perfect the presentation without the pressure of standing in front of a group. Here are two comments with opposing views on this:

The digital story is not like a PowerPoint standing at the front of the class presenting your stuff. It was cool to kind of make it your own...The digital story gave me more room to think over what I wanted to do and put it all together. Where as when you give a presentation you are put on the spot and for me that is hard to do. I need time to process things through and put it together, so that is what I liked about storytelling.
– Kendra, 2014

I would prefer giving a live presentation over digital storytelling, because of having the real audience. Speaking in front of people that you know you can have an impact on…that you are having a non-verbal conversation with and they are thinking things over in their minds. And the way you speak to them is so different versus just speaking to yourself. You receive feedback from the audience and adjust your message accordingly versus just creating it yourself and recording it. It is more lively, because there is this real interaction going on.
Summer created her digital story in a traditional presentation tool, Microsoft PowerPoint and added a voice over to the presentation. During the summer of 2014, students were given the option to choose the form of media used to create their digital story. She did not use VoiceThread (the course support and recommended media tool) or iMovie, which was utilized by most of her peers. The primary advantage of using multimedia tools is the sharing potential via the Internet.

The student interview data revealed a majority preference for the use of digital storytelling for engaging them in the creative process as well as the longevity and sharing aspect of the digital storytelling. However, a few students thought it was not as scholarly or academic as a research paper. Here are two comments demonstrating this point of view:

The digital story is like a story…rarely in the academic world do you get the opportunity to say what you really want to say. In most of my classes it is write a paper on this subject and you might not even have an interest in that topic. The digital storytelling really allows you to take ownership of you education. It was like here is an assignment and you make it what you want it to be…there was so much liberty in it and that is what I loved about it.

\footnote{To download Summer’s Digital Story go to: \url{https://docs.google.com/file/d/0B22HZUpEo742TEtQZWh5bkdEdE0/edit}}
The digital storytelling project is something that I would enjoy coming back to watching. I would be much more likely to look at throughout the years and have it be something special to me than a paper. I would file a paper away and maybe read it once or twice but it would not be as enjoyable as hearing myself talk about the experience when it is fresh in my mind and having pictures there to guide me through the story.

– Lauren, 2013

Comments from students overwhelmingly suggested that this innovative digital form of assessment was preferred to the traditional assessment especially in the study abroad setting. Students were experiencing learning through travel and exploration. They were out and about taking pictures and hearing music, language and new sounds. The digital storytelling project allowed them to use a digital form of literacy to express their full experience. This *lived experience* promotes the experiential learning model for students to gain knowledge through grasping or perceiving in the travel and then transform or process the knowledge into a digital story (Kolb, 1984). One faculty summed up this idea well with his comment:

Visual literacy, learning and technology have really taken off and students are more engaged and motivated to be able to tell their story and to share with others. It is a solid reminder that the ability to share with others is easier than sending a paper…it is a short clip that demonstrates what they have learned and experienced
more powerfully than they could ever do in a written format... It creates a sense of perspective that can become very personal that would not normally happen in a paper or presentation.

– Dr. Todd Fletcher, Verano Mexico

Finding #3: Multimodal Literacy

Multimodal literacies are defined as understanding the various ways that knowledge is represented and meaning is made through different modes of expression. Multimodal literacy focuses on the design of discourse through exploration of specific semiotic methods (language, gestures or images) that are deployed through many modalities (visual, aural, or somatic) and includes interaction and integration in building a coherent multimodal form (websites, videos, or posters) (Jewitt & Kress, 2003). For this study, students were asked to make meaning of their study abroad experiences through digital storytelling. This required students to choose photos or videos to record and express what they learned during their experience. The diversity of modalities (examples include - writing, storyboards, photos, videos, records, etc.) assisted students in compiling richer and more meaningful artifacts used for assessment purposes. The following student statements verified their experiences:

This is the power of digital storytelling and multimedia, your pictures and your voice and what you are saying are so powerful as they bring back memories in a way that a paper would just not elicit.
I do like the more visual auditory…multimedia format presentation that helped me engage better in the information. – Jen, 2012

The digital storytelling project was a visual experience. We went to these places physically and took photos and made a picture slide show, which is how digital story works, so it was more accessible to use the digital storytelling with visuals of every place we went unlike a paper.
– Jimaral, 2014

I used music in my story and that was the hard part, I had to choose a song that is soft…that was part of the process, too. I probably went through 10 songs. I choose a song from an album that I was constantly listening to over there… it was a good relationship. – Genesis, 2014

A major observation I made about students and multimodal literacy was the opportunity to select their mode of expression and the impact on motivation in creating the digital stories. In the first two summers that the digital storytelling project was incorporated into the curriculum, students were not given the opportunity of choice in

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3 To view Jimaral’s Digital Story – go to: https://youtu.be/iIWZi02Na70
4 To view Genesis’ Digital Story – go to: https://youtu.be/8WofHUO5o38
multimodal venues. Restricting choice did not consider students coming to the student abroad program with developed multimodal literacy skills. In the first two years of the study, the push back from students in being required to create the digital story with only one type application, VoiceThread, became evident in the quality of the stories created and in their comments below:

I was not allowed to use other means. For example, I have a Mac laptop and I like to use iMovie. I tried to incorporate music into my digital story that is because I use Garage Band a lot and I like to produce my own music too. But I could not do this with VoiceThread because I was not familiar with it at that time.
– Ana, 2010

Figuring out the technology and it was very time consuming. I sort of put it off starting it because I had a little trouble with the technology and I did not feel like doing it. So those were things that were obstacles for me.
– Lauren, 2013

Student agency in the mode of delivery was appreciated and resulted in students being more open to learning about the technology they chose and consequently the stories were richer in both content and media and manifest in the following student comments:

I had never heard of VoiceThread and I already familiar with iMovie and how it works, because I have done little picture slides, so I thought I would stick with
iMovie. Everyone works differently, so choice is nice.
– Kendra, 2014\(^5\)

Learning the software was challenging. It was a little bit confusing and clunky at first. It took me a while to figure out the recordings. I really wanted it to flow. Like on some pictures I wanted it to go a bit faster, but I had to wait until the recording was done. I feel there could be some improvement with the VoiceThread software. I liked the concept of VoiceThread, but not the program itself. It is the content that really matters and in the end if you are really creative then the software should not really hinder you.
– Monica, 2014

Confirming to these student comments, faculty also thought the diversity of modalities became an important aspect of digital literacy, supports student agency, and assist in assessing what students’ are learning in their study abroad program.

It goes back to what kind of modality people feel comfortable operating in. Putting people in an uncomfortable situation where they learn will help them to grow, but there is often resistance to the uncomfortable situation.
– Dr. Todd Fletcher, Verano Mexico

I think as many different types of modes that you can have in assessing outcomes is a good thing. Having this other way to express themselves was really good for

\(^5\) To view Kendra’s Digital Story – go to: [https://youtu.be/O2cZPyoSx7M](https://youtu.be/O2cZPyoSx7M)
the students.

– Dr. Richard Ruiz, Vivir Mexico

Overall, this article centered on the influence the digital story project had upon the multimodal literacy of students as they navigated their ways through the production of the final product. Many students struggled in learning the technology and forming stories within a new modality; however, the responses from all students indicated that they were glad they had persisted in completing the project because now they had a reflective, sharable artifact of their experience.

Conclusion

These three articles discuss the major findings of this study on digital literacy as an assessment practice identifying reflection, assessment and multimodal literacy as a significant aspect of digital literacy assessment. Reflection in the learning process emerged as critical to the assessment process. Students who were encouraged through an assignment (in this case the digital storytelling project) to reflect upon their unique learning experience were more apt to realize the depth of the learning that took place during their study abroad program. Not only did the digital storytelling project assist with the reflection process in demonstrating learning outcomes, but it also had an effect on the growth of personal identity in students.

The study also showed that creative assessments can enhance the learning experience, but it is necessary to be aware that restrictions on the creative process can create obstacles in demonstrating the learning outcomes of the project. This became apparent in the study when a rubric was utilized for measuring the quality of the digital
storytelling project. When the rubric was used as a guide it was appreciated and embraced by the students, as it outlined the goals of the project. However, when the rubric was used in a restrictive or constrained way, students felt the project was not about their own personal learning journey, but more about meeting the expectations of the rubric. This shows that a rubric can be both an effective or ineffective tool for assessment depending on how it is utilized and implemented. The recommendation is to be clear in ensuring a constructive use of the rubric.

Finally, the last article was about multimodal literacy. The major finding for this theme was to not let technology get in the way of pedagogy. When students were given agency about the modality that was used as an outlet for their creativity, they took ownership and responsibility for making the project a success. However, when students were required to use a modality that was uncomfortable for them and they saw little relevant and personal value in learning that modality, the creative project turned into a mundane task with little to no benefit for the students.

In tying these findings together, reflection is an effective method of assisting students to realize deeper learning. The reflective process can be achieved through the creative use of technology; however, when guiding the student through the process, it is critical to integrate agency and choice regarding modality they believe will demonstrate their learning most effectively including the use a rubric or an evaluation tool that guides the student to success.

Recommendations for Further Research

The main findings that were drawn from this research study include reflection and assessment. First and foremost, students need a mechanism to motivate them to reflect
fully upon their study abroad experience. Without this mechanism, no matter the modality, students will not take the time and effort to reflect about their experiences and lose the opportunity for learning to take place. This ties back to Kolb’s (1984) model of experiential learning where students grasp and perceive knowledge through transforming and processing knowledge. An example of the reflective process affecting a student is Ana’s story. I interviewed her four summers after she had created her digital story. Ana had gone on the Verano Mexico study abroad program in 2010 and then agreed to be interviewed in 2014 for this research study. As she watched the piece she had produced four summers ago, she said, “I am such a different person than I was back then.” She had created an in depth reflective story about her experience in Mexico, but as she watched it four years later, she was able to reflect about who she was, what she learned and how she has developed into the person she is today. It was a powerful moment for her. The digital story had an effect upon Ana more than an oral report or paper would have because of the multimodal elements. Her story complete with photos and voice made a larger impact than just words on a piece of paper or text on a PowerPoint slide.

From an assessment point of view, the implications are that digital story is an effective method for demonstrating not only learning outcomes from a study abroad program, but the personal growth of the students as they travel and experience different people and cultures. I would interject that the digital storytelling project should not be the only means of assessing students, but it is an assessment that will continue to effect students, as it is an artifact that can be shared it with others and viewed later in life.

The major recommendations I would make as digital storytelling is taken from a pilot research study to a full practice assessment include several ideas. It is important to
work with students both before and after the study abroad trip in teaching them to be comfortable with the technology. It is also crucial to teach students the art of storytelling, so that this project does not become a glorified slide show of their study abroad trip. Journaling during the study abroad trip and prompting students with questions to answer every day was an effective method for helping students to form their digital stories.

Two lessons learned that were unexpected for me during this research was agency and accessibility. Students need to have a sense of agency when it comes to learning. This was evident in giving them a choice about what technology they used to create the digital stories. The choice or lack of choice got in the way of the creativity. Once students were able to chose their own modality there were less complains and better products. In terms of sharing stories among their peers, I found that when students were positioned into going to a place that is not as accessible or seems “clunky”, they become resistant and reluctant participants. However, when students are allowed to share in spaces that are familiar and easy to navigate, comments and conversations grew.

Another area of concern that became apparent during the research on digital storytelling was the issue of ethics surrounding the privacy and confidentiality of people being represented, featured or even displayed in the background of the final projects. These digital stories were not only shown within the confines of the digital classroom, but were made available on public websites, like YouTube, Vimeo, and Facebook. This project actually opens up an opportunity to educate students about good digital citizenship and assist in getting students to think about not only their own digital footprint, but also the effects they may have upon others digital representation of others unknowingly.
Students need to be informed and educated to pay close attention to the photos and videos being taken of people and be aware of how the people may feel about their images being used for a reflective piece that may be broadcast to the world. Capturing images in a public place is for the most part acceptable as we all engage within the world; however, students do need to be respectful of people especially those who might belong to a culture where taking pictures is not customary or tolerated. Students must also get special permission from minors and parents of minors, if photos are being taken within the confines of an education setting. This practice will lead students to become more sensitive to others as they reflect upon their own learning experience.

Overall, the digital storytelling project was a successful assignment used as both a reflective assessment and as an avenue for students to demonstrate personal growth. I recommend that the digital storytelling project be expanded to more study abroad programs and other experiential learning environment in order further study the effective practice of reflective learning.
### APPENDIX A - DIGITAL STORYTELLING RUBRIC

<table>
<thead>
<tr>
<th>Category</th>
<th>Excellent</th>
<th>Good</th>
<th>Satisfactory</th>
<th>Needs Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose 20 points</strong></td>
<td>Establishes a purpose early on and maintains a clear focus throughout. (20 pts.)</td>
<td>Establishes a purpose and maintains focus for most of the presentation. (15 pts.)</td>
<td>There are a few lapses in focus, but the purpose is fairly clear. (10 pts.)</td>
<td>It is difficult to figure out the focus and purpose of the presentation. (5 pts.)</td>
</tr>
<tr>
<td><strong>Dramatic Question 20 points</strong></td>
<td>Story has a clear beginning, middle and end. Plot is well developed by setting up a conflict/dramatic question in the beginning that holds the viewer’s attention throughout and ends with a resolution. (20 pts.)</td>
<td>Story has a beginning, middle and end. Plot is moderately developed with a conflict/question that sustains viewer attention throughout the majority the presentation and ends in a resolution. (15 pts.)</td>
<td>Story has a clear beginning, middle and end. Plot is minimally developed. Has minimally interesting conflict/resolution. (10 pts.)</td>
<td>Story resembles picture slide show that lacks plot, conflict or resolution. (5 pts.)</td>
</tr>
<tr>
<td><strong>Voice 15 points</strong></td>
<td>Employs pitch reflection and timbre of one’s own voice to narrate the story and connect with the audience in a conversational style. Voice quality is clear and consistently audible throughout the presentation. Pace and rhythm is appropriate to the story line and holds audience attention. (15 pts.)</td>
<td>Voice quality is clear and consistently audible throughout the presentation. Pace and rhythm is appropriate to the story line and holds audience attention. (10 pts.)</td>
<td>Voice quality is clear and audible throughout most of the presentation. Pace is at times too fast or too slow to fit the story line and sustain audience attention. (7 pts.)</td>
<td>Voice quality is not always clear. Pace is consistently too fast or too slow. Does not employ proper pitch, timbre and intonation to connect with audience and sustain interest. (3 pts.)</td>
</tr>
<tr>
<td><strong>Soundtrack, Emotion/Tone 15 points</strong></td>
<td>Music, if used, is evokes the emotion of the story line and enhances the story. The emotion of the story is conveyed effectively through voice narration and images. (15 pts.)</td>
<td>Music, if used, is appropriate to the emotion of the story line and enhances the story. The emotion of the story is moderately conveyed through voice narration and images. (10 pts.)</td>
<td>Music, if used, is adequate to the emotion of the story line and enhances the story. The emotion of the story is somewhat conveyed through voice narration and images. (7 pts.)</td>
<td>Music, if used, overshadows the story. Emotion of the story line is not satisfactorily conveyed via either music or voice. (3 pts.)</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
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<tr>
<td><strong>Personal Reflection</strong></td>
<td>Content clearly reflects your experience, the stages and outcome of your service-learning project, and effectively demonstrates personal and professional growth and reflection. <em>(15 pts.)</em></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Content clearly reflects your experience, the stages and outcome of your service-learning project, and demonstrates a moderate degree of personal and professional growth and reflection. <em>(10 pts.)</em></td>
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</tr>
<tr>
<td></td>
<td>Content conveys your experience and the scope of your service-learning project to a minimal degree. Content demonstrates a minimal amount of personal or professional growth. <em>(7 pts.)</em></td>
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<tr>
<td></td>
<td>Content does not clearly explain your service-learning project and does not demonstrate reflection of personal or professional growth. <em>(3 pts.)</em></td>
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<tr>
<td><strong>Economy</strong></td>
<td>Conscious use of economizing of language for proper pacing of story and maintenance of audience attention. Length of presentation is 10 – 15 minutes <em>(15 pts.)</em></td>
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<tr>
<td></td>
<td>Moderately good economical use of language for proper pacing of story and maintenance of audience attention. Length of presentation is 10 – 15 minutes. <em>(10 pts.)</em></td>
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<tr>
<td></td>
<td>Pace of presentation is a little too rapid or too slow. Overall length of presentation is a little too long or too short. <em>(7 pts.)</em></td>
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<tr>
<td></td>
<td>Pacing of story is too fast or too slow to maintain audience attention. Overall length of the presentation is way too long or too short. <em>(3 pts.)</em></td>
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</table>
APPENDIX B - DIGITAL STORYTELLING PRE-DEPARTURE SURVEY

DIGITAL STORYTELLING PRE-DEPARTURE SURVEY

PART ONE:
About your purpose
1. What motivated you to go on a study abroad program?
2. What attracted you to this particular study abroad program?
3. Did you look at other programs, if so why did you choose this one?

PART TWO:
About what you expect to learn:
(*learning objectives are what you are expected to know by the end of program*)
1. What do you expect to gain culturally from this study abroad program?
2. What do you hope to learn academically from this study abroad program? What are your personal learning objectives?
3. Are you aware of the learning objectives of this program? If so, describe.

PART THREE:
About how you expect to demonstrate your learning

As you are earning college credit for participating in this study abroad program:
1. How do you think you will demonstrate what you have learned during the experience?
2. How would you personally like to demonstrate what you have learned from this experience?
3. Who might you want to share with what you have learned on this experience and why?

PART FOUR:
About your digital literacy (or how much you know about technology)
1. What are some of the software programs (example: Microsoft products) you have used in class?
2. What are some applications (example: Google apps) you use on the Internet for academic purposes?
3. Have you ever created a multimedia project (use of photos, video and sound)? If so, what software or applications did you use?
**APPENDIX C - DIGITAL STORYTELLING STUDENT INTERVIEW**

**DIGITAL STORYTELLING STUDENT INTERVIEW**

**PART ONE: Survey**

Please respond to the following questions by circling the appropriate number from 1 – Strongly Disagree to 5 – Strongly Agree.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strongly Disagree</strong></td>
<td><strong>Disagree</strong></td>
<td>Neutral: Neither agrees nor disagrees.</td>
<td><strong>Agree</strong></td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

1. I enjoyed the digital storytelling assignment I completed during my study abroad experience.

   1 2 3 4 5

2. The digital storytelling assignment had a positive impact on my learning experience in this course.

   1 2 3 4 5

3. The Voice Thread tool used for creating my digital story was easy and intuitive to use.

   1 2 3 4 5

4. The digital storytelling experience fostered a greater degree of reflection about my experience than more traditional assignment formats such as writing a report.

   1 2 3 4 5

5. I would recommend digital storytelling as a tool for reflection for other class assignments or projects.

   1 2 3 4 5
PART TWO: Interview

Participant: ______________________________
Age: ______________________________
Ethnicity: ______________________________
Highest Educational Degree: ______________________________
Current Program: ______________________________
Native Language: ______________________________

- How would you estimate your overall level of skill with technology (for example, computers, computer programs and applications, digital cameras or camcorders, etc…)
- Beginning
- Beginning to intermediate
- Intermediate
- Intermediate to advanced
- Advanced
- Name some of the visual media applications that you are proficient in using. (If they ask for example – power point, iMovie, etc…)

- What was your primary reason for participating in this particular study abroad program?

- Did you enjoy the digital storytelling assignment?

- Did the digital story telling assignment have a positive impact on your learning experience during your study abroad experience? Why or why not?

- Did the digital storytelling assignment impact your learning? If so, in what ways?

- Did the digital storytelling experience foster a greater degree of reflection about your experience than more traditional assignment formats such as writing a report or preparing a power point presentation?
• Would you recommend digital storytelling as a tool for reflection for other class assignments or projects?

• How did your ability to share or present your learning experience with others using the digital storytelling vehicle compare to other methods of sharing such as an oral report or power point presentation?

• What did you view as benefits to completing the digital storytelling experience, in comparison to more traditional learning experiences such as producing a report or paper?

• What did you view as challenges or obstacles to completing a digital storytelling assignment?

• Did the digital storytelling assignment enriching your writing or presentation skills?

• Did you have comments on your Digital Story? Did you like the comments feature as discussion tool? Why or Why not?

Thank you for your participation!
APPENDIX D - DIGITAL STORYTELLING FACULTY INTERVIEW

DIGITAL STORYTELLING FACULTY INTERVIEW

Faculty:

Program:

Credits students could earn:

Country in SAB:

Time period in country:

• Why was this country selected for your program?

• What was your primary reason for offering a study abroad program?

• What are your overall learning objectives for your program?

• How do you have students demonstrate learning outcomes for your program?

• Was the digital storytelling a good assessment tool for your program? Why or why not?

• How did students react to the digital storytelling project?

• Do you think this project had an impact upon their learning? Scale of 1 – 4 (1 is low)

• What was your overall impression of the digital stories submitted by students? Did they meet your expectations, fall short or exceed?

• How did the digital storytelling project help you in assessing student-learning outcomes?

• Do you think the digital storytelling project fostered a greater degree of reflection about your student’s experience than more traditional assignment formats such as
writing a report or preparing an oral presentation?

• Would you recommend digital storytelling project for other class you teach?

• What did you view as challenges or obstacles in using the digital storytelling project?

• Do you think the digital storytelling project enriched your student’s overall study abroad experience?

• Do you have general comments about the digital story project?

• How would you estimate your overall level of skill with technology?
  o Beginning
  o Beginning to intermediate
  o Intermediate
  o Intermediate to advanced
  o Advanced
Observation and Participation in Special & Regular Education Classrooms/Social agency contexts

Co-Instructors and support staff: Todd V. Fletcher, Maria Serrano, Maria Elena Peterson

GOALS:

The goals of the observation and participation field trips in Guadalajara and to Mexico City during the last part of the program are: to become familiar with the cultural and historical origins of Mexico (In Mexico City: field trips to the Pyramids at Teotihuacan, National Museum of Anthropology, the National Palace, Diego Rivera murals in the Ministry of Education, Templo Mayor, the school visits in Mexico City, and the Basilica de la Virgen de Guadalupe) as a context for our study and observation and participation in the Mexican education system.

The goals of the observation and participation classes (service learning project) while in Guanajuato are: to become familiar with teaching, learning, and management strategies used in regular or special education classrooms or clinical settings and learn about the implementation of the curriculum through observation of teacher/school routines in your assigned schools/settings. For those in medical/clinical or other settings the idea is to become familiar with the practices and routines in your particular setting. You will be operating on your previous experiences in other educational/work contexts and this provides you with the lens by which you will observe and form your opinions about the experiences in the schools/social agencies in Guanajuato.

During our time in Guanajuato, we hope to be able to visit a:
Centro de Atención Multiple (CAM)
Unidad de Servicios de Apoyo a la Educación Regular (USAER)
Primary and Multigrade classrooms and schools in urban and rural settings

We will be visiting different schools and contexts during the first few days after our arrival to Guanajuato. After these visits you will choose a school or schools or educational setting that you will be observing/participating in for the remainder of the program. We will meet weekly to discuss (probably on Wednesdays) assigned reading(s), entry journals, weekly school site attendance, and participation in your designated classroom(s) or setting. You are expected to be in your placement in the mornings or afternoons depending upon your particular context. Some of you may choose to work in the rural areas outside of Guanajuato and also do activities at Resplandor in the afternoon.

SPECIFIC OBJECTIVES

Characteristics of Students
You will gain a broad knowledge base of the similarities and differences among students in general and special education programs in México.

Curricular Methods, Activities, & Materials

You will observe different types of curricular materials, activities, and strategies for children and adults in academic, clinical, and non-academic settings. For example:

a) Collect information on various curriculum materials and note their applicability to different students
b) Observe and record teaching strategies and methodologies including activities and materials used in the delivery of instruction (routines and practices)

Classroom Organization and Management Skills

You will identify, observe, and record different classroom management strategies and routines. Comments may pertain to classroom organization, communication between teacher and students, and techniques used on working with children who need special attention (behavioral/academic).

Delivery of Services

a) You will determine, identify, observe, and record what type of supplemental and support services are available for the population and settings in which you are observing.
b) You will obtain and make notes on information regarding federal laws, and practice and identify similarities and differences across the continuum of services including general education, inclusion or resource (USAER), and self-contained (CAM) classrooms and other clinical settings.

COURSE COMPONENTS

You will take notes based on cultural visits to museums, historical sites, and educational settings as our cultural informants provide us with insights and knowledge about Mexican culture and routine cultural and professional practices.

You will keep a journal in which you will have daily entries reporting and reflecting on your field trips, school experiences and observations. The journals will be submitted on a weekly basis.

Journal:
Weekly journal of entries, discussing questions, concerns and observations are required.

Weekly Group Discussions
Weekly group discussion on assigned reading articles and student placements. Group discussions will be held on a weekly and ongoing basis.

Final Project:
Your experience in Guanajuato will be unique. Your goal is to come up with a project in your placement and develop a plan that you can carry out during your time at the school/agency. This project will not necessarily take shape the first few days of your visits and observations but through your interactions and contacts in your placement you should be developing an idea about a project you want to pursue and with which the teacher or professional you are working with is in agreement. We are guests in our respective placements in Guanajuato. Therefore you need to make sure that your project is something that you jointly develop and discuss with not only your university supervisor but also with the person you are working with most directly at your placement. We will provide you with the needed support to insure that you develop a project at your particular site.

A) As a concluding activity for the time spent in your placement you will write a summative essay that reflects your observations, interventions and participation. This reflection on your experiences can be combined with your home stay and host family experience as well as interactions with other cultural informants including faculty and staff. It will address both personal and professional development. This could serve as the outline and script for the digital story you will develop.

B) Given your experiences in multiple settings as a part of this experience – the digital story telling project should tell the story of how this study program provided opportunities to critically reflect on your individual cultural identity (personally) and also your role as an educator (professionally) working in a culturally diverse environment by providing a panoramic view of your total 6 week immersion experience.

C) Oral Presentation: Your presentation to the class on your school project and your presentation on the digital story project will be during the last week of the program (week of July 7). The school/agency project will require that you provide background on the school and the student(s)/client(s) with whom you have chosen to work. You will present what you did with the student(s)/client(s) during your contact time with them. Ideas for projects will be ongoing. You will be able to consult staff in Cajones or Guanajuato who will be visiting and collaborating with you as a part of your placement and project development. Melody will be available by email and she will later join us in Mexico City and then travel with us to Guanajuato to provide direct support to you as you begin to finalize your digital storytelling project.

Product 1:
Create a typewritten 4-5-page project report based on your activities at the school/clinic placement. The report should include a description of the student(s) and their learning difficulties/abilities and the context of the student, school and community, and a statement of goals or objectives that you have established for yourself and the student(s). If possible try and gather some baseline information from the student or students. You
will list the different activities you implemented with the student(s)/client(s) and describe
and discuss academic, behavioral and/or social growth you observed and recorded. The
final project should provide a summary statement of your activity during your time in the
school/agency/clinic and a general reflection on your overall experience. You can
include work samples/experiences, etc. as a part of what you finally turn in. The final
product can be turned at the latest by August 5th after your return to the U.S.

Product 2 is a co-requirement with the other class and not a separate assignment:
Digital Story Telling Project: How did this immersion experience influence my
personal/professional development as an educator? Reflect on personal changes and
challenges as well as professional opportunities to grow and develop. This will be a
video essay reflection on the total trip reflecting both personal and professional growth.
Try to integrate concepts you have learned in class and from presentations by program
faculty as well as your own personal experience visiting and working in schools/clinics
and programs. The draft version will be presented to the class on July 4/5 and a final
version can be turned in up to two weeks after our return to the U.S. preferably before the
end of July.

GRADES
Grades will be based on the following criteria:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance and participation during scheduled school/agency visits</td>
<td>50%</td>
</tr>
<tr>
<td>Attendance and participation during scheduled group discussions</td>
<td>10%</td>
</tr>
<tr>
<td>Daily journal entries/reflections</td>
<td>15%</td>
</tr>
<tr>
<td>Final Written Project Report and presentation</td>
<td>25%</td>
</tr>
</tbody>
</table>

Grading Scale
90 – 100% A  
80 – 89%   B  
70 – 79%   C
APPENDIX F - VIVIR PROGRAM SYLLABUS

MAS 495a
Special Topics in Mexican American Studies
Richard Ruiz, Instructor
Summer 2014

Description:
This course is designed to provide a flexible topics seminar for undergraduate students across several domains in the field of Mexican American Studies. Students will develop and exchange scholarly information in a small group setting. The scope of work will consist of research by course participants; students will exchange the results of such research through discussion, reports, and papers. Potential topic areas include: border studies; economics of international exchange; migration; Mexican education system; society and culture of Mexico; language variation in Mexican and Mexican American communities; labor.

Grading Policy:
University policy regarding grades and grading systems is available at: http://catalog.arizona.edu/2013-14/policies/grade.htm
Grade Distribution for this Course:
A: 90-100
B: 80-89
C: 70-79
D: 60-69
E: 0-59
Requests for incompletes (I) and withdrawal (W) must be made in accordance with university policies which are available at http://catalog.arizona.edu/2013-14/policies/grade.htm#I and http://catalog.arizona.edu/2013-14/policies/grade.htm#W respectively.

Reading:
The basic text for this class is M. C. Meyer (2010), The Course of Mexican History (9th edition), NY: Oxford University Press.
Other readings will be posted on D2L.

Assignments:
1. Reading and Discussion: Students will be expected to keep up with the reading assignments in the text and in D2L and post comments in the Discussion section of D2L. (10% of grade)
2. Examinations: Students will complete three examinations during the course of the summer: (a) a knowledge pre-test on the history, culture, and social institutions of Mexico at the beginning of the summer; (b) a mid-term examination to be submitted electronically before leaving Mexico City on the content of our cultural visits and academic presentations (e.g. CIESAS lectures on language and cultural diversity; paleo-history of Mexico at the Museo de Antropología; significance of the archeological sites visited; the
political and economic background of Mexican society as discussed in the visits to the Mexican Senate and the US Embassy, etc.); (c) a final examination in the form of a KWL chart on the entire experience. (30% of grade)

3. **Curriculum Development, Delivery, and Report:** (a) Students will be grouped into teams of 3-5, with at least one fluent Spanish speaker in each group. (b) Each team will be responsible to create a set of units within a theme (e.g. science; dance; art; etc.) for the week of service learning at the student camp. (c) The team will work with groups of children at the summer camp during the last week in Mexico with a focus on their thematic units. (d) Students will develop a team report reflecting on the curriculum developed and the experience of working with the children due two weeks after the end of the camp. (30% of grade)

4. **Voice Thread Final Project:** Each student will develop an electronic portfolio of their experience in Mexico, including reflections on their motivations for joining the program, their experiences in Mexico, and the major learnings they had about the relationship between Mexico and the US. The Voice Thread Project will be due by July 26. (15% of grade)

5. **Commercial:** In teams of 2, students will produce a 2-minute video commercial on the class and program for publicity and potential recruitment of future students. The commercial is also due on July 26. (15% of grade)

**Honors Credit:**

Students wishing to contract MAS 495 for Honors Credit should email the instructor to set up an appointment to discuss the terms of the contract and to sign the Honors Course Contract Request Form. The form is available at [http://www.honors.arizona.edu/documents/students/ContractRequestFrom.pdf](http://www.honors.arizona.edu/documents/students/ContractRequestFrom.pdf).

**Late Work Policy:**

As a rule, work will not be accepted late except in case of documented emergency or illness. You may petition the instructor in writing for an exception if you feel you have a compelling reason for turning work in late.

**Attendance Policy:**

The UA’s policy concerning Class Attendance and Administrative Drops is available at: [http://catalog.arizona.edu/2013-14/policies/classatten.htm](http://catalog.arizona.edu/2013-14/policies/classatten.htm)

The UA policy regarding absences on and accommodation of religious holidays is available at [http://deanofstudents.arizona.edu/religiousobservanceandpractice](http://deanofstudents.arizona.edu/religiousobservanceandpractice).

Absences pre-approved by the UA Dean of Students (or Dean designee) will be honored. See: [http://uhap.web.arizona.edu/chapter_7#7.04.02](http://uhap.web.arizona.edu/chapter_7#7.04.02)

**Classroom Behavior:**

The Arizona Board of Regents’ Student Code of Conduct, ABOR Policy 5-308, prohibits threats of physical harm to any member of the University community,
including to one’s self. See: http://policy.arizona.edu/threatening-behavior-students.

Accessibility and Accommodations:
It is the University’s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let the instructor know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations. For additional information on Disability Resources and reasonable accommodations, please visit http://drc.arizona.edu/.

If you have reasonable accommodations, please plan to meet with the instructor by appointment or during office hours to discuss accommodations and how course requirements and activities may affect your ability to fully participate.

Please be aware that the accessible table and chairs in the classroom should remain available for students who find that standard classroom seating is not usable.

Student Code of Academic Integrity:
Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/codeofacademicintegrity.
The University Libraries have some excellent tips for avoiding plagiarism available at: http://www.library.arizona.edu/help/tutorials/plagiarism/index.html.

Additional Resources for Students:
UA Non-discrimination and Anti-harassment policy: http://policy.arizona.edu/sites/default/files/Nondiscrimination.pdf
UA Academic policies and procedures are available at: http://catalog.arizona.edu/2013-14/policies/aaindex.html
Student Assistance and Advocacy information is available at: http://deanofstudents.arizona.edu/studentassistanceandadvocacy

Confidentiality of Student Records:
http://www.registrar.arizona.edu/ferpa/default.htm

Subject to Change Statement:
Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.
<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Resources</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Trip Preparation</td>
<td>Schedule of Activities</td>
<td>UA Staff</td>
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<td></td>
<td>Cultural Experiences</td>
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<td>Academic Experiences</td>
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<td></td>
<td>Curriculum Preparation</td>
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<td></td>
<td>Mexico City</td>
<td>Maps</td>
<td>Professional Contacts</td>
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<td></td>
<td>Guanajuato</td>
<td>Maps</td>
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<tr>
<td>I History of Mexico</td>
<td>Ancient Mexico</td>
<td>Meyer, ch. 1-16;</td>
<td>Richard Ruiz</td>
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<td></td>
<td>Indigenous Peoples</td>
<td>Museum of Anthropology</td>
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<td>Indigenous Languages</td>
<td>presentation</td>
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<td></td>
<td>Colonial Legacy</td>
<td>Meyer, ch. 17-21</td>
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<td>Mexican Revolution</td>
<td>Meyer, chs. 38-39</td>
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<td></td>
<td>Agrarian Reform/Industrialization</td>
<td>Operation Wetback</td>
<td>Juan Garcia (UA)</td>
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<td>Migration</td>
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<tr>
<td>II Politics/Economics</td>
<td>Mexican Political System</td>
<td>Meyer ch. 35</td>
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<td>Political Parties</td>
<td>Meyer chs. 36-37</td>
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<td></td>
<td>Politics of the Border</td>
<td>D2L reading</td>
<td>Oscar Martinez (UA)</td>
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<td>Economics of the Border</td>
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<td>Raquel Rubio-G (UA)</td>
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<td>NAFTA/Maquiladoras</td>
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<td>Anna O’Leary (UA)</td>
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<tr>
<td>III Religion</td>
<td>Indigenous WV/Religions</td>
<td>D2L article</td>
<td>Patrisia Gonzales (UA)</td>
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<td></td>
<td>Traditional Medicine</td>
<td>Meyer ch. 10</td>
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<td>Catholicism</td>
<td>Meyer ch. 10</td>
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<td>Syncretism</td>
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<td>IV Culture</td>
<td>Mayan Glyphs</td>
<td>Presentation at CIESAS</td>
<td>Museo de Antropologia; pyramids</td>
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<td></td>
<td>Early Literature</td>
<td>D2L article</td>
<td>Plaza Garibaldi</td>
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<td>Traditional Art Forms</td>
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<td>Gyurko, Jerez</td>
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<td>Modern Literature</td>
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<td>Palacio de Bellas Artes</td>
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<td>Music and Theater</td>
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<td>Kahlo Casa Azul</td>
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<td>Visual Arts</td>
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<td>Languages of Mexico</td>
<td>Flores Farfán</td>
<td>CIESAS</td>
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<td>Ethnic Groups</td>
<td>CIESAS Staff</td>
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<td>V Social Structure</td>
<td>Personalismo</td>
<td>D2L article</td>
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<td>Machismo/Gender roles</td>
<td>Visit to schools</td>
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<td>Elites and the Poor</td>
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<td>The role of education</td>
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<td>SEP, UPN</td>
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</table>
Course Description
This four-week field program is based in Rwanda, Africa, one of Central-East Africa’s most progressive countries and home to several species of monkeys and apes, including the famed mountain gorilla. We will spend about one week in each of Rwanda’s national parks observing 7-12 species of monkeys and apes in diverse ecosystems. Students will record details of the social life of troops of baboons and vervet monkeys in the savanna setting of Akagera National Park on the border with Tanzania. In Nyungwe National Park, in the south of Rwanda, we will trek to observe groups of chimpanzees, black and white colobus and guenon monkeys in a dense forest. In the high altitude afro-alpine habitat of the Volcanoes National Park in the north of Rwanda, we will follow and observe mountain gorilla families and golden monkeys. In studying primates in diverse ecosystems, students will learn basic principles of comparative socioecology and techniques for behavioral recording and analysis. Each student will focus on a research theme that cuts across all field sites. In the course of studying primates in these locations, students will experience directly the challenges of primatological field work in remote locations, and learn about issues concerning human and nonhuman primate coexistence and about a local conservation programs addressing these issues.

This course promotes a strong interdisciplinary and comparative approach to primate family/social systems, combining perspectives from evolutionary biology, psychology, anthropology, and human development. The course has no prerequisites and is intended to benefit students from a wide array of disciplines, as well as more generally all students who wish to have an overseas first-hand encounter with the world’s most magnificent primate species in rare ecosystems, and to experience the dynamic cultures of Rwanda.

Location and Times
July in Rwanda, Africa.

Instructor Information
H. Dieter Steklis, Ph.D.
Professor, University of Arizona (South Campus)
Affiliate Professor of Psychology, University of Arizona
Adjunct Professor of Family Studies and Human Development, University of Arizona
Affiliate Scientist, The Dian Fossey Gorilla Fund Int.
steklis@arizona.edu (520) 730-0423

Netzin Steklis, M.A.
Adjunct Research Specialist, McClelland Institute for Children, Youth, and Families, University of Arizona
Instructor, Family Studies and Human Development, University of Arizona
Adjunct Lecturer, Anthropology, University of Arizona (South Campus)
Course Objectives
The specific objectives of this intensive field immersion are threefold:

1. **PRIMATE SOCIOECOLOGY**: To experience and understand the dynamics of primate social relationships (e.g., family systems, mothering styles, adolescence, fathering), and their connection to social systems, species differences in social systems and connection to local ecology;

2. **FIELD METHODS**: To think critically and learn scientific methodology, including a variety of quantitative field observation techniques and data gathering tools used to describe and analyze social interactions, social systems, group demography, and environmental features;

3. **GLOBAL COMPETENCY**: To gain global competency by working with fellow students from diverse backgrounds, cultures, and nationalities, and to experience the challenges of primatological field work in remote locations.

Expected Learning Outcomes
By the end of the course, you will:

1. Have proficiency in the use of basic scientific methods and instruments for collecting primate behavioral data.
2. Be able to design and carry out a basic observational field research project
3. Be knowledgeable about the relationship between local ecology and primate social behavior
4. Understand human family/social systems in the broader primate comparative perspective
5. Understand in situ primate conservation issues and approaches to their solution
6. Be experienced in multi-cultural and multi-disciplinary collaborative team work under challenging field conditions
7. Have an improved familiarity with the cultures and peoples of Rwanda

Course Themes and Methods
The course will be oriented around four broad themes that cut across the different primate species and ecosystems:

1. **Parenting** (maternal, paternal, alloparenting)
2. **Leadership** (dynamics of group leadership, dominance hierarchies)
3. **Cognitive Ecology** (problem solving- social / ecological challenges)
4. **Commensalism** (conservation, human-wildlife coexistence)

At the outset of the course, each student will be assigned to one of these themes that will be the focus of the student’s field research at each site. Students comprising each “theme team” will share and discuss their results with the rest of the class at the end of each weekly field session. In this way, all students will learn about each of the four themes.
Teaching Format
We will use several teaching methods:
• Lectures by course instructors and by visiting special topics experts
• Student presentations to the class
• Class discussions
• Group video review of field data collection
• Student research projects
• Hands-on data collection at field sites

Required Texts and Other Materials
There is no textbook for this course. The course instructors will have available to students a variety of scientific electronic reading materials pertaining to the course research themes. Although computers will be available at some field locations, students may bring their own notebook or laptop computers, iPads, USB memory sticks, etc. to facilitate access to these resources.

Required Course Preparation
Following primates on foot for several hours in different and oftentimes challenging elevations and terrains requires all students to be physically fit. In addition, students should be prepared for the unpredictable nature of field research in remote areas with little or no infrastructure. Experience in outdoor camping is a plus.

Assignments and Due Dates
Details about each assignment, including sign-up sheets and detailed instructions, can be found on the course website: http://primatefieldschool.arizona.edu/Syllabus

Pre-Course Work (due upon arrival to Rwanda)
• Rwanda Orientation Presentation – (you select the topic) You will be required to do a short presentation to the class on a Rwanda orientation topic.
• Rwanda Primate Profile Project – (you select a Rwandan species) You will be required to do a short presentation to the class on the natural history of one of the Rwandan nonhuman primate species.

During Course Work (due throughout the course)
• Journaling – You will be required to write a reflective journal entry for particular dates during the course. The schedule will rotate among all the students.
• Theme Team Research Presentation - You will be required to prepare a major class presentation on your results of your research theme at the end of the course.

Post-Course work (due 10 days after leaving Rwanda)
• My Digital Story - You will be required to reflect on your whole experience during the field school and create a Digital Story.

Grading Policy
The grade for the course will be based on the following work:
<table>
<thead>
<tr>
<th>Activity</th>
<th># over course</th>
<th>points each</th>
<th>total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda Orientation Presentation</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td>8%</td>
</tr>
<tr>
<td>Rwanda Primate Profile Project</td>
<td>1</td>
<td>250</td>
<td>250</td>
<td>19%</td>
</tr>
<tr>
<td>Journaling</td>
<td>5</td>
<td>50</td>
<td>250</td>
<td>19%</td>
</tr>
<tr>
<td>Participation / Cohesion</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td>8%</td>
</tr>
<tr>
<td>Theme Team Presentation</td>
<td>1</td>
<td>400</td>
<td>400</td>
<td>31%</td>
</tr>
<tr>
<td>My Digital Story (photo collection)</td>
<td>1</td>
<td>200</td>
<td>200</td>
<td>15%</td>
</tr>
</tbody>
</table>

**TOTAL PTS** 1300 100%

Incomplete grades will be given only in special circumstances in compliance with University policy. Note that final grades will not be submitted until all work and photos have been submitted.

**Grading Criteria**
A: > 90% B: 80% - 89% C: 70% - 79% D: 60% - 69% E: < 59%

**Attendance Policy**
By default you will be present throughout this course. You will have sufficient free time to attend to personal matters, such as washing laundry, supply and gift shopping etc.

**“Classroom” Behavior**
We expect students to actively participate in group activities including discussion, presentations, visits to field sites and educational facilities, and camp preparation and cleanup. Because you will live and work together as a group, you will need to be particularly tolerant and amicable. Importantly, we will expect you to be respectful of Rwandan customs and cultural traditions.

**Notification of Objectionable Materials (if applicable)** N/A

**Special Needs and Accommodations Statement**
Students who need special accommodation or services should contact the Disability Resources Center, 1224 East Lowell Street, Tucson, AZ 85721, (520) 621-3268, FAX (520) 621-9423, email: uadrc@email.arizona.edu, http://drc.arizona.edu/. You must register and request that the Center or DRC send me official notification of your accommodations needs as soon as possible. Please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and
activities may impact your ability to fully participate. The need for accommodations must be documented by the appropriate office.

Student Code of Academic Integrity
Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://w3.arizona.edu/%7Estudpubs/policies/cacaint.htm. ABOR Policy 5-308, prohibits threats of physical harm to any member of the University community, including to one’s self. See: http://policy.web.arizona.edu/~policy/threaten.shtml.

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http://www.registrar.arizona.edu/ferpa/default.htm

Subject to Change Statement
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<table>
<thead>
<tr>
<th>Day#</th>
<th>Schedule</th>
<th>Location &amp; Lodging</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student arrivals, orphanage or cooperative</td>
<td>Kigali Discover Rw Hostel</td>
</tr>
<tr>
<td>2</td>
<td>Rwanda Orientation Presentations; Kigali Genocide Memorial Centre; Mille Collines aka &quot;Hotel Rwanda&quot;; Movie night &quot;Hotel Rwanda&quot; or documentary</td>
<td>Kigali Discover Rw Hostel</td>
</tr>
<tr>
<td>3</td>
<td>Rwanda Orientation Presentations; Kimirondo cloth market</td>
<td>Kigali Discover Rw Hostel</td>
</tr>
<tr>
<td>4</td>
<td>Drive to Akagera, socioecology lecture while driving camp, setup by dark</td>
<td>Akagera National Park Tent</td>
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<tr>
<td>5</td>
<td>Game drive, Akagera orientation, Akagera primate presentations; lecture age/sex class; baboon obs short; LUNCH; lecture id; pm baboon obs, galigo night spotting</td>
<td>Akagera National Park Tent</td>
</tr>
<tr>
<td>6</td>
<td>Baboons and vervets obs (practice age/sex &amp; id); LUNCH; Lodge lecture ethogram w/baboon behaviors, Behavior Profile; pool; galigo night spotting</td>
<td>Akagera National Park Tent</td>
</tr>
<tr>
<td>7</td>
<td>Morning obs Behavior Profile; Habitat Profile; Evening lecture data collection methods;</td>
<td>Akagera National Park Tent</td>
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<tr>
<td>8</td>
<td>Theme team Hypothesis building/data collection; galigo night spotting</td>
<td>Akagera National Park Tent</td>
</tr>
<tr>
<td>9</td>
<td>Theme team Hypothesis building/data collection; boat</td>
<td>Akagera National Park</td>
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<tr>
<td>Day</td>
<td>Activity</td>
<td>Location</td>
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<tr>
<td>10</td>
<td>Leave Akagera to Kigali; pm at hotel organize data, reflections, laundry etc</td>
<td>Kigali &amp; Discover Rw Hostel</td>
</tr>
<tr>
<td>11</td>
<td>Nyungwe primate presentations; organize data; lecture, laundry</td>
<td>Kigali &amp; Discover Rw Hostel</td>
</tr>
<tr>
<td>12</td>
<td>Drive to Butare museum, Intore dancers, arrive Kitabi</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>13</td>
<td>Nyungwe park orientation; canopy walk @Uwinka (easy trek); pm lecture; discussion with rangers</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>14</td>
<td>Black &amp; White colobus @Uwinka (medium trek), baboons at Kitabi</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>15</td>
<td>Mona monkeys (medium trek) @Cyamudongo; Gisakura Guest House vervets</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>16</td>
<td>Grey cheeked mangabeys @Uwinka (long trek); Gisakura Guest House vervets</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>17</td>
<td>1/2 students to chimps @ Cyamudongo or Uwinka (long trek); theme team work</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>18</td>
<td>1/2 students to chimps @ Cyamudongo or Uwinka (long trek); theme team work</td>
<td>Nyungwe National Forest Kitabi Conservation Ctr</td>
</tr>
<tr>
<td>19</td>
<td>Leave Nyungwe, lunch Kigali, continue to Musanze/Ruhengeri, dinner Volcana, Volcanoes primate presentations</td>
<td>Volcanoes National Park Fatima Mission</td>
</tr>
<tr>
<td>20</td>
<td>Golden monkeys (medium-long trek), Habitat Profile of bamboo, “Gorillas in the Mist” movie night</td>
<td>Volcanoes National Park Fatima Mission</td>
</tr>
<tr>
<td>21</td>
<td>Karisoke camp hike (medium trek), Habitat Profile of herbaceous slope am, Karisoke staff presentations pm</td>
<td>Volcanoes National Park Fatima Mission</td>
</tr>
<tr>
<td>22</td>
<td>Gorillas (medium-long trek), other students work on theme team presentations</td>
<td>Volcanoes National Park Fatima Mission</td>
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<tr>
<td>23</td>
<td>Gorillas (medium-long trek), other students work on theme team presentations</td>
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<td>Volcanoes National Park Fatima Mission</td>
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<tr>
<td>25</td>
<td>Gorillas (medium-long trek), other students work on theme team presentations</td>
<td>Volcanoes National Park Fatima Mission</td>
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<tr>
<td>26</td>
<td>Theme team research presentation work, Karisoke bones presentation?</td>
<td>Volcanoes National Park Fatima Mission</td>
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<tr>
<td>27</td>
<td>Theme team research presentation work, Gorilla doctors presentation?</td>
<td>Volcanoes National Park Fatima Mission</td>
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<tr>
<td>Day</td>
<td>Activity</td>
<td>Location</td>
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<tr>
<td>28</td>
<td>To Kigali, Theme Team Research Symposium</td>
<td>Kigali Discover Rw Hostel</td>
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<tr>
<td>29</td>
<td>Shop, pack, farewell dinner</td>
<td>Kigali Discover Rw Hostel</td>
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<td>30</td>
<td>Student departures</td>
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APPENDIX H - NUTRITIONAL SCIENCE PROGRAM SYLLABUS

Study Abroad
Mediterranean Diet and Health, NSC-455SA
2014 Syllabus

May 19-May 21, 2014 - University of Arizona, Tucson, AZ (available on line)
May 25-June 21, 2014 - Verona, ITALY

Program Director: Donato F. Romagnolo, Ph.D., MSc.
Department of Nutritional Sciences, College of Agriculture and Life Sciences.
The University of Arizona, Tucson, AZ
Email: donato@u.arizona.edu
Tel. 520-626-9108/9571
Location: Verona, Italy
Credit hours: 6 units; 96 contact hours.
Attendance: mandatory. Attendance will be recorded.

Course Description:
The Mediterranean dietary pattern has a well-established beneficial role in health promotion. Epidemiologic studies reveal the protective role of adherence to this pattern on overall cancer incidence and mortality, prevention of obesity, type II diabetes, and cardiovascular diseases. On November 17, 2010, UNESCO recognized this diet pattern as an Intangible Cultural Heritage of Italy, Greece, Spain and Morocco, thus recognizing this Mediterranean component of life style as a contribution to the world.

Objectives of this Summer Program include:
1. Provide students with information about the health benefits of foods associated with a Mediterranean diet and for the prevention of chronic diseases;
2. Review and discuss the influence of bioactive compounds present in Mediterranean foods on metabolic pathways;
3. Provide students with an opportunity to learn about the food industry in Northern Italy, and dietary patterns of the Mediterranean area;
4. Acquire hands-on experience with food preparation supervised by local food instructors;
5. Experience the cultural diversity of Italy and influence of Mediterranean culture.

Requirements:
This class is designed for University of Arizona undergraduate junior and senior students as well as non-University of Arizona students who have a background in nutrition, health, biological, physiological, and biomedical sciences. Academic requirements include NSC 170C1 (formerly NATS 104) - Nutrition, Food and You, or NSC 101 - Introduction to Human Nutrition, or equivalent courses in nutrition, health, physiological, biological, or biomedical sciences.

Textbooks:
1. Selected readings will be posted on D2L by Dr. Romagnolo and will consist of original research articles, review articles, monographs, and book chapters.
Program and assignments:

Part 1.

- May 19-May 21, 2014. Meetings will take place on the Campus of the University of Arizona, Mon/Tue/Wed, 3:00-5:00 PM. Online instruction will be available for students not on campus. On line attendance is mandatory.
- May 21. The role of Mediterranean diet in the prevention of obesity, type 2 diabetes, and cardiovascular diseases, and relation to morbidity and mortality.
- May 22-25: Travel to Italy


- Classroom meetings will be from 9:00 AM to 2:00 PM and excursions will last from 9:00 AM to 5:00 PM. Each classroom activity will include an introductory lecture by Dr. Romagnolo or a guest speaker followed by food presentations, demonstrations, preparation, and tasting organized by local food experts. Lunch will be served on-site during class-room days. Brown-bag lunch will be provided during excursions.
- 6:00 PM. Bus transfers to reception.
- Presentation of program and staff.
- Welcome, guest speaker from University of Verona.
- Dinner.
- May 27. Bioactive food components in Mediterranean diet and regulation of metabolic pathways. Cooking lesson on vegetables and lunch.
- May 30. EXAM 1. Free lunch and weekend.
- June 2. No class, National Italian holiday.
- June 4. Mediterranean fats and oils, olive oil, bioactive components, and health effects.
- Visit to pasta plant and lunch.
- June 6. Carbohydrates and diet. Overview of cereal-based foods, relations to gastrointestinal health; cereal grain origins and cultivars of the Mediterranean area, wheat, barley, and rice.
- Free Lunch and weekend.
- Tour of rice plant and lunch.
• June 21. Farewell and Departure
• June 28. Self-study** Due

(*) The paper will be 5 pages long, double space (1” margins) and prepared according to scientific standards of the Journal of Nutrition (www.nutrition.org) and address the relationships between the Mediterranean diet and one of the health problems selected among those presented in class (i.e. obesity, cancer, diabetes, inflammation, etc). The paper should be referenced (not included in the 5 pages limit) and may have figures and tables, if necessary, also not included in the 5 pages limit. The manuscript should be submitted electronically to Dr. Romagnolo (donato@u.arizona.edu).

(**) The self-study involves the preparation of a short video/slide presentation (Digital Storytelling Project) focusing on the scientific and individual/group cultural experience while with the program.

On site contributions will include presentations by guest lectures from The University of Arizona, faculty from The University of Verona, and representatives of food industry. Writing emphasis and Honors assignment options are available for qualifying students.

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<th>Examinations Breakdown</th>
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Lambert, J. (2010). *The Digital Storytelling Cookbook*. Digital Diner Press. This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 2.5 License. To view this license, visit: http://creativecommons.org/licenses/by-nc-sa/2.5/


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