

## Abstract

### **Melissa Schwartz: A DESCRIPTIVE EXPLORATORY STUDY ON HOW NURSE EDUCATORS USE DIGITAL STORIES IN THE CLASSROOM**

This study examines the experiences of 12 nurse educators using digital stories in undergraduate nursing courses. Two issues were explored: 1) How and for what purpose are nurse educators incorporating digital stories in the classroom, and 2) What benefits and/or problems have been identified in the use of digital stories in nursing education. Study results showcase the most compelling reasons and methods for using digital stories as a pedagogical tool. Overall, student reactions were positive and benefits identified amidst the challenges. Knowledge gained from this study will assist educators in higher education as they incorporate digital stories in the classroom.

A DESCRIPTIVE EXPLORATORY STUDY ON HOW NURSE EDUCATORS USE  
DIGITAL STORIES IN THE CLASSROOM

A Dissertation Presented to  
the Faculty of  
the College of Nursing  
East Carolina University

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

by  
Melissa R. Schwartz

July, 2014

© Melissa R. Schwartz, 2014

A DESCRIPTIVE EXPLORATORY STUDY ON HOW NURSE EDUCATORS USE  
DIGITAL STORIES IN THE CLASSROOM

by

Melissa R. Schwartz

APPROVED BY:

CO-DIRECTOR OF  
DISSERTATION \_\_\_\_\_

Janice A. Neil, PhD

CO-DIRECTOR OF  
DISSERTATION \_\_\_\_\_

Elaine S. Scott, PhD

COMMITTEE  
MEMBER \_\_\_\_\_

Annette I. Peery, EdD

COMMITTEE  
MEMBER \_\_\_\_\_

Michelle F. Eble, PhD

DIRECTOR PHD NURSING  
PROGRAM \_\_\_\_\_

Elaine S. Scott, PhD

DEAN OF THE GRADUATE  
SCHOOL \_\_\_\_\_

Paul J. Gemperline, PhD

## **DEDICATION**

For everyone who has, is, and will be an actor, actress, and extra in the evolving story of my life. For my guardian angels and family in heaven who watch over me. And to God the best writer, casting director and producer there is.

## **ACKNOWLEDGEMENTS**

I could not have completed my doctoral degree in nursing had it not been for every individual who has come into my life, even if all you offered was a smile. For a smile, sometimes is all you need to encourage and inspire. My gratitude flows abundantly to the following people for without them I don't know exactly where this story would have gone:

Drs. Neil and Scott, my co-directors for my dissertation, Dr. Peery and Dr. Ebly, my committee members, and Dr. Sitzman, my consultant thank you for providing me continued encouragement, words of wisdom, and letting my creative spirit fly!

For the faculty of Morton Elementary School, Tabernacle Middle School, White Oak High School, East Carolina University, and University of Phoenix for providing me with an excellent education and a love for writing.

Henry and Lucie Goodno, the best parents I could have asked for!

My children, Anna and Michael Schwartz, for being there start to finish. I love you both dearly!

Chris Schwartz, thank you for taking me through the jungle safely and putting me on the plane.

Robert Beck, I'm so blessed you were flying that plane. I'll be your first officer anytime.

My colleagues and friends: Dr. Jana Pressler, Dr. Nancy Stephenson, Bob Green, Andrea Sessoms, Dr. Robin Webb-Corbett, Dr. April Matthais, Dr. Annette Greer, Dr. Gina Woody, Jane Miles, Mark Hand, Dr. Hui Bian, Karl Faser, Nikolaas Fishel, Connely Evans, Tamara McKeel, Emily Gibson Seberger, Brandon Eatman, Dr. Kimberly Larson, Dr. Janet Malek, Dr. Patricia Fazzone, Janie Beck, Don and Margie Lantham, Tracy and Carol Bachophen, Keila Dumicz, and the nurse educators who shared their stories, and so many more. You've each contributed in special ways.

Thank you all so very much!

I must also acknowledge the financial support of my own institution; East Carolina University and the North Carolina Nurse Educator of Tomorrow Scholarship, without funding this would not have been possible.

## TABLE OF CONTENTS

SIGNATURE PAGE.....	i
DEDICATION.....	ii
ACKNOWLEDGEMENTS.....	iii
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
CHAPTER ONE: INTRODUCTION.....	1
Research Problem.....	8
Purpose Statement.....	8
Conceptual Model.....	9
Significance of Study.....	11
Operational Definitions.....	11
Summary.....	12
CHAPTER 2: LITERATURE REVIEW.....	14
Finding Digital Stories used in Higher Education.....	14
Categorization of Studies and Program Evaluations.....	16
Digital Stories as a Pedagogical Tool toward Discourse.....	18
Digital Stories as a Pedagogical Tool toward Reflective Learning.....	19
Digital Stories as a Pedagogical Tool toward Creative Teaching and Learning.....	22
Summary.....	32
CHAPTER 3: METHODOLOGY.....	34
Research Design.....	34
Participant Sample.....	35



Data Collection Procedures.....	35
Data Validity and Trustworthiness .....	38
Participant Confidentiality .....	39
Summary.....	40
<b>CHAPTER 4: STUDY FINDINGS .....</b>	<b>41</b>
Participant Demographics.....	41
Research Question One: How And For What Purpose Are You Incorporating Digital Stories In The Classroom? .....	43
Compelling Reasons .....	43
Incorporating Digital Stories into Teaching Practice.....	47
Research Question Two: What Benefits And/Or Problems Have You Identified In The Use Of Digital Stories In The Classroom?.....	51
Student Reactions.....	51
Student Benefits .....	53
Challenges.....	57
Summary.....	61
<b>CHAPTER 5: DISCUSSION AND RECOMMENDATIONS .....</b>	<b>63</b>
General Discussion .....	63
Digital stories as a pedagogical tool toward discourse .....	64
Digital Stories as a pedagogical tool toward reflective learning .....	65
Digital Stories as a pedagogical tool toward creative teaching and learning .....	66
Limitations of Study .....	67
Significance in Nursing.....	67

Recommendations for Research .....	68
Final Summary .....	69
References .....	71
APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER.....	80
APPENDIX B: E-MAIL QUERY OF FACULTY.....	81
APPENDIX C: DEMOGRAPHIC QUESTIONNAIRE .....	83
APPENDIX D: INTERVIEW CONFIRMATION E-MAIL.....	86
APPENDIX E: PROBING QUESTION TREE.....	87
APPENDIX F: ADDITIONAL TABLES .....	90

## LIST OF TABLES

Table 1. Participant demographic information .....	42
Table 2. Study results.....	62

## LIST OF FIGURES

Figure 1. Literature Map.....	17
-------------------------------	----

## CHAPTER ONE: INTRODUCTION

The National League of Nursing [NLN] calls for nurse educators to think beyond the 20<sup>th</sup> century pedagogy to explore new possibilities in nursing education that are research based (NLN, 2003). The need for this educational revolution in nursing is largely due to rapid healthcare changes, increasing client complexity, generational differences, and content saturation (Ahrin & Cormier, 2007; Stanley & Dougherty, 2010). Nursing is not alone. Educators throughout the university system are undergoing changes acknowledging that traditional teaching methodologies have become out of the ordinary for many contemporary university students (Clarke & Adam, 2012). These changes have prompted educators to create and implement new pedagogical tools and practices that move teaching from teacher-centered to student-centered in order to better prepare students to be excellent nurses, leaders, and developers of knowledge.

### **Contemporary students**

The contemporary student, those born after 1975 (Ahrin & Cormier, 2007) cannot be taught using the same strategies as predecessors (Howe & Strauss, 2007). Growing up in an ecosystem of technology (Ohler, 2008), students in the new millennium are versatile communicators and multitaskers who desire interactive tools and have characteristics of being confident, optimistic, committed, and creative (Johanson, 2012). Contemporary students desire quick answers (Johanson, 2012) and are accustomed to immediate gratification (Ahrin & Cormier, 2007). These students have shorter attention spans and are less familiar with reflective and systematic thinking required within professional nursing (Johanson, 2012).

Taking these generational realities into consideration, transformation in nursing education is needed (Benner, Sutphen, Leonard, & Day, 2010). Contemporary nursing graduates are entering the workforce in large numbers. The concern for educators then is how to effectively

prepare future nurse graduates as they transition into a complex healthcare environment (Arhin & Cormier, 2007).

### **Teacher-centered conventional pedagogy**

The term pedagogy, etymologically associated with the teaching of children, represents the various components enlisted within the act of classroom teaching (Kenway & Modra, 1992; Ironside, 2001). Although the term pedagogy is used synonymously with teaching, pedagogy is just as much a way of thinking as it is the manner in which teaching is implemented (Ironside, 2001). Transformations in technology, society, culture, and consciousness are steering faculty away from the conventional pedagogy commonly referred to as traditional teaching (Clarke & Adam, 2012). Nurse educators, rethinking traditional teaching methods, have developed alternative pedagogies, such as narrative pedagogy that promote a changing learning environment (Sochacki, 2010).

Conventional pedagogy used within nursing curriculum places subject material strategically into a course whereby the nursing instructor pre-plans lectures beginning with simple concepts moving to the more complex (Ironside, 2001; Sochacki, 2010). This method of teaching lacks the necessary interaction, reflection, and collaboration (Ahrin & Cromier, 2007) that is required of nursing students as they develop customized plans of care for individuals with multifaceted medical conditions. The conventional pedagogy of instruction while beneficial in transferring knowledge (Sochacki, 2010) and facts about a culture (Ironside, 2001) is basically structured to meet pre-determined learning objectives (Ahrin & Cromier, 2007). Research suggests the conventional pedagogy of teaching contributes to the student belief that nursing is more about technique than communication (McAllister, Tower, & Walker, 2007) that over looks the very heart, and art, of nursing; listening and caring (Schwartz, 2012; Sochacki, 2010).

Acknowledging faculty shortages, the conventional pedagogy is well-suited to large student teacher ratios (Sochacki, 2010) and provides varying degrees of success (Kleiman, 2007) in measuring student achievements in learning (Ironsides, 2006; Sochacki, 2010). While this approach has economic value, it may not be sufficient to meet the needs of the contemporary student, who favor interactive learning (Howe & Strauss, 2007). Considering the need for interactive learning, educators must recognize knowledge is best produced, negotiated, and transformed when there is a collaborative interaction among the educator, the learner, and the knowledge itself (Kenway & Modra, 1992).

Moody, Horton-Deutsh, and Pesut (2007) contend the Academy of Nursing needs renewal that “. . . involves collegial appreciation of values that supports human interconnectedness and interrelationships to nurture positive, healthy work environments in nursing academia and practice” (p. 320). This recommendation is in staunch contrast to research in higher education that reveals generations of teacher-centered learning that discourages reflection and critical thinking (Kawashima, 2005). In fact, studies suggest this method of teaching may actually promote competition, confrontation, isolation, and anxiety in students (Sochacki, 2010).

Despite research demonstrating the negative attributes of the conventional pedagogy and needs of the contemporary student (Werth & Werth, 2011), 56% of nurse educators continue to use this method of teaching (Brown, Kirkpatrick, Mangum, & Avery, 2008). On the positive side, 70% of nurse educators around the world are implementing multi-media strategies as pedagogical tools (Brown et al., 2008) to address some of the deficits of traditional teaching. Educators who acknowledge both the limitations and benefits of the conventional pedagogy are exploring new alternatives (Sochacki, 2010) and innovative pedagogies and pedagogical tools,

defined as items used to learn or teach (Thibodeaux, 2012). Tools that will take learning from teacher-centered to student-centered will enable nurse educators to address contemporary student deficits in reflection, discourse, and critical thinking (Kawashima, 2005).

### **Learner-Centered Emergent Pedagogies**

Student or learner-centered teaching steers away from the idea that students are passive learners with no knowledge and the educator is the only expert on the content (Young & Maxwell, 2006). Educators who use student-centered teaching as a model look at the needs of the students, identify how their learning styles might be met, and acknowledge student experience and knowledge on the content being covered. The goal of student-centered teaching is to create an environment that promotes thoughtful engagement in learning, critical thinking, and reflective thinking through the promotion of teamwork (Young & Maxwell, 2006).

Narrative pedagogy is identified as a student-centered approach to teaching (Young & Maxwell, 2006). Narrative pedagogy arises out of the reflection and interpretation of shared experiences between and among students, teachers, and clinicians (Diekelmann, 2001; Ironside, 2001). Narrative pedagogy is derived from a combination of conventional, phenomenologic, critical, and feminist pedagogies (Diekelmann, 2001). These alternative pedagogies are also interpretive because they make interpreting the context of learning the primary concern (Ironside, 2001). In phenomenologic pedagogy, educators and students learn through lived experience. In critical pedagogy, the educator draws attention to issues of power and oppression in the classroom to transform student understanding through dialogue and critique. Occasionally subsumed within critical pedagogy, the educator using a feminist approach strives to overcome hierarchy by encouraging female students to participate in class discussion (Ironside, 2001).



Narrative pedagogy is recognized as having the ability to transform nursing education (Diekelmann, 2001) where learning is co-created between student and teacher (Ironside, 2001). Studies suggest this open environment for learning will capitalize on the strengths and address the weaknesses of contemporary nursing students (Arhin & Cormier, 2007). Researchers in nursing education support the use of the narrative pedagogy and recommend nursing programs and professional organizations support educators in learning how to effectively use narrative pedagogy and pedagogical tools in the classroom (Benner et al., 2010).

Narrative pedagogy is not per se a teaching strategy; rather, it is an attempt to create an environment for open conversation to occur between the teacher and the student(s) (Ironside, 2001); thus, moving teaching from teacher-centered to student-centered. Narrative pedagogy developed by Diekelmann (2001) uses discourse, the verbal exchange of ideas (Discourse, 2012) to prompt interaction between student and educator. One primary form of narrative pedagogy is storytelling (Davidson, 2004). Storytelling and written story are both forms of narrative (Shieh, 2005) and referred to as pedagogical tools within the narrative pedagogy (Arhin & Cormier, 2007). Throughout time, the use of stories has proven to be one of the most effective ways to transfer information (Brown et al., 2008). Ethnographic research, a descriptive study of humankind (Ethnography, 2008) primarily used in the field of anthropology (Patton, 2002), documents the use of myths and folktales as a valuable tool for passing along information and specifically observes the use of storytelling in an old-to-young transmitting pattern (Sugiyama, 2011).

Research in neuroscience has demonstrated that the human mind is intricately wired to form long-term memories that encode, process, and distribute memories throughout the brain. Research on the function of the brain finds the hippocampus also drives human desire for

autobiographical expression (Bilich, 2008). Additionally, cognitive psychologists have explored and found through research that humans use imagination as mental simulation to perform, plan, study, behave, and solve problems (Thomas, Hannula, & Loftus, 2007).

In the field of higher education, research supports the use of narrative pedagogy and in particular storytelling, as a means to engage students (Diekelmann, 2001), encourage empathy (Davidson, 2004), positively influence the learning environment (Lordly, 2007), make difficult content more understandable (Robin, 2011), provide students with a reflective experience (Christiansen, 2011; Sandars & Murray, 2009), assist in the development of compassion, humanism, accountability, altruism (Quaintance, Arnold, & Thompson, 2010), and promote excellence in practice (Sandars & Murray, 2009). Furthermore, various disciplines acknowledge that combining the use of memory, imagination, and stories as a methodology that can promote change in the way one thinks, behaves, and learns (Person, 2006). Contemporary uses of narrative pedagogy hold promise for invigorating the learning environment and engaging the emergent generation of students in nursing.

Stories are valuable and have survived for centuries: however, the advancement of technology is threatening the archiving and sharing of stories as oral tradition or even in printed texts. The development of television, websites, video blogging, and photo essays are overpowering the historical written and oral forms of storytelling (Porter, 2006). One emergent technology that can resolve this dilemma is the use of the digital story (Lambert, 2009; Ohler, 2008).

Digital stories have become one of the newest pedagogical tools on the narrative field in higher education (Rossiter & Garcia, 2010). Digital storytelling was developed in the early to mid-1990s by Dana Atchley and colleagues (Lambert, 2009). As professionals in the field of

video production, they developed digital storytelling workshops where people learned to use digital media to create short audio-video stories about their lives; stories capable of being shared and broadcast around the world (Hartley & McWilliam, 2009). Digital stories encompass all narrative forms and processes to summon the viewer's emotions (Ganley, 2012).

An example of a digital story, *Remembering Mary*, has been used in nursing education (Schwartz & Schwartz, 2012). This story was developed for classroom use to prompt discussion and achieve higher-level learning objectives in a baccalaureate family-centered nursing course (Schwartz, 2012). *Remembering Mary* was used to complement lecture as a way to transfer knowledge about intimate partner violence, prompt discussion on cultural and personal values, and as a means to develop the conceptual skill of understanding narratives (Schwartz, 2012). Student outcomes showed comprehension of subject material as students were able to identify Mary's risk factors. Receiving and valuing occurred as students listened respectfully as class members shared their own stories and religious reasons as to why Mary would stay in an abusive relationship. Internalizing values occurred as students created an alternate ending for Mary where they collectively developed a safety plan that she might have used. Through the conceptual skill of understanding, students were able to use inductive reasoning to problem solve (Schwartz, 2012).

Digital stories have been heralded in secondary education as building a collaborative community that promotes plurality while developing multimedia skills, creative thinking, and parallel discourse between student and teacher (Ganley, 2012). Digital stories are also a means to transfer knowledge with greater impact over traditional stories because student's process visual information 60,000 times faster than written and verbalized information (Porter, 2006). The incorporation of digital stories, as a pedagogical tool when aligned with Bloom's Taxonomy as a

framework for student learning, can aid students in achieving higher-level learning objectives and becoming developers of knowledge (Schwartz, 2012). In comparison to the traditional story, digital stories may improve learning since students are not only told, but are shown (Porter, 2006).

### **Research Problem**

Studies show that storytelling and digital stories, short videos that combine still and moving images, music, sound, text, and video clips, have become prevalent in the classroom (Wyatt & Hauenstein, 2008) and may be an effective way to improve teaching and learning (Lordly, 2007). Digital stories as a pedagogical tool for nursing education have numerous benefits; however, there is sparse research exploring how to incorporate digital stories in nursing education.

### **Purpose Statement**

The purpose of this research was to explore how nurse educators use digital stories in the classroom. The findings of this study will assist nurse educators in establishing best practices in the use of digital stories in nursing education.

The following research questions were developed to address the two main issues concerning the use of digital stories in nursing education:

- 1) How and for what purpose are nurse educators incorporating digital stories in the classroom?
- 2) What benefits and/or problems have been identified in the use of digital stories in nursing education?

## **Conceptual Model**

A social constructivist theoretical framework guided this dissertation that explores the experience of students and teachers engaging in digital storytelling (Polit & Beck, 2008). Social constructivism informs both the research method and the analysis of the teaching strategy examined in the study. More specifically, the philosophical and theoretical views of John Dewey and Paulo Freire are foundational to the study.

Twentieth century philosophers, John Dewey (1997) and Paulo Freire (1998), contributed significantly to the development and need for theories, models, and frameworks for evaluating the use and significance of storytelling in higher education. Their work has been pivotal in the quest for more progressive interactive education. Digital stories, as a pedagogical tool, support the pursuit toward revolutionizing education. What follows are Dewey (1997) and Freire's (1998) thoughts exploring and understanding reality as it pertains to learning.

Dewey believed progressive education should be more than executing the purposes of another person and that education should encompass foresight gained from experience so that there could be a new purpose for the learner (Dewey, 1997). Sharing digital stories represents knowledge gained from experience. Both the provider of the story and listener of the story can reflect on and recreate the experience. With the experience of personal story, the nursing student can perceive the different realities of the client (Carper, 1978) that Dewey posits stems from the complex intellectual operations gathered from life experience (Dewey, 1997).

Freire claimed education occurs when there are two learners such as student and teacher (Aronowitz, 1998). Interaction between student and teacher promotes open dialogue where each reflects and shares what they know about the subject of concern (Aronowitz, 1998). The goal of the educator should not be to transfer knowledge, but rather heighten epistemological curiosity

wherein students become lifelong learners who expand and construct knowledge (Freire, 1998). The creation and use of digital stories in the classroom exemplifies what Freire (1998) suggests expands and constructs knowledge as, “. . . learners will be engaged in continuous transformations through which they become authentic subjects of the construction and reconstruction of what is being taught, side by side with the teacher, who is equally subject to the same process” (p. 33). The essence of learning then becomes a transformative, socially constructive process (Toy, 2013).

Using these theoretical underpinnings, this study explores the socially constructed process of teaching and learning that occurs between the nurse educator and the student: more specifically, it examines the educator’s methods and perceived challenges and benefits in the use of digital storytelling as a transformative learning experience.

### **Constructivist paradigm**

The researcher using social constructivism as an approach to learning recognizes that each individual has a different experience and perception of the phenomenon under investigation (Patton, 2002). The constructionist evaluator attempts to capture these varied perspectives through open-ended interviews. The researcher’s evaluation yields multiple perceptions, but does not pronounce one perception as correct. The final report is presented in a multivocal, multicultural format that simply presents the different perceptions and experiences of the research participants (Patton, 2002).

Beck and Kosnik (2012) state, “. . . social constructivism is an approach that encourages all members of a learning community to present their ideas strongly, while remaining open to the ideas of others” (pp. 7-8). An approach to learning that involves the whole person: thought, emotion, and action. Social constructivism as an approach to learning provides student and

teacher with a major role where each provides input that prompts discussion and reflection in class (Beck & Kosnik, 2012). Constructing knowledge is how the mind works because people cannot grasp new ideas without linking those ideas to existing concepts. Integration, inquiry, and community become key components to social constructivism (Beck & Kosnik, 2012).

Knowledge in this sense becomes a transformative, socially constructive process (Toy, 2013).

### **Significance of Study**

Digital storytelling is a new pedagogical tool used in nursing education and research. The data collected suggests the efficacy of digital stories as an alternative teaching strategy for nurse educators (Haigh & Hardy, 2011; Stacey & Hardy, 2011). Digital stories in higher education are applicable to varied learning styles (Clarke & Adam, 2012), are able to capture student attention, and can positively influence the learning environment (Leng, 2010; Lordly, 2007) by providing students with a reflective experience (Li, 2007; Christiansen, 2011; Garrety, 2008; Sandars & Murray, 2009; Stacey & Hardy, 2011) achievable through discourse with peers and educators (Leng, 2010; Rudnicki, 2009; Stacey & Hardy, 2011; Yuksel, Robin, & McNeil, 2011). Studies show storytelling and digital stories are prevalent in the classroom and are an effective way to improve teaching and learning, but *how* to effectively incorporate digital stories has not been thoroughly researched. Knowledge gained from this study will assist not only nurses, but all educators in higher education as they implement and use digital stories in the classroom.

### **Operational Definitions**

The following specific definitions were utilized for the study:

*Narrative.* Narrative is the art and practice of narration represented in art such as an event (Narrative, 2012a), book, or any form of literary work (Narrative, 2012b). In this study narrative is defined as a story told through digital media. East, Jackson, O'Brien & Peters (2010)

define narrative as, “Structured and formal accounts containing researcher additions and omissions” (p. 19). Story and narrative are frequently used interchangeably in the literature (Sochacki, 2010).

*Story.* A narration (Story, 2012a) or statement of an account or event (Story, 2012b) that may be true or fictitious, in prose or verse that is designed to instruct or amuse an audience (Story, 2012a). When used in the research setting, East et al. (2010) define story as a, “Research participants’ personal accounts and experiences” (p. 19). Storytelling becomes the act of telling a story (Moon & Fowler, 2008).

*Digital story.* Digital story represents storytelling in the digital world (Schwartz, 2012). They are short vignettes that combine the art of telling stories (Rossiter & Garcia, 2010) with still and moving images, music, sound, text, and video clips (Bran, 2010; Gazarian, 2010) using a variety of video software (Lambert, 2009). Digital stories used in education last only a few minutes (Robin, 2011). Other forms of digital stories might include short educational movies, oral storytelling within digital stories, and interactive or adaptive stories where the audience is both the listener and story creator (Franz & Nischelwitzer 2004; Ohler, 2008; Schwartz, 2012).

### **Summary**

Educators who acknowledge the limitations of the conventional pedagogy are exploring new pedagogies (Sochacki, 2010) and pedagogical tools like digital stories that take education from teacher-centered to learner-centered. Learner-centered instruction focuses on the learning styles and needs of the student as well as the knowledge they bring to the classroom. By contrasting pedagogical tools with pedagogical approaches, and comparing student outcomes to those tools and approaches, a better defined, research based science of nursing will evolve (Brown et al., 2008). In chapter two, related studies and program evaluations are explored. In



chapter three, the methodology for this study provided. In chapter four, study findings revealed. Lastly, chapter five provides a general discussion and further recommendations for research on digital stories.

## CHAPTER 2: LITERATURE REVIEW

This literature review is divided into six sections. The first section describes how studies and program evaluations pertinent to this study were found. Section two provides information on how the literature was categorized. Sections three through five, organized based on a thematic evaluation of the literature review findings explore research on and use of:

- Digital stories as a pedagogical tool toward discourse
- Digital stories as a pedagogical tool toward reflective learning
- Digital stories as a pedagogical tool toward creative teaching and learning.

Section six provides a summary.

### **Finding Digital Stories used in Higher Education**

The Cumulative Index of Nursing and Allied Health (CINAHL) via EBSCO host between 1990 and the first quarter of 2014 were explored using the key terms digital stories and nursing education. The combination of terms yielded eight articles. Upon review of the eight articles one research study and three program evaluations were included. The remaining four articles were excluded because they focused on digital stories for use in the patient population and for use in virtual communities. Mesh terms narrative and narration were used with no additional studies found.

The Educational Resource Information Center (ERIC) via EBSCO host was explored using the key terms digital stories and nursing education with two results. Neither article was appropriate as they focused on game-based learning and the use of digital stories with school age children. Next, the terms digital stories and higher education were explored with 132 results. All titles and subject content were reviewed; this search resulted in one applicable study. One study found explored the use of digital stories by Australian academicians.

PsychINFO was also explored using the same word combinations of digital stories and higher education. This search resulted in one study that provided insight into the use of digital stories in higher education as a method of discourse.

MEDLINE via PubMed was explored using the single term digital stories. This search resulted in 39 journal articles. All titles and abstracts were reviewed. Two program evaluations exploring the use of digital stories in nursing educations were included in the literature review. Those articles excluded did not focus on digital story use in higher education.

Secondary to the small number of studies published on the incorporation of digital stories in higher education, Proquest Dissertations and Thesis was searched using the key terms digital storytelling and higher education. The result of this search yielded 704 dissertations. All titles and multiple abstracts were reviewed. Articles excluded focused on digital story use outside the college setting. Two dissertations examining the use of digital stories in higher education were included in the literature review.

East Carolina University (ECU) library one search was accessed using the keywords digital storytelling and education. Scholarly, peer reviewed, articles, and studies in English between 2007 and the first quarter of 2014 were reviewed. Many of the journal articles and studies that surfaced had already been accessed through CINAHL and Medline. No new work was added to the literature review.

Upon review of collected work, Google Scholar was explored to find studies cited by digital storytelling authors that had not been found in online databases. The ancestral approach initiates tracking of citations used within articles and studies (Cooper, 1982). This approach assisted in finding two studies that were not originally found.

There were numerous studies evaluating the use of digital stories in K-12 education, but far less in higher education. Since the focus of this study was in higher education, K-12 citations were not included. Research on digital stories in nursing education resulted in one study. For the purpose of this literature review articles reflective of program evaluations in nursing education were included. Additional studies, exploring the use of digital stories for educational use in higher education were included.

### **Categorization of Studies and Program Evaluations**

Studies and program evaluations were categorized using words found within the text, research findings, and key words provided by the article's author(s). Categories that evolved were:

- Digital stories as pedagogical tools toward discourse
- Digital stories as pedagogical tool toward reflection
- Digital stories as a pedagogical tool toward creative teaching and learning.

The literature map below (see Figure 1) provides an overview on the placement of studies and program evaluations.

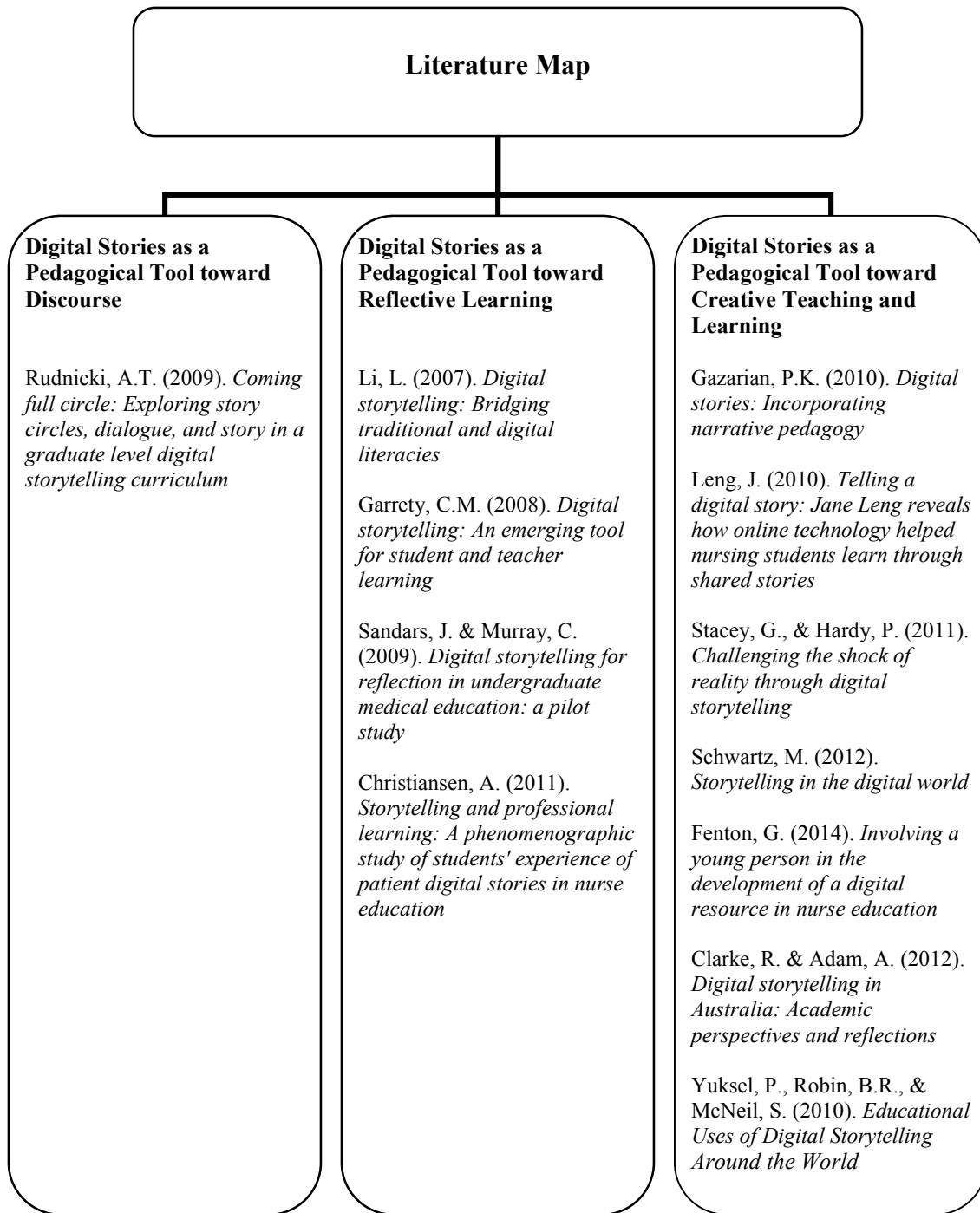


Figure 1. Literature Map

## **Digital Stories as a Pedagogical Tool Toward Discourse**

Dialogue is defined as a conversation between two or more people (Dialogue, 2014). Synonymous with dialogue (McCutcheon, 2010) is the concept of discourse, a method used to express their beliefs, feelings, and personal values (Mezirow, 2003). The way an individual writes, speaks, and acts are all characteristics of discourse (Gee, 2000). Text, speech, digital stories, and art are just a few examples of how individuals share their varied discourses (Gee, 2000). This section of the literature review explores the use and significance of digital stories for the promotion of discourse in the classroom.

The author of the following study provides in her dissertation definitions for dialogue and discourse. She notes the term “dialogue” was used rather than “discourse” for, “. . . continuity of [her] narrative” (Rudnicki, 2009, p. 24). For the purpose of this literature review and continuity of work, the term discourse was categorically used.

Rudnicki’s (2009) dissertation story was influenced by the work of philosopher Paulo Friere who acknowledged dialogue between teacher and student is a necessity in the promotion of higher consciousness (Friere, 1993). With this knowledge, dialogue became the focus of Rudnicki’s (2009) dissertation, where, through narrative inquiry, she explored whether storytelling in the classroom summoned higher consciousness as student’s shared stories and assisted one another in the development of their personal digital story (Rudnicki). Her research focused on the experiences, feelings, and thoughts that culminate through dialogue between and among them as personal stories are shared (Rudnicki). Sharing personal stories in small groups represents the beginning of making a digital story (Hartley & McWilliam, 2009; Lambert, 2009; Rudnicki, 2009).

Rudnicki's (2009) convenience sample consisted of five graduate students enrolled in a digital storytelling and culture course where she participated as a teaching assistant (Rudnicki). Findings from study participants showed that digital stories can serve as bridges to connect the student's personal world with his or her educational world (Rudnicki, 2009). One question was omitted after the first interview that she acknowledged limited her ability to fully evaluate participant feelings, thoughts, and experiences. The question dropped was intended to find out how study participants felt with regards to her assistance and discussions with them during the digital story making process. Rudnicki found this question awkward for her as the first participant simply stated that she was "helpful" (Rudnicki, 2009, p. 164). Rudnicki proposes for future studies a reflective journal of discourse between instructor and student would be more appropriate (Rudnicki, 2009).

Rudnicki's (2009) study *Coming full circle: Exploring story circles, dialogue, and story in a graduate level digital storytelling curriculum*, provides insight into the development of higher consciousness as achieved through discourse. Not only did study participants attain a higher level of consciousness through feedback and story sharing, but coming full circle, she through her own reflections of the study developed a greater understanding of digital stories (Rudnicki, 2009). This dissertation exemplifies the magnitude of learning that comes from sharing and reflecting upon one's personal experience and the experiences of another through the sharing of stories and development of digital stories.

### **Digital Stories as a Pedagogical Tool Toward Reflective Learning**

Reflection is an important element in discourse (Mezirow, 2003) and a cognitive process unique to the individual (Walters, Green, Wang & Walters, 2011). When a person reflects on a situation, he or she takes the experience, brings it into the mind, ponders it, makes connections to

other experiences, and lastly, filters it through personal biases (Walters et al., 2011). This process can develop into learning (Walters et al., 2011) that in-turn becomes the guide for future behavior (Daudeline, 1996). “This reflective process provides opportunities to facilitate and stimulate self-discovery for students in their practice as educators, as leaders, and as self-actualized people” (Guajardo, Oliver, Rodriguez, Valadez, Cantu, and Guarjardo, 2011, p. 155).

Li (2007) conducted a study evaluating digital storytelling as a pedagogical tool to help pre- and in-service teachers integrate traditional teaching within a digital learning environment. Study participants were undergraduate students (pre-service) (N=20) and graduate students (in-service) (N=20) enrolled in a teacher preparation program from a mid-western American university. As part of the course, participants were asked to take part in online discussions, reading assignments, and to individually create a digital storytelling project. Participants were given questions that addressed professional issues, understandings, and beliefs as current and future teachers. They were encouraged to use digital stories as a means to record their thoughts on the process of learning and teaching (Li, 2007). A pre- and post-course 5-point Likert style scale was used to collect data. Data collected included participant’s general knowledge of digital stories as a technology, as technological integration in the classroom, and for their use of multimedia and instrument tools (Li, 2007). Results from the study suggested strong gains in critical reflection and use of technology among in-service teachers; however, pre-service teachers reported less growth in knowledge and use of technology in the classroom. The researcher suggested this difference may have occurred secondary to generational differences between the two groups. When participants were asked how they viewed digital stories as a teaching and learning tool, both groups reported digital storytelling as an effective approach to bridging traditional and digital learning (Li, 2007). This study actually consisted of four research



questions; however, only participant perspectives on use of multimedia and Internet tools were explored fully. Those research questions not addressed in this study or followed-up in subsequent studies revolved around the participant's use of technology in the real world of teaching. The findings from this study support the use of digital stories to improve reflective practice (Li, 2007). This study also exhibits an all too frequently occurring gap in digital storytelling—research evaluating the use and significance of digital stories in a course other than one focused on making digital stories.

Garrety (2008) conducted both an ethnographic and narrative study evaluating how digital storytelling can be used as a tool for reflective practice in teacher education. Three volunteers were recruited from pre-service teachers enrolled in a K-3 literacy method course. Two themes, 1) use of digital stories as a tool for organizing thoughts and reflections, and 2) variance in levels of reflection, emerged from the collection of field notes, journals, interviews, and relevant sources (Garrety, 2008). Study suggest that digital stories, as a pedagogical tool, improve student abilities to reflect, integrate story with academic content, and learn (Yuksel et al., 2011).

Sandars and Murray (2009) conducted a qualitative study that evaluated whether digital stories effectively engaged medical students in reflection. A convenience sample of 12 medical students volunteered for the reflective learning exercise (Sandars & Murray, 2009). All volunteer students participated in a focus group interview with one of the researchers. The interview session was audio-taped and transcriptions were independently analyzed by both researchers. A constant comparative method was used by both researchers where emerging codes were compared to transcripts. Three main themes were identified and included, engagement in the process, facilitation of reflection by the creation of digital stories, and facilitation of reflection by

the presentation of the digital story (Sandars & Murray, 2009). This study supports the use of digital stories as a method to stimulate critical thinking (Hunter, 2008; Yuksel et al., 2011), provide reflection on practice (Christiansen, 2011; Yuksel et al., 2011), and improve social, artistic, and language skills (Yuksel et al., 2011) in students.

Christiansen (2011) identified that little is known about how and what students learn through the engagement of digital stories. Her phenomenographic study explored student experience of patient digital stories in nursing education. Twenty third-year nursing students were recruited from adult, child, mental health, and learning disability courses within an undergraduate nursing program in the United Kingdom. All students completed a 40-60 minute interview that was digitally recorded and transcribed for review by the researcher. Four categories of description were noted: digital stories as a learning resource, emotional experience, reflective experience, and as a transformative experience (Christiansen, 2011). Results of the study were consistent with other studies supporting the notion that students are capable of taking in different approaches to learning that significantly enhance student comprehension of the subject material (Christiansen 2011; Clarke & Adam, 2012). This study supports the pedagogical use of digital stories to bring the student into the world of another, and provide reflection of practice (Fenton, 2014; Garrety, 2008; Stacey & Hardy, 2011).

### **Digital Stories as a Pedagogical Tool Toward Creative Teaching and Learning**

Digital stories as a pedagogical tool are just one facet of technology being implemented in the classroom to facilitate teaching and learning (Rossiter & Garcia, 2010; Thibodeaux, 2012). Leadership programs, educators, and organizations are beginning to investigate the use of digital media as a method of learning through personal introspection and discussion as brought about from intense digital reflection (Guajardo et al., 2011). Where and how digital stories can

thoughtfully and reflectively support student learning and development (Clarke & Adam, 2012) will be explored further in this section.

Gazarian (2010) conducted a program evaluation where narrative pedagogy was used as a guiding framework for the development of a digital storytelling assignment for senior-level nursing synthesis and clinical decision making course at Simmons College in Boston, Massachusetts. Initially, the author created a digital story of her own to be shared with students as a means of promoting a trusting environment and discussion of the digital story (Gazarian, 2010). The course was set up with students being placed in various clinical preceptorships. Because students did not rotate sites, they were required to create a digital story of their own to share with classmates. Students were instructed to synthesize concepts and ideas from previous coursework and share experiences from their clinical site. For the assignment, 42 students used Voice Threads, 2 students used iMovie, and 1 student used PowerPoint with audio and text. None of the students requested to complete the assignment without the use of technology. The instructor kept notes on the digital stories and their applicability to upcoming classroom topics. If a digital story was seen as applicable to classroom content, the student was queried to acquire permission to show their digital story in class. While most students were honored and proud to share their digital stories, there were a few uncomfortable with sharing and requested that they not be in the room for the viewing. Selected digital stories and digital stories from students who volunteered their digital stories were shown after two in-class examinations. The author noted and provided examples of student digital stories that exemplified critical, reflective, and interpretive thinking. Reportedly, all students were facile with the use of technology. The evaluation of this digital storytelling assignment suggests digital stories enhance student critical,

reflective, and interpretive thinking skills, when implemented from the narrative pedagogical perspective (Gazarian, 2010).

Leng (2010) evaluated the use of digital stories at the University of Surry in Australia. The author, a nursing instructor at the nursing school, invited a group of third-year nursing students to individually create a digital story about significant experiences they encountered during their professional development. Leng (2010) stated, “. . . students were instantly captured by the assignment. . .” (p. 61). Those digital stories created were then shared with fellow classmates, practitioners, and university teachers. Leng (2010) noted those who viewed the stories “. . . were positive about the powerful impact of these accounts, citing the work as ‘inspiring’ or expressing their surprise at how much meaning can be conveyed in short clips” (p. 61). Feedback from those students who participated in the creation of a digital story showed, “. . . they engaged with the storytelling process and enjoyed focusing on what mattered to them” (Leng, 2010, p. 61). The process also prompted them to reflect on what had occurred. Furthermore, they enjoyed the collaboration involved in making a digital story and the act of sharing their creation. In review, Leng (2010) adds, “Digital storytelling will not work for everyone nor will it always give a full student assessment. But there is no doubt that the technique is useful in learning and teaching strategies” (p. 61). This creative teaching and learning strategy supports digital stories capture student attention, engage, inspire, and convey a message in one short clip (Leng, 2010). This program evaluation supports study findings that learning is achieved through the process of both creating and sharing digital stories where collaboration and reflection of practice used (Rudnicki, 2009).

Stacey and Hardy (2011) implemented an educational program in the United Kingdom that attempted to address issues of reality shock that newly qualified nurses were experiencing.

The aim of their paper was to report on an educational program implemented to challenge the negative experiences and outcomes of newly qualified nurses (Stacey & Hardy, 2011). The first stage of the educational program invited eight newly qualified nurses to reflect on a recent experience through the development of their own digital story during a three-day workshop facilitated by Pilgrim Projects' Patient Voices Program. The newly qualified nurses consented to participation using a two-stage consent and release process that ensured storytellers, the newly qualified nurses, were informed at every stage of the process and to reinforce a sense of safety that allows storytellers to share and tell their personal stories. The stories that emerged described distressing incidents where they reflected on negative situations and how these situations affected them. Storytellers were then invited to take part in a focus group discussion to consider their experience of the digital storytelling process. Written permission was obtained by the authors for them to share participant excerpts in subsequent publications. The group of storytellers spoke about their motivation to create a digital story; which was driven by their desire to reflect on their experiences. Additionally, storytellers were motivated by the opportunity to create a teaching resource that would communicate an important message. Storytellers identified digital stories as a medium for expressing their experiences in a way that would command the attention of educators, service managers, and policy makers. In spite of motivating factors, storytellers found the process challenging. For example, some felt conflict in sharing their personal experiences with the public. Storytellers thought this placed them in a vulnerable position where others might judge them, their feelings, and their practice. Additionally, storytellers were surprised by the emotional consequences of the process. Storytellers were reminded by group facilitators of how difficult their experiences had been;

thus, storytellers realized they had already become detached from certain emotional elements through the process of exposure and self-protection (Stacey & Hardy, 2011).

The second phase of Stacey and Hardy's (2011) educational program was the development of the learning environment. Five educators with expertise in educational technology, safe learning environments for personal development, and skills for reflective practice were invited to attend a focus group discussion (Stacey & Hardy, 2011). Additionally, a member of the University counseling service was invited to provide advice on approaches to developing self efficacy and as a way to connect with counselors from the workshop. Focus group members noted the power of the digital story to communicate a significant message in a short amount of time. There was a consensus that stories should be used in a sensitive and safe environment secondary to the emotional impact that they may have on students. Despite the emotional content of the digital stories, focus group members felt the educational experience resulting from showing the digital story was extremely valuable. Following the discussion, focus group members developed a workshop format to take place over one day with one facilitator for each group of 15 students. Preparation sessions for workshop facilitators were planned that would enable skill development and discussion on how student's vulnerabilities could be safely explored in the classroom environment (Stacey & Hardy, 2011).

The third phase of Stacey and Hardy's (2011) educational program involved the implementation and evaluation of the educational program with 58 students in the final module of the University of Nottingham's pre-registration nursing program. All 58 students who took part in the workshop completed a questionnaire (Stacey & Hardy, 2011). Student comments suggested viewing newly qualified nurses digital stories enabled them to relate to the storyteller, raised issues that were of concern to them as students, and provided them with reassurance as

they shared their concerns through group discussion. The authors noted the authenticity of the digital stories paired with reflective discussion appeared to assist students in seeing themselves in the position of the newly qualified nurse. This approach provided students with the opportunity to reflect on how they might respond to the same challenges the storytellers faced. Students were also asked to compare this experience with other teaching approaches that encouraged reflective learning. Student feedback suggested the open structure of the workshop provided them space to reflect; whereas, other approaches focused more on the teaching of reflective models (Stacey & Hardy, 2011). Stacey and Hardy's (2011) program evaluation provided knowledge on how digital stories can be incorporated in the classroom and insight into the effectiveness of digital stories. Focus group members provided feedback that digital stories can convey important messages in a short amount of time that is consistent with Leng's (2010) program evaluation. The authors were conscientious to include feedback from storytellers, educators, and students; which is invaluable as nurse educators develop future studies on the incorporation and effectiveness of digital stories in nursing.

Schwartz (2012) implemented the use of digital stories, as a pedagogical tool, to achieve higher-level learning using Bloom's Taxonomy as a framework for student learning in nursing education at East Carolina University in Greenville, North Carolina. The idea came from a video project that was used by the author and her colleagues in a second-semester family-centered nursing course. Students in that course created 3-5 minute educational videos in groups of three to four students (Schwartz, 2012). The student created video project covered any one of the topics covered during the course. Having this experience, the author piloted a new extra-credit option in a first-semester health assessment course. The purpose was to introduce digital stories as a pedagogical tool to assist students toward achieving higher-level learning using Bloom's

Taxonomy. The author, the instructor of this course, developed an online course folder for students that included a sample digital story that she had used in the family-centered nursing course, information on digital stories, equipment and software needed to create the digital story, and an example of role distribution. The author did not state how many students participated in the extra-credit assignment or the number of students who created a digital story. She commented that students were initially allowed to add music of their choice to complement their digital stories; however, several students made their digital stories available on the World Wide Web and this practice was discouraged after review of copyright laws. Students were then encouraged to use copyright free music, create their own music, or use no music at all. While technological support was offered, no one over the course of two semesters asked for assistance other than topic ideas. Student digital stories were to focus on either basic facts associated with a particular health problem, ethical issues, or cultural concerns associated with a client or family member as they cope with a health problem. Consent was obtained from individuals outside the college of nursing participating in the digital story; however, student consent was not obtained. The author recommends students also consent to the use of their work for future classes. Full credit was given to all students who participated in the extra-credit assignment. Digital stories were due one week prior to the scheduled presentation date so the instructor had time to review digital stories to assess whether they could be used to transfer knowledge or prompt classroom discussion. Bloom's Taxonomy was used as a framework to develop test questions, questions posed to the class, and as a method to assess student learning. The author provided examples on how her own digital story, used in a previous course, aligned with the cognitive, affective, and psychomotor domain of Bloom's Taxonomy. This program evaluation is consistent with



Gazarian's (2010) findings that nurse educators can promote student learning when an educational framework is used for the creation and use of digital stories in the classroom.

Fenton (2014) conducted a program evaluation where a digital learning object (DLO), a digital story, based upon a young person's experience of cancer, was incorporated into a teaching module for undergraduate nursing students. This project evaluation occurred in the North West of England in a school of nursing with 100 undergraduate nursing students. The aim of the project was to develop and embed a DLO into a learning module as a method to expose students to the lived experience of a patient living with cancer and to evaluate students' perception of the DLO as a teaching and learning tool. The questionnaire had eight statements related to student perceptions of the DLO. The questionnaire had three possible responses: agree, disagree, or neutral. An open-ended questionnaire was included inviting students to comment about the DLO. Forty students completed the questionnaire. Findings from the DLO questionnaire showed, 80% felt the content was clear with appropriate level of detail, 82.5% of students found the resource interesting and motivated them to explore its content, 77.5% felt the DLO was clearly presented, interesting to look at, listen to and work with, 82.5% reported they were able to navigate easily through the resource, 90% thought it was useful to have audio, text, and visual access to the resource, 87.5% felt it was useful to have the resource available on Blackboard to access for future learning, 87.5% agreed the DLO enabled them to gain insight into a young person's perspective of being a patient, and 82.5% reported the resource helped them understand the patient's experience of healthcare. Student's written comments were organized into three themes: 1) Valuing patients' perspectives, 2) Nurse skills, and 3) DLO resource (Fenton, 2014). Under valuing patient perspectives, students reported the DLO was a good resource to gain patient perspective that provided a clear explanation of the patient's journey, personal views, and

treatment regime. Furthermore, the DLO provided insight as to why a young person would choose to stay in an adult hospital. Under nurse skills, students reported the DLO was valuable for hearing the patient describe the inexperience of some nurses and the identification of poor communication skills. Under DLO as a resource, students reported the DLO was a good resource option, an interesting educational tool that offered more than simply reading about a condition, and easy to follow. Additionally, students added they would like to have more DLOs and liked the links to further educational resources. Only one student stated they would have preferred continuous text rather than sections (Fenton, 2014). The evaluation of this program supports study findings that digital stories, as digital learning objects, can be a valuable alternative pedagogical tool to promote knowledge and increase student understanding from the viewpoint of the patient (Fenton, 2014; Gazarian, 2010).

Recognizing the increasing popularity of digital stories as a pedagogical tool in North America, Clarke and Adam (2012), wanted to know more about the use of digital stories by academicians in Australia. This descriptive exploratory study included two case studies and six interviews from Australian professors who demonstrated use of or interest in using digital stories for teaching. Initially participants included professors who had presented papers at international conferences and from them; a snowball sample of participants was gathered. The two case studies were of faculty members using digital stories as a media tool for courses in communication and creative writing. Research questions were reflective in nature and explored participant's experiences with digital storytelling, such as their motivation for use, perceived strengths and weaknesses in the implementation process, and recommendations for use in the classroom. The two case studies were intended to showcase how digital stories could be used in higher education. The guiding principal that emerged was the need for constructive alignment

where digital stories are consistent with learning outcomes, availability of necessary resources to produce digital stories, and planning necessary to implement this non-traditional form of teaching. Three problems identified by the researchers were 1) lack of consistency in digital storytelling use, 2) too few academicians using digital stories, and 3) their accessibility to interviewing faculty (Clarke & Adam, 2012). Research findings from this study support the need for further research on how educators in higher education are incorporating and using digital stories in the classroom. Findings were consistent with program evaluations in nursing where Bloom's Taxonomy (Schwartz, 2012) and narrative pedagogy (Gazarian, 2010) were used as guides to ensure digital story development and application were consistent with learning outcomes (Clarke & Adam, 2012).

Yuksel, Robin, and McNeil (2011) conducted a study to determine how educators, students, and others from around the world use digital stories in education. The problem identified was limited information about the educational uses of digital stories. The purpose of this study was to determine how people (teachers, professors, students, researchers, and digital storytelling website visitors) are using digital stories to support the educational process. Of the 174 participants, 154 completed the online survey. Data collected showed 85.7% (n = 132) used digital storytelling in the classroom. Among teachers 34.0% used digital stories to support their teaching and 70.0% used digital stories to support student learning. Total participant results showed that 56.0% created their own digital stories, 46.0% used digital stories created by others, and 73.0% allowed students to create their own digital stories. When asked what was needed to implement digital storytelling in their classroom only 16 participants responded. Of the 16 participants, seven respondents cited the need for more training, technical hardware, and software to produce digital stories. Twenty six countries were represented in this study and

nearly 78.0% acknowledge knowing educators and students interested and willing to use digital stories as an educational tool. This study was consistent with Clarke and Adam's (2012) study, which identified the increasing popularity of digital stories, the inconsistency in how digital stories are being used, and the accessibility of academicians using digital stories. Findings of this study support the need for further research on how educators are using and incorporating digital stories in higher education.

### **Summary**

The literature review supports the need for further research in the area of digital stories to support its application to classroom instruction (Gazarian, 2010). After reviewing the literature, additional qualitative studies are needed to address ways that digital stories foster communication, promote ideas, evoke emotion, and promote critical thinking (Gabriel & Connell, 2010). Quantitative studies in digital storytelling are needed to assess knowledge acquisition and knowledge retention in comparison to a variety of teaching methods, and as a teaching-learning tool (Corbett, Schwartz, Green, Sessoms & Swanson, 2013; Gabriel & Connell, 2010). Qualitative and quantitative studies are needed to assess implementation practices so that obstacles like time and issues of technology are lessened; thus, leading educators toward best practices for use of digital stories in nursing education.

Nurse educators, like educators throughout the university system, who acknowledge environmental and generational changes need new pedagogies and pedagogical tools to achieve higher level learning. A review of the literature suggests digital storytelling can be an effective pedagogical tool promoting discourse and reflection in the classroom; however, little research has been conducted on how to implement digital stories in nursing education. This study explored how and why nurse educators are incorporating digital stories in the classroom and

what benefits and/or problems have been identified in using digital stories in nursing education.

The information gathered from this study will narrow an important gap that exists in using digital stories as a pedagogical tool in nursing education as well as higher education.

## CHAPTER 3: METHODOLOGY

Digital stories in nursing education show tremendous potential, but continued research is required to support its use in higher education. This chapter will provide the research design. The research design is comprised of the participant sample, data collection procedures, data validity and trustworthiness, and how participant confidentiality were maintained.

### **Research Design**

“The philosophical assumptions that drive the design of a study are rooted in the paradigms of those who are doing the studying” (Houser, 2012, p. 35). Paradigms are sets of beliefs and practices collectively shared among researchers that regulate inquiry within the discipline (Weaver & Olson, 2006). Disciplined inquiry in the field of nursing research should originate from a specified paradigm as this provides the foundation and frame for conducting research, resolving problems, and deriving theory and laws (Monti & Tingen, 1999; Polit & Beck, 2008). This study uses a qualitative approach, frequently used to evaluate digital stories, and well-suited to the constructivist theoretical framework of the study (Polit & Beck, 2008). Qualitative research holds the view that meaning and knowledge are human constructions (Byron, 2011).

Qualitative descriptive research design was chosen to explore nurse educators’ use of digital stories as a pedagogical tool in the classroom. Two main issues were explored using the personal accounts of nurse educators: 1) How and for what purpose are nurse educators incorporating digital stories in the classroom? and 2) What benefits and/or problems have been identified in the use of digital stories in nursing education?

## **Participant Sample**

This study included an intentional sample of twelve nurse educators. Initially a purposive sample of four nurse educators, all of which had published and demonstrated the use of digital stories in the classroom, were recruited through e-mail. Purposive sampling enabled the researcher to choose participants who could provide a wealth of information on the issue of importance, thus, providing an understanding about the issue directly pertaining to the purpose of the study (Patton, 2002). At the end of the interview and after termination of recording, participants were asked to identify other nurse educators who fit the selection criteria of the study. Chain sampling or snowball sampling is often used when the population of eligible individuals might be difficult to identify (Patton, 2002). From the purposive sample a snowball sample of eight additional nurse educators emerged. The inclusion criteria for study participants included: 1) Nurse educators in Bachelor of Science in Nursing (BSN) programs, 2) Nurse educators who use or have used digital stories in the classroom, and 3) English speaking. The study was voluntary and participants had the right to withdraw and withhold information at any time. Approval for this study was obtained from the University Institutional Review Board.

## **Data Collection Procedures**

Participants were invited to participate in the study by e-mail. Interested persons agreed to take part in the study by clicking on a link provided within the query that was developed using Qualtrics<sup>®</sup>, a secure Web-based survey system. Participants were then contacted by e-mail or phone once the demographics questionnaire was completed to schedule a mutually agreed upon date and time for the interview. A reminder e-mail was sent to confirm the date and time of the interview along with the following probing questions for the participants to consider prior to the interview:

- Please tell me the most compelling reasons for your use of digital stories in the classroom.
- How do you go about incorporating digital stories into your teaching practice?
- How do your students react to the use of digital stories in the classroom?
- Describe the top 3-5 challenges related to digital stories in the classroom.
- Describe the top 3-5 benefits of digital stories in the classroom.
- Would you like to say anything else about digital stories in the classroom to me?

Additional probing questions were used as needed to gain clarity and details of participant responses during the course of the telephone interviews. Examples of questions can be found in Appendix E. Interviews were conducted by the principal investigator and lasted between 30 and 70 minutes. All interviews were digitally recorded.

Interviews were transcribed verbatim by the principal investigator. All names and other identifying information contained within the interview text were replaced by pseudonyms. A reference list was retained by the principal investigator outlining which pseudonym goes with each participant should follow-up questions be needed. Following the investigator's verification of the accuracy of the transcriptions, the original recording was erased. The transcribed interview texts comprised the data for this study.

**Data Management.** Lifescribe™, a smartpen, allowed the principal investigator to record the audio from the interview session while simultaneously taking written notes; the notes were stored digitally in the pen and were uploaded to a private, secure data base, and password protected computer for playback, transcription, and storage (LifeScribe, 2012). A secondary digital recorder was used should technical difficulties arise with the smartpen.



At the conclusion of each participant interview, recordings were transcribed by the principal investigator. Immediately following transcription of interviews, data were reviewed and categorized using probe questions that were provided to the participants. The transcript and initial coding of participant responses were then e-mailed to the participants for feedback. Four out of the twelve participants provided notes of clarity through track changes to their transcript. Participant notes, transcripts, and data from the Lifescribe™ smartpen were then exported into a PDF file and managed using Nvivo10™, qualitative data analysis software. Nvivo10™, allowed the principal investigator the opportunity to import and code textual data for thematic analysis (Nvivo10, 2012).

**Data analysis technique.** Nvivo10™, provided a secondary method of analysis where participant responses were categorized using interview questions. Responses were validated using the word frequency feature of Nvivo 10™. The tally of similar answers in response to each categorical question evidenced patterns and regularity in participant responses (Sandelowski, 2000). Comparable responses to research questions were then sorted by the reasons these nurse educators used digital stories, the methods they used to incorporate digital stories, and the thematic organization of content related to their experience using digital stories.

Straight, eclectic, and unadorned answers to research questions are the analysis strategy of choice for qualitative descriptive studies (Sandelowski, 2000). Sandelowski (2000) adds, “. . . there is no mandate to re-present the data in any other terms but their own” (p. 338). Consistent with descriptive qualitative research, the direct summary of data assisted the researcher toward answering the two research questions: 1) How and for what purpose are nurse educators incorporating digital stories in the classroom? And 2) What benefits and/or problems have been identified in the use of digital stories in nursing education?

## **Data Validity and Trustworthiness**

The main function of trustworthiness is to validate findings and ensure they accurately reflect the viewpoints and experiences of the research collaborators, rather than the researcher (Polit & Beck, 2008). To ensure trustworthiness of this study, member checking for credibility, peer debriefing, and an audit trail was initiated to ensure the data was respected and represented in a manner faithful to the intent of participants (Sochacki, 2010).

**Member checking.** The first method implemented to ensure trustworthiness was member checking. In a member check, the researcher provides information to participants about emerging interpretations as a way to obtain his/her reactions to the accuracy of the content (Polit & Beck, 2008). The first member check occurred during the interview process as the researcher used repeated verbal checks to ensure clarity and integrity of content meaning (Sochacki, 2010). Another form of member checking that occurred during data collection involved going back to participants and sharing preliminary interpretations, as described previously, with them so that they could evaluate whether the researcher's thematic analysis was consistent with his/her experiences (Polit & Beck, 2008). For this study, all subject matter generated was presented to the participants through a word document sent via e-mail to verify that what was textually interpreted captured their firsthand experience. During this time, the participants had the opportunity to provide constructive narrative and insert track changes to their transcripts as part of the data analysis process. Through the process of member checking, dependability in the data was maximized to ensure stability of the information over the course of the study (Houser, 2012). Credibility was also garnered as participants reviewed the researchers notes and initial analysis to guarantee the findings accurately represented the underlying meaning of data (Houser, 2012).

**Peer debriefing.** The second method used in this study to ensure trustworthiness was peer debriefing. Peer debriefing involves sharing data and memos with peer educators (Sochacki, 2010). A peer educator with expertise in descriptive qualitative studies, agreed to review full transcripts, memos, participant feedback, and study findings. Transcribed interviews were analyzed individually and with the peer educator. This process provided further examination of the data and credibility of the study (Sochacki, 2010).

**Audit trail.** Lastly, an audit trail was implemented to secure trustworthiness of the study. Documentation in qualitative research includes memos, interpretations, thorough descriptions, and reports of feedback (Houser, 2012). The audit trail was used to increase dependability of the study (Houser, 2012) as all material and documentation was systematically organized. Audit trails are beneficial for independent auditors as their review of data should yield the same conclusions as the researcher (Polit & Beck, 2008). The audit trail for this study included the participant's e-mail query, demographic questionnaire, interview confirmation e-mail, probing question tree and memos used during the interview, interview transcripts, and coded interviewee responses.

### **Participant Confidentiality**

All names and other identifying information contained within the interview text were replaced with pseudonyms by the investigator. Pseudonyms that were used were Participant #001 (P1), Participant #002 (P2), Participant #003 (P3), Participant #004 (P4), Participant #005 (P5), Participant #006 (P6), Participant #007 (P7), Participant #008 (P8), Participant #009 (P9), Participant #010 (P10), Participant #011 (P11), Participant #012 (P12).

All memos and artifacts from the study are kept in a private, secure data base, password-protected computer, or locked in the file cabinet in the office of the researcher at East Carolina

University, and will be retained for a minimum of three years. After this time period, all data and transcripts will be shredded or deleted.

### **Summary**

Academicians recognize that change in education is necessary as 20th century pedagogies and pedagogical tools may no longer meet the needs of the contemporary student (Clarke & Adam, 2012; NLN, 2003). Addressing the call for change, this descriptive qualitative study explored the incorporation of digital stories in nursing education. This study explored how and why nurse educators are incorporating digital stories in the classroom and what benefits and/or problems have been identified in using digital stories in nursing education.

## CHAPTER 4: STUDY FINDINGS

The purpose of this descriptive qualitative study was to explore how nurse educators use digital stories in the classroom. Two research questions were explored. This chapter will provide an overview of participant demographics and study findings. The findings are presented in two sections and organized by research question. Research question one: How and for what purpose are you incorporating digital stories in the classroom? This section will present participant responses to the following questions: 1) The most compelling reasons for your use of digital stories in the classroom, and 2) How do you go about incorporating digital stories into your teaching practice? Section two: What benefits and/or problems have you identified in the use of digital stories in the classroom? This section will present participant responses to the following questions: 1) How do your students react to the use of digital stories in the classroom? 2) Describe the top 3-5 challenges related to digital stories in the classroom, and 3) Describe the top 3-5 benefits of digital stories in the classroom.

### **Participant Demographics**

The 12 participants of this study were nurse educators from five universities, two from the United States, one from Europe, and two from the United Kingdom. Each of the participants has experience using digital stories in undergraduate nursing programs. The participant sample consisted of nine females and three males. Of the 12 participants, nine have been nurses for over 20 years, nine had Master's degrees, three had a Doctorate in Philosophy, and six have been teaching between 11 and 20 years. A detailed description of demographic findings can be found in Table 1.

Table 1

*Participant Demographic Information*

Variable	(n =12)
Highest education	
MSN	9
PhD	3
Years as a nurse	
6-10 years	1
11-20 years	2
> 20 years	9
Years teaching	
< 5 years	1
6-10 years	4
11-20 years	6
Over 20 years	1
Gender	
Male	3
Female	9
Where they live	
Europe	1
United Kingdom	3
Massachusetts	2
North Carolina	6
Describe their school setting	
Public	5
Private	2
No response to Public or Private	5
Open enrollment	1
Competitive enrollment	6
No response to Open or Competitive	5
Provide BSN* program	12
Provide MSN program	7
Provide PhD program	3

\* Note in the United Kingdom, students qualify with a Bachelor of Science, which is abbreviated to BSc. One participant living in Europe stated, “Our nurses graduate as Bachelor of Health Care and their specialization is Nursing so we see them as BSN, and we also use the abbreviation in daily talk” (P8).

## **Research Question One: How And For What Purpose Are You Incorporating Digital Stories In The Classroom?**

### **Compelling Reasons**

When asked the question, “Please tell me the most compelling reasons for your use of digital stories in the classroom.” There were five reasons that emerged 1) Capturing attention through media, 2) Change things up a bit, 3) A sharing experience, 4) Seeing, hearing, and feeling, and 5) Feel, intuit, think (FIT).

**Compelling reason one: Capturing attention through media.** Five participants cited media as a means to capture the attention of their students (P1; P4; P9; P10; P11). P10 believes digital stories to be attention getting because, “. . . sometimes people just come to class . . . they’re expecting the same old thing.” So a digital story, “. . . immediately catches their attention and they are going to watch it right off the bat.” P11 states, “The media itself, I think, is probably what captures them . . .” In fact, P1 calls this “The most compelling reason” adding, “. . . movies or pictures with story combined are just more interesting to watch than pure text.” P9 uses it to not only capture the attention of the student, but to “. . . develop interest in a topic” and “. . . so that they’re interested in learning more.” And when you have students in class for a two hour period, P4 states, “. . . you really get their attention” with visual media. P1 summarizes that “Over the years, we’ve tried to use different media in our classroom . . . to see what will work with our students . . . the simple fact is . . . movie type media is the best. It really gets their attention.”

Three study participants linked capturing student attention through visual media largely due to the students’ use of digital technology (P1; P2; P4). P4 acknowledges the technology generation is amongst us and “I noticed they watch TV, they have their phone, they are texting,

and they are studying, and they're reading all at the same time." With regards to technology, P1 notes, "It is intuitive for modern students. They do digital stories all the time anyway."

P2 used to have students write narratives, but they would

. . . look at their paper and read and it was just not very compelling or interesting to listen to. So . . . I thought, with these students being so used to video and multimedia messaging that to be able to tell stories in a multimedia fashion would be much more . . . interesting. And I was right.

P1 concurs, ". . . we have to build a medium to meet students at least part way." When you teach in a way the students are comfortable, P1 thinks ". . . we're probably several steps ahead."

Quotes illustrating *Compelling reason one: Capturing attention through media* can be found in Table F1 (see Appendix F).

**Compelling reason two: Change things up a bit.** Three participants identified the need to try something different as a compelling reason for incorporating digital stories in the classroom (P2; P6; P10). P6 captured the need to try something different explaining the need to "Change things up a bit." P10 thinks of digital stories as a compliment to lecture, which ". . . breaks things up. It sets a different tone in the class than you would get if you were just going to lecture." P2 hopes the incorporation of digital stories as a project provides students ". . . joy and excitement." Because ". . . they don't get much opportunity to express themselves in a very creative way . . . So, I think, it's just kind of refreshing and it's different from anything they've had to do before." Quotes illustrating *Compelling reason two: Change things up a bit* can be found in Table F2 (see Appendix F).

**Compelling reason three: A sharing experience.** Four participants highlight digital stories as a sharing experience (P1; P2; P9; P12). For example, P9 has students create digital stories because it was a way ". . . to get the students to share their experiences with other



students.” P2 notes, “. . . nobody is forced to share them in public unless they want to.” P1 adds digital stories as a project, “. . . they had the most fun with. They had the most fun sharing and other people enjoyed watching them.” P12 invited students along with their parents, siblings, and partners to take “. . . photographs holding up signs of what death and dying meant to them . . .” P12 described the project as a “shared endeavor” to “raise awareness” adding, “I wanted to send the message beyond the classroom . . .” Participants displayed the versatility of digital stories as they can be shared in class (P1; P9), through e-mail (P12), posted in virtual learning websites (P1; P9), or uploaded to YouTube (P1; P12). Quotes illustrating *Compelling reason three: A sharing experience* can be found in Table F3 (see Appendix F).

**Compelling reason four: Seeing, hearing, and feeling.** Nine participants identified seeing and hearing as a compelling reason for incorporating digital stories into their teaching practice (P3; P4; P5; P6; P7; P8; P9; P11; P12). P3 notes that with seeing and hearing, “They [students] actually see and hear the emotion. You can’t really tell that when you’re lecturing about it . . . . The most appealing thing, you can hear it right from the patient, the nurse . . .” P12 expands,

I think it’s the digital story that highlights how people experience that and how people empathize. We have all lost things or people. How can we relate? I think we need to see that, hear that, rather than be told the cold facts about it.

Of the nine participants, four participants added the element of feeling to seeing and hearing (P3; P4; P11; P12). Exemplifying the sensation of feeling that a digital story elicits, P3 likes to incorporate digital stories so “. . . students can hear and then you know feel that person speaking . . .” P12 expands to add, “I think moving images with expressions of feeling emotion really taps into our students feelings.” P12 also thinks that things that are hard to quantify

. . . really need to be felt rather than understood. Things like spirituality. Things like grief and loss. I think it’s quite hard for us to teach from a technical perspective, from the

cognitive, from the fact and figures type approach. I think really we need to look at what is the group's responses and how does it make people feel.

Two dimensions evolved from compelling reason four: Touches the affective domain and gains patient perspective.

***Touches the affective domain.*** Four participants connected the phenomenon of seeing, hearing, or feeling to affective emotional teaching (P8), or more specifically the affective domain of learning (P2; P3; P12). P3 likes using “. . . digital stories because it gets to that affective domain, that students can really hear and see what's going on, an actual demonstration of the story . . .” In fact, for P3, it is, “. . . the most compelling reason I use digital stories . . .” From experience, P12 adds,

I've actually found that a very pragmatic, didactic teaching style of just working in the cognitive domain didn't really seem to engage them, didn't really seem to gather, or make them feel, or think . . . by using digital stories, using video, audio, linking those together . . . really kind of brought home the emotional side of practice as well as kind of the technical . . . more cognitive . . . rational kind of elements.

***Gains patient perspective.*** Four participants linked seeing, hearing, and/or feeling the storyteller as providing students with a way to gain patient perspective (P4; P7; P11; P12). P4 notes, “I think in nursing school they learned about so many different disease processes that they memorize the cold facts and they don't really see how it affects the patient themselves and the people that love them.” P7 thinks, “. . . it really helps students to see that these are people's real lives, these are what people are dealing with day in and day out . . . these are not just stories, they are real people, they're real stories, and I think that, that really helps.” Quotes illustrating *Compelling reason four: Seeing, hearing, and feeling* can be found in Table F4 (see Appendix F).

**Compelling reason five: Feel, intuit, think (FIT).** Four participants noted going by what they feel works in their classroom (P4; P5; P8; P9). Two participants shared being led by

intuition as they teach (P2; P8). Five participants noted what they think works in the classroom (P2; P4; P5; P7; P12). What these seven nurse educators perceived and experienced was captured in these three words: Feel, intuit, and think (FIT). Exemplifying what it means to *feel*, P8 states, “. . . I’m doing this very much based on what I feel will work.” P2 provides an example of *intuit* stating, “. . . my intuition was that they want to do things a little bit differently.” P4 illustrates the word *think* with regards to a need for change in practice stating, “. . . I think in nursing school they [learn] about so many different disease processes that they memorize the cold facts and they don’t really see how it affects the patient themselves and the people that love them.” Quotes illustrating *Compelling reason five: Feel, intuit, think (FIT)* can be found in Table F5 (see Appendix F).

### **Incorporating Digital Stories into Teaching Practice**

Having a better understanding of what compelled these nurse educators to use digital stories in the classroom; study participants were then asked, “How do you go about incorporating digital stories into your teaching practice?” Five methods evolved 1) Digital stories embedded in PowerPoint, 2) Digital stories embedded in the virtual learning environment, 3) Digital stories to prompt discussion, 4) Digital stories to assess the storyteller’s healthcare needs, and 5) Digital stories created as a project to share.

#### **Incorporating digital stories method one: Digital stories embedded in PowerPoint.**

Five of the 12 participant’s noted embedding their digital stories directly into a PowerPoint presentation to be used for lecture (P3; P4; P5; P10; P11). P4 captured the overall reason to embed stating,

I like to embed them because that way it doesn’t really delay it from going out to YouTube, and bringing it in, and you know to me when you have to minimize one screen and bring up another it kind of breaks . . . the momentum that you’ve got going on . . .

Five participants expanded on where they embed the digital story (P3; P4; P6; P8; P10).

P10 explains in detail,

I put it right at the beginning or sometimes in the middle. If I'm using it to arouse emotion or to get attention, I try to put it at the beginning . . . if it goes with a specific topic that really is not sort of an introduction then I just embed it where ever it fits . . .

Three participants noted discussing the content first, then showing the digital story (P4; P6; P8). Different from the other three participants, P3 has actually stopped the digital story before it ends to, “. . . talk about it . . . . Then after we've discussed it, I show them what happened.” Quotes illustrating *Incorporating digital stories method one: Digital stories embedded in PowerPoint* can be found in Table F6 (see Appendix F).

**Incorporating digital stories method two: Digital stories embedded in the virtual learning environment.** Four participants discussed embedding digital stories into a virtual learning environment (P1; P7; P9; P12). One Participant, P12, finds digital stories from the National Health Service Website and embeds those “. . . into our . . . virtual learning environment.” Similarly, P7 states, “We have modules where they have to go and access them . . . . Then they can navigate through them from day-to-day as well and return to them.” P9 has students upload their digital stories online so, “. . . students can watch them at their leisure instead of being forced to watch . . . 15 of them in a row.”

As far as using digital stories in class, P1 states,

So far, we've been just using them as an adjunct so the students can on their own time go view them on Blackboard . . . That way they can see the digital stories and review them . . .

Quotes illustrating *Incorporating digital stories method two: Digital stories embedded in the virtual learning environment* can be found in Table F7 (see Appendix F).

**Incorporating digital stories method three: Digital stories to prompt discussion.** Ten participants noted digital stories were used as triggers to prompt discussion both in the classroom (P2 ; P3; P4; P6; P7; P8; P10; P11; P12) and the virtual learning environment (P2; P9). For example, P9 has students view one another's digital stories on discussion board, ". . . and comment on them . . ." P2 initially has students upload their digital stories into their e-learning website and then P2 instructs students to, ". . . let me know which ones they think would make a good classroom discussion . . ." P2 adds, ". . . it became clear to me that . . . after listening to a couple years of these digital stories . . . that students wanted to talk about [them]." P2 uses those digital stories recommended by students to be discussed after exams ". . . as a live discussion . . ." because ". . . I think it just works better . . ." P11 provides an additional example where the digital story is used in class and students are to

. . . discuss the . . . significant areas that would arise from that particular digital story, and then they go and do research on those elements, and then they bring it back, and get feedback, and discuss what they've learned, and teach each other . . .

P11 does a lot of work with service user's (patients) "And some of those people made digital stories themselves and they can use their stories as part of their teaching sessions . . . as . . . triggers for . . . facilitative discussions." P12 films service users that come a lot and then they use those digital stories, ". . . in the classroom to . . . promote discussion and debate."

Three participants spoke about the use of a framework (P2) or model (P7; P12) to guide classroom discussion. P7 states for their summative assessment,

. . . they have to consider this service users healthcare needs using a model of healthcare . . . we ask students to apply the dimensions such as how someone might be affected physically by a condition, how they might be affected emotionally . . .

P12 expands, ". . . we base our assessments on asking students to pick one of those stories and to . . . look at the different domains of health that might need some nursing input and care."

P2 uses an ethical framework to debrief the digital story. The framework P2 uses for students,

. . . ask them what are the facts, what are the ethical problems, who are the stakeholders, what are the options . . . and how do we know if we've made a difference? Or how could we re-evaluate the situation?

Quotes illustrating *Incorporating digital stories method three: Digital stories to prompt discussion* can be found in Table F8 (see Appendix F).

**Incorporating digital stories method four: Digital stories to assess the storyteller's healthcare needs.** Two participants spoke of using digital stories as an assignment where students would watch and assess the storyteller's needs (P7; P12). As an assignment, P7 has eight to ten digital stories for students to choose one and complete a summative assessment whereby they identify the service user's (patient's) healthcare needs. P11 similarly has students

. . . brainstorm or discuss the . . . significant areas that would arise from that particular digital story, and then they go and do research on those elements, and then they bring it back, and get feedback, and discuss what they've learned, and teach each other . . .

Quotes illustrating *Incorporating digital stories method four: Digital stories to assess the storyteller's healthcare needs* can be found in Table F9 (see Appendix F).

**Incorporating digital stories method five: Digital stories created as a project to share.** Four participants had students create digital stories as either an individual project (P2), a small group project (P1; P9), or a class project (P12).

P1 has done

. . . videos using actual digital stories created by the students and so we break up clinical groups and then have them create a digital story about some aspect of OB nursing . . . they are creating presentations . . . 3-5 minutes. They were given subjects like birth control. I think there were 11 digital stories. And they had to . . . in little groups of 5-6, create content, upload it, and . . . put it on Blackboard.

P2 has students “. . . tell a story about an ethical worry that they encountered in clinical practice.” Students then

. . . produce a 3 to 5 minute digital story that simply tells the story of an ethical worry and then they get posted to our e-learning website and I asked them to view each other’s digital stories and let me know which ones they think would make a good classroom discussion and we watch . . . I have usually between 40 and 50 students in my class . . . . So, we select . . . two or three on a couple of occasions and watch them.

P9 has students in the community setting create projects where

They have to summarize what their site is like, what their population is like and . . . . And they get to . . . experience vicariously what the other clinical sites are like . . . . I have 85 students in the class . . . there are about 17 clinical groups and each clinical group prepares a digital story at the end of the year.

P12 invited students to participate in creating a small video where they

. . . produced photographs holding up signs of what death and dying meant to them, and what it made them think about and what it made them feel. We put that into an audio visual presentation with a kind of musical background and somebody wrote a poem . . . it was all about what we call advanced care planning. It was all about discussing your wishes, letting people know . . . . It was in a group of like 70 . . . . I didn’t want to make it a summative assignment, mainly because I thought people would feel obliged to be a part of it. Actually, I wanted people to want to be a part of it rather than forcing them to.

Quotes illustrating *Incorporating digital stories method five: Digital stories created as a project to share* can be found in Table F10 (see Appendix F).

## **Research Question Two: What Benefits And/Or Problems Have You Identified In The Use Of Digital Stories In The Classroom?**

### **Student Reactions**

Having a better understanding on how these nurse educators incorporate digital stories in the classroom; study participants were then asked, “How do your students react to the use of digital stories in the classroom.” Four themes surfaced 1) No negatives, very positive, 2) Students and faculty enjoy, 3) They like them, and 4) Wow! Ooh! Aah!

**Student reaction theme one: No negatives, very positive.** Four participants saw no negatives (P2; P3; P4; P5) regarding the use of digital stories in the classroom. Two of those participants expanded to say reactions were positive (P3; P5), and three additional participants expanded on the positive feedback they have received from students (P7; P8; P11). Quotes illustrating *Student reaction theme one: No negatives, very positive* can be found in Table F11 (see Appendix F).

**Student reaction theme two: Students and faculty enjoy.** Five participants noted students enjoy digital stories (P1; P2; P5; P9; P12) and of those five, two faculty members commented that they enjoyed watching digital stories made by students (P2; P5). P2 states, “It’s much nicer to listen to digital stories instead of grading papers.” As for student created digital stories, P2 thinks, “. . . students enjoy not having another paper to write.” P12 believes, “They enjoy the idea of actually doing something different.” P9 adds, “. . . they enjoy watching them.” Capturing why students enjoy watching digital stories, P1 comments, “The simple fact is, movies or pictures with story combined, are just more interesting to watch than pure text. So, students enjoy it.”

Three participants noted students enjoy watching others (P1; P2; P9). Zeroing in, P2 stated, “They enjoyed watching . . . others videos.” Likewise, P9 states, “And they really, really enjoy watching everybody else’s . . .” While P1 adds, “I don’t have any hard data to back that up. But it seems . . . they had the most fun sharing and other people enjoyed watching them.” Quotes illustrating *Student reaction theme two: Students and faculty enjoy* can be found in Table F12 (see Appendix F).



**Student reaction theme three: Students like them.** Five participants noted that students like digital stories (P2; P6; P8; P9; P12). P8 states, “Commonly they say that this was a good way of teaching. I really liked this way . . . you made me understand.” P6 adds, “. . . the student’s reaction was that they really like that. It was easier for them to grasp what was going on.” P12 summarizes with student created digital stories noting,

I think some people are very visual learners and . . . kinesthetic kind of learners that like to do it, and discussing, and being part of something, as opposed to reflection, sitting back, thinking about information that is coming at them.

Quotes illustrating *Student reaction theme three: Students like them* can be found in Table F13 (see Appendix F).

**Student reaction theme four: Wow! Ooh! Aah!** Two participants cited student reactions as Wow! Ooh! Aah! (P5; P6). P5 revisits some of her student’s reactions after one digital story as, “Wow!” “Ooh!” as the students exclaimed, “I know, wow, that is the circle of violence right there! P5 said in watching the digital story, “. . . it just sort of hit home and made it more real for the students.” Similarly P6 said,

Well, seeing that quick little thing and the chest tube and trocar going between the ribs. I’ve got students going, “Ooh!” “Aah!” “Ooh!” . . . How long is it going to take me to explain that? And they still couldn’t visualize it if all I was doing was trying to talk them through it, and tell them what it would look like, and what was happening . . .

Quotes illustrating *Student reaction theme four: Wow! Ooh! Aah!* can be found in Table F14 (see Appendix F).

### **Student Benefits**

Spanning outward from student reactions, study participants were then asked to, “Describe the top three to five benefits of digital stories in the classroom.” Seven themes evolved whereby digital stories are beneficial for 1) Greater depth of discussion, 2) Making a point, 3)

Engaging the student, 4) Promoting reflection, 5) Promoting empathy, 6) Development of critical thinking, and 7) Use of information technology skills.

**Student benefits theme one: Greater depth of discussion.** Four participants (P2; P6; P7; P11) noted discussion as a benefit. For example, P2 captures the overall theme stating digital stories provide “. . . greater depth of discussion of the topic.” P6 states that drama leads to “. . . improved discussion . . .” P7 concurs, “They do generate a lot of discussion.” P6 summarizes, “A digital story helps them to visualize and see and it opens up a lot of doors for discussion.” P11 believes it’s “. . . because of that emotional reaction to things that it really initiates some in-depth discussion . . .” Quotes illustrating *Student benefits theme one: Greater depth of discussion* can be found in Table F15 (see Appendix F).

**Student benefits theme two: Making a point.** Six participants emphasized that digital stories are good for making a point (P2; P6; P7; P8; P10; P11). Referring to a digital story that one senior nursing student made about an ethical worry encountered in the clinical setting, P2 states, “. . . she makes a point . . . that sickle-cell patients often have poorly managed pain . . .” P2 also uses this student’s digital story in a junior level medical-surgical course where the digital story becomes, “. . . useful to make a point for the junior student” who is just now learning about sickle-cell.

P6 states, “. . . you can bring home so many points with a story.” Echoing this P7 refers to one digital story used in class to “. . . make the point.” Similarly, P8 uses them when, “I want to go straight to the point.” P10 adds, “It makes points in ways that you can’t make verbally through lecture.” P11 provides a reason why digital stories are beneficial in making a point, stating, “The media itself, I think, is probably what captures them and then the point is made really succinctly.” Overall, P11 finds digital stories “. . . to be really powerful and they go

straight to the point that we want to make.” Quotes illustrating *Student benefits theme two: Makes a point* can be found in Table F16 (see Appendix F).

**Student benefits theme three: Engaging the student.** Five participants thought digital stories were beneficial for engaging the student (P1; P2; P5; P11; P12). P2 stated, “. . . I think people engage better with story.” Within the educational arena, P12 thinks, “. . . it engages different learning styles . . .” As for the student, P11 notes digital stories, “. . . have a real impact on the students and seem to really, really engage in them . . . . I think they feel really engaged by them and often quite moved by the content . . .” P5 agrees, “They are more engaged.” P1 summarizes, “Quite simply, [digital stories] are engaging . . . it engages the students no question about it. Student created videos engage more than anything else.” Quotes illustrating *Student benefits theme three: Engaging the student* can be found in Table F17 (see Appendix F).

**Student benefits theme four: Promoting reflection.** Four participants noted digital stories were functional for promoting reflection (P2; P3; P4; P11). Reflection was spoken of in two different ways one of which was where students reflected on what they saw in the digital story (P3; P4; P11) and the other was the creation of digital stories as a method for students to “. . . reflect on their practice” as cited by (P2).

P4 states that after watching the digital story, “I let that stay for a minute just so they can self reflect on what they’ve seen and then we start to talk about it.” With regards to the type of reflection that occurs from watching a digital story, P3 explains

When you hear someone, you can really get them to reflect on what it is they hear afterwards; whereas, if you tell them something about it you might not get that type of reaction from them or that reflection from them.

Quotes illustrating *Student benefits theme four: Promoting reflection* can be found in Table F18 (see Appendix F).

**Student benefits theme five: Promoting empathy.** Four participants noted that digital stories were beneficial for promoting empathy (P7; P9; P11; P12). P9 feels, “. . . that the stories draw students into the experience of it and develop more sympathy and empathy and compassion . . .” P12 states, “I think it’s the digital story that highlights how people experience that and how people empathize.” P7 explains further as educators,

. . . might want to talk about empathy for example. How you might develop the skill empathy. So [the teacher] might decide to have a look at one of those particular digital stories. To think about the concept empathy.

P11 acknowledges, “I think that [digital stories] help students feel more like what it’s like to be in that position . . . it can promote empathy.” However, P11 cautions digital stories can hit “. . . some emotional buttons for them where they get upset. So, you have to make sure support is in place for that.” Quotes illustrating *Student benefits theme five: Promoting empathy* can be found in Table F19 (see Appendix F).

**Student benefits theme six: Development of critical thinking.** Three participants noted the use and development of critical thinking skills (P6; P7; P12). Referring to the use of digital stories as an assignment where students have to assess the healthcare needs of the digital storyteller, P7 notes, “Sometimes they want a bit more story . . . then they have to use their thinking skills, their analytical skills, and try to think of these different dimensions of health.” Talking about the use of digital stories in lecture, P6 states, “I do see improved critical thinking when students see a concept from a different style of presentation.” Referring to students who create their own digital stories, P12 states, “I think created video helps develop skills in people to

be more problem solving.” Quotes illustrating *Student benefits theme six: Development of critical thinking* can be found in Table F20 (see Appendix F).

**Student benefits theme seven: Use of information technology skills.** Four participants identified the use of information technology (IT) skills as a benefit to using digital stories in the classroom (P2; P7; P10; P12). P9 finds creating digital stories are useful because students, “. . . learn how to make a presentation that’s different than a PowerPoint . . .” P12 adds, “. . . they develop digital skills and creative skills and I think that’s a real benefit to them.” Quotes illustrating *Student benefits theme seven: Use of information technology skills* can be found in Table F21 (see Appendix F).

## **Challenges**

After identifying the benefits of digital stories, study participants were then asked to, “Describe the top three to five challenges of digital stories in the classroom.” Five themes were identified as challenges 1) Finding an appropriate digital story, 2) Legal issues, 3) Ability to assess student learning from digital stories, 4) Time in class to show digital stories, and 5) Students don’t always see the same way.

**Challenges theme one: Finding an appropriate digital story.** P12 captured the theme stating, “I think finding the right material can sometimes be a challenge” this thought was shared by a total of seven participants (P1; P3; P4; P5; P9; P10; P12). This particular challenge was fresh on the mind of P10 who shared, “. . . I went through a lot [of digital stories] last night when I was searching . . .” P12 adds, “. . . finding the right thing can be quite time-consuming to do . . .” What’s the problem in finding a digital story? P1 explains

I just found out that two weeks ago, that as of this summer 48 hours of video is uploaded every minute to YouTube . . . that’s almost double from a year and a half ago. It’s an incredible amount of stuff. The vast majority is not really good . . . useful from a teaching

perspective. There's probably 10-15% on YouTube that is, in fact, geared toward teaching.

Challenges identified by P4 included, “. . . finding a digital story that adds depth to the discussion . . . finding one within my time limit . . . finding factual information not one that has errors . . .”

P5 adds, “. . . I want to use more, but I don't know other than using a Google search how to find great stories . . . that fit what I am teaching.” P9 said, “. . . unless one fell in my lap about the content that I wanted to share, I haven't known where to go.” Summarizing, P3 said, “. . . I don't think we have that many resources. If there are, where are the masses?”

Eight participants noted finding digital stories at YouTube (P1; P3; P4; P5; P6; P8; P10; P12). Two participants noted using Google (P3; P10). Two participants accessed digital stories through the National Health Service (P7; P12). Additionally, P7 finds digital stories at “. . . patientstories.uk . . .” Quotes illustrating *Challenges theme one: Finding an appropriate digital story* can be found in Table F22 (see Appendix F).

**Challenges theme two: Legal issues.** Legal issues were a concern for five participants (P1; P2; P3; P7; P9). While P3 has not had students create digital stories, P3 saw students needing to “. . . go through some hoops . . .” because “. . . you have to make sure they have all the right things signed first.” P7 having the experience of creating a digital story stated, “That comes with difficulty, in that there was not a standard consent format . . .” P9 has digital storytellers give permission, but “I'm still concerned about patient confidentiality. So, we tell them it's only for the classroom.” P1 who also has students creating digital stories said, “. . . we can't just upload pictures after John wrecked his car and he's in the emergency room.”

As for accessing digital stories online, P2 gets a “. . . little cautious about fair use . . . . I want to make sure there is no copyright infringement.” P2 adds, “. . . I suppose if somebody has

put it up there then . . . it would not be a HIPPA violation.” P1 concludes, “. . . there’s that confidentiality piece to worry about. How do you get around that?”

Legal issues are a major concern in the creation and use of digital stories in the classroom. Six participants (P1; P2; P7; P9; P11; P12) spoke to the challenges presented and how they address some of these issues. P1 noted legal issues as a challenge; however, adds if students, “. . . are filming somebody we have to have a written release from that person to use their image.” While P7 did not remember where the consent came from P7 stated that the digital storyteller, “. . . gave us written consent for the material, as well as future use of the materials.” P9 also notes, “People give permission for the students to use their photog.” P12 states, “. . . we do have a form that they sign and they are aware of what the intentions are, and they consent to it.” P2 has a little sheet that says, “You can use my digital story in other classes or you cannot use my digital story in other classes.” P11 expands

The Patient Voices Program has got their own consent and release procedure . . . they basically ask where they would be happy for their digital story to be shown. So, it could not be shown or released to the public, or another website, or if they would prefer for it to be used in teaching by people they know . . . they kind of give their permission for where it should be shown and in what context.

Quotes illustrating *Challenges theme two: Legal issues* can be found in Table F23 (see Appendix F).

**Challenges theme three: Ability to assess student learning from digital stories.** Four participants noted the ability to assess student learning from digital stories as a challenge (P1; P2; P6; P12). P1 states, “. . . we need to create a better way of actually saying which one of these digital stories worked for them. Which one really did hold their attention? And actually learn from?” Because as P2 states,

. . . you have to think about whether or not it’s effective learning. Just because I enjoy it and just because the students enjoy it does it make a difference? Does it meet a learning

objective? Because we really shouldn't be doing in the class unless it's based on a learning objective . . . . I struggle with that.

P6 adds,

. . . lots of students get caught up with the dramatics of the song and the entertainment value of it . . . I'm not sure if it's more of the information or if it's more of that entertainment aspect . . .

Talking about having students create digital stories as a graded project, P12 states

. . . I think I would have to convince my colleagues that it was something that . . . was a structured objective assessment of ability and it really kind of measured people's ability against learning outcomes . . . and very clear learning objectives for that particular module.

Quotes illustrating *Challenges theme three: Ability to assess student learning from digital stories* can be found in Table F24 (see Appendix F).

**Challenges theme four: Time in class to show digital stories.** Three participants told about the constraints of time in class to show digital stories (P1; P2; P5). For example, P5 was telling about a digital story and then responded with, “. . . let me take that back you may not want to use this example, because I did not . . . show it in class. I was going to, but I did not have time.” P1 had the same problem because, “Presenting digital stories does take time that's why we've gone to [putting] them on Blackboard.” Referring to digital stories shown in class that were created by students, P2 identifies as a challenge, “Time. I wish I had time to watch every single one of them.” Quotes illustrating *Challenges theme four: Time in class to show digital stories* can be found in Table F25 (see Appendix F)

**Challenges theme five: Students don't always recognize the intended point.** Three participants shared the fact that students don't always see digital stories the same way as faculty (P1; P6; P12). Referring to the review of digital stories created by students, P1 said, “I want you to know as a teacher often time what I considered the most informative was not what the students



considered the most informative.” In class, P6 states, “Sometimes . . . student’s failure to capture what I’ve seen as a valued relevancy of a . . . digital story . . . or maybe they hadn’t seen what I was hoping they would see and get out of it.” P12 said, “. . . the challenge would be . . . the discovery . . . where . . . digital stories might lead you, might not be where you think.” Quotes illustrating *Challenges theme five: Students don’t always recognize the intended point* can be found in Table F26 (see Appendix F).

### **Summary**

Drawn to using digital stories for a variety of reasons, these 12 nurse educators have successfully incorporated digital stories both inside and outside the classroom walls. They noted digital stories are beneficial for greater depth of discussion, making a point, engaging the student, promoting reflection, promoting empathy, development of critical thinking, and use of information technology skills. Challenges cited included finding an appropriate digital story, legal issues, ability to assess student learning, time in class to show digital stories, and students don’t see the same way. Considering the benefits and challenges educators and students enjoy digital stories and students react positively with no negatives reported. Upon review of the data, the 12 participants of this study have contributed significantly to the understanding of how nurse educators use digital stories in nursing education. A summary of study findings can be found in Table 2.

Table 2

*Study Results*

---

Research question one: How and for what purpose are you incorporating digital stories in the classroom?

Compelling Reasons	<ul style="list-style-type: none"> <li>Capturing attention through media</li> <li>Change things up a bit</li> <li>A sharing experience</li> <li>Seeing, hearing, and feeling</li> <li style="padding-left: 20px;"><i>Touches the affective domain</i></li> <li style="padding-left: 20px;"><i>Gains patient perspective</i></li> <li>Feel, intuit, think (FIT)</li> </ul>
Incorporating Digital Stories into Teaching Practice	<ul style="list-style-type: none"> <li>Digital stories embedded in PowerPoint</li> <li>Digital Stories embedded in the virtual learning environment</li> <li>Digital stories to prompt discussion</li> <li>Digital stories to assess the digital storyteller's needs</li> <li>Digital stories created as a project to share</li> </ul>

Research question two: What benefits and/or problems have you identified in the use of digital stories in the classroom?

Student Reactions	<ul style="list-style-type: none"> <li>No negative, very positive</li> <li>Students and faculty enjoy</li> <li>Students like them</li> <li>Wow! Ooh! Aah!</li> </ul>
Benefits	<ul style="list-style-type: none"> <li>Greater depth of discussion</li> <li>Making a point</li> <li>Engaging the student</li> <li>Promoting empathy</li> <li>Development of critical thinking</li> <li>Use of information technology skills</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>Finding an appropriate digital story</li> <li>Legal issues</li> <li>Ability to assess student learning from digital stories</li> <li>Time in class to show digital stories</li> <li>Students don't always recognize the intended point</li> </ul>

---

## CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

This chapter provides the general discussion, limitations of study, significance in nursing, recommendations for research, and final summary. The discussion will illuminate this study's findings, related research, and program evaluations where digital stories were used in education as a method to prompt discourse, reflection, and as a tool for creative teaching and learning. The study limitations, significance in nursing, as well as recommendations for research, will be addressed to assist academicians in higher education as they research and incorporate digital stories into their classes. The final summary provides insight as to the value and potential of digital stories for use in higher education.

### **General Discussion**

This study's findings endorse the philosophical beliefs of both John Dewey (1997) and Paulo Freire (1998), who contributed significantly to the development and need for theories, models, and frameworks for evaluating the use and significance of digital storytelling in higher education. The use of frameworks and models was not a prominent theme. However, frameworks and models were noted by three study participants as useful to guide discussion (P2; P7; P12).

Dewey believed progressive education should encompass foresight gained from experience (Dewey, 1997). This foresight parallels what nurse educators say led them to change their teaching practice, that being what they feel (P4; P5; P8; P9), intuit (P2; P8), and think (P1; P2; P4; P5) would work in their classroom. This transformation comes from practice as nurse educators realize the need to change things up a bit (P2; P6; P10) in order to capture the student's attention (P1; P4; P9; P10; P11). The basis for change stems from FIT and the realization that students need to see, hear, and feel a story (P3; P4; P5; P6; P7; P8; P9; P11; P12).

Freire claimed education occurs when there are two learners such as student and teacher (Aronowitz, 1998). The ability to share experience through the creation and use of digital stories, exhibits how teacher and student have become lifelong co-learners expanding and constructing knowledge together (Freire, 1998). Overall, participant's viewed digital storytelling as a pedagogical tool that is consistent with the above philosophical assumptions.

### **Digital stories as a pedagogical tool toward discourse**

The way an individual writes, speaks, and acts are all examples of discourse (Gee, 2000). Digital storytelling is a new method of discourse, where the storyteller or digital story creator produces short vignettes (Rossiter & Garcia, 2010), with still and moving images, music, sound, text, and video clips (Bran, 2010; Gazarian, 2010). When educators were asked, "How do you go about incorporating digital stories into your teaching practice?" participants used digital stories as discourse in five ways:

- 1) Sharing and demonstrating learning.
- 2) Sharing and demonstrating work they have completed in the community setting.
- 3) As a project raising awareness and interest in a subject.
- 4) Using a collaborative assignment to assess and discuss a digital storyteller's healthcare needs.
- 5) Using a methodology to prompt discussion in the classroom and virtual learning environment.

The elements of discourse displayed by study participants were consistent with research and program evaluations in nursing and higher education. Similarly, published research and program evaluations demonstrated digital stories can be created as student projects (Gazarian, 2010; Leng, 2010; Li, 2007; Rudnicki, 2009; Schwartz, 2012, Sandars & Murray, 2009) to

demonstrate learning (Gazarian, 2010; Schwartz, 2012), showcase work completed in the community (Gazarian, 2010), bring awareness and attention to a subject (Christianson, 2010; Fenton, 2014; Leng, 2010; Stacey & Hardy, 2011), accessed as an assignment to discuss a storyteller's healthcare needs (Fenton, 2014; Schwartz, 2012), and as a methodology to prompt discussion (Rudnicki, 2009; Schwartz, 2012; Stacey & Hardy, 2011).

Through creation, assessment and discussion, nurse educators and students promote a collaborative community, where creativity in thought and debate are promoted (P12), and information technology skills developed (P2; P7; P9; P12)-all of which support digital stories as a method of discourse.

### **Digital Stories as a pedagogical tool toward reflective learning**

When a person reflects on a situation, he or she takes the experience, brings it into the mind, ponders it, makes connections to other experiences, and filters it through personal biases (Walters et al., 2011). Reflection has been noted to be an important element in discourse (Mezirow, 2003). The use of digital stories in the classroom was noted by three study participants to illicit self-reflection and aid in discussion (P2; P3; P11). Consequently, reflective learning can be achieved through the use of digital stories as demonstrated by study participants (P2; P3; P4; P11).

This study's findings were consistent with research in higher education where study results showed strong gains in critical reflection for both pre- and in-service teachers in a teacher preparation program who were required to create a digital storytelling project (Li, 2007). Additional studies and program evaluations demonstrated how the use and creation of digital stories in higher education engaged students in the reflection process (Christianson, 2010; Garrety, 2008; Gazarian, 2010; Leng, 2010; Sandars & Murray, 2009; Stacey & Hardy, 2011).

## **Digital Stories as a pedagogical tool toward creative teaching and learning**

Digital stories are recognized in higher education as one of the newest pedagogical tools to be used within the narrative pedagogy (Rossiter & Garcia, 2010). The narrative pedagogy is recognized as being a student-centered pedagogy (Ironsides, 2001) that promotes teamwork, critical thinking, reflection of self and practice, and engagement in learning (Young & Maxwell, 2006). Participants of this study did not acknowledge working within the narrative pedagogy; however, digital stories used by these nurse educators did engage students (P1; P2; P5; P11; P12), assist in the development of critical thinking (P6; P7, P10; P12), and promote reflection (P2; P3; P11). Research collected supports digital stories engage students in learning that can prompt reflection (Sandars & Murray, 2009) and through the process of discourse assist students toward achieving higher level consciousness (Rudnicki, 2009). Further research suggest digital stories an effective tool for reflective practice (Garrety, 2008) that can lead to strong gains in student reflection (Li, 2007). The results of this study and collected research support digital stories contain the elements of engagement, prompting of critical thinking, and reflection. In nursing, Gazarian (2010) developed a, “. . . digital story assignment for a senior-level synthesis and decision making course” using the narrative pedagogy as a guiding framework. Data suggest digital stories, as a pedagogical tool, fits well within the narrative pedagogy.

Digital stories as a pedagogical tool are just one facet of technology being implemented in the classroom to facilitate teaching and learning (Rossiter & Garcia, 2010; Thibodeaux, 2012). Humans are known to be natural storytellers (Bilich, 2008). Combine storytelling with technology and the perfect storm for creative teaching and learning may well be achieved. As a tool, digital stories can be used to meet the needs of different learning styles (P12). Participants of this study report students enjoy digital stories (P1; P2; P5; P9; P12). Students like this

different modality of learning as it allows them to express their creativity (P12) and showcase their technological skills (P2; P7; P9; P12). The 12 participants of this study suggest digital stories can provide an experience of creativity and learning in teaching.

Findings from this study were consistent with research and program evaluations in nursing where students found the creation of digital stories enjoyable (Leng, 2010). Published educators also acknowledged digital stories provided an innovative learning experience that provided students the ability to showcase their creative technological skills (Gazarian, 2010). Resoundingly, digital stories were recognized as a valuable pedagogical tool for undergraduate nursing (Leng, 2010; Stacey & Hardy, 2011; Fenton, 2014) and higher education (Clarke & Adam, 2012; Li, 2007).

### **Limitations of Study**

The information gathered from this study consisted of nurse educators teaching at the baccalaureate level. This will limit transferability of study results as information may not be generalizable to other disciplines, geographic areas, programs of nursing, or to the incorporation of digital story use with smaller or larger numbers of students.

### **Significance in Nursing**

Challenges in healthcare and generational changes have prompted nurse educators to look critically at the many pedagogies and pedagogical tools currently implemented in the classroom (Ahrin & Cormier, 2007; Stanley & Dougherty, 2010). Nurse educators acknowledging student need for an interactive learning environment are implementing the narrative pedagogy (Ahrin & Cormier, 2007; Howe & Strauss, 2007). Narrative pedagogy, an interpretive phenomenological pedagogy, provides a much needed interactive teaching-learning environment where “. . . teachers and students co-create, negotiate, and transform knowledge . . .” (Ironsides, 2006, p.

479). Digital stories, the newest pedagogical tool on the narrative field, combines audio, text, picture and video to bring story to life (Rossiter & Garcia, 2010). This spirited union of seeing, hearing, and feeling (P3; P4; P5; P6; P7; P8; P9; P11; P12) is proving to be a powerful force in nursing education. A product promoting learning for the storyteller, student, educator, and any person who comes in contact; a methodology that can result in change of practice for nursing and nursing education (Fenton, 2014).

Digital stories can help people with chronic illness share their story; an act of sharing that facilitates student exposure to patient perspectives (P4; P7; P11; P12). Digital stories have the potential to assist students in seeing the, “. . . holistic perspective [of] the disease process” (P4) and the “. . . holistic approach to care” (P7) that’s required of nurses. As described by the 12 nurse educators of this study, digital stories can be used by fellow educators to achieve greater depth of discussion (P2; P6; P7; P11), make a point (P2; P6; P7; P8; P10; P11), engage the student (P1; P2; P5; P11; P12), promote reflection (P2; P3; P4; P11), promote empathy (P7; P9; P11; P12), critical thinking (P6; P7; 12), and information technology skills (P6; p7; P10; P12). These insights hold the power to introduce new possibilities for digital stories. Perhaps, as educators and students, new perspectives for research areas in healthcare can be achieved through the incorporation and creation of digital stories in the classroom.

### **Recommendations for Research**

Further research is needed in the area of digital stories to support its application to classroom instruction (Gazarian, 2010) specifically nursing. Additional qualitative studies are needed to address the ways in which digital stories foster communication, promote ideas, evoke emotion, and promote critical thinking (Gabriel & Connell, 2010). Quantitative studies in digital stories might include evaluating the extent of knowledge acquisition, knowledge retention



(Corbett et al., 2013), comparison to a variety of well researched teaching methods, assessment of use with a variety of demographic variables, and efficacy as a teaching-learning tool (Gabriel & Connell, 2010). Continued research in the area of digital stories will contribute to the holistic teaching-learning environment as it pertains to educating tomorrows nurse.

Research for assessing digital story use with students includes:

- Do digital stories facilitate development of patient perspective?
- Are students engaged more fully in the learning process if the digital story were created by someone they know or by someone not known to them?
- What attributes of a digital story (images, words, music) capture the student's attention best?
- What attributes of a digital story (images, words, music) best improve learning?

Research for educators includes:

- Exploration of potential legal ramifications associated with the use, and distribution of digital stories.
- What types of knowledge do digital stories help transmit?

### **Final Summary**

The 12 participants of this study provided a wealth of knowledge that will assist nurse educators and possibly other educators in higher education. The literature review and data from this study suggest digital stories, as a pedagogical tool, is beneficial to student learning. The incorporation of digital stories in the classroom could provide a needed portal to educate nurses for practice in the 21<sup>st</sup> century. The creativity in teaching and learning that these nurse educator's exhibited may attend to generational issues and issues of content saturation that academicians face. Creativity in thinking is promoted when students create digital stories. Greater depth of

discussion is achieved in the classroom when digital stories are shown. The promotion of creativity may be what is needed to provide vision, direction, and inspiration in students as they face rapid changes in healthcare and complex morbidities seen in the clients for whom they will care.

## References

- Arhin, A.O. & Cormier, E. (2007). Using deconstruction to educate generation y nursing students. *The Journal of Nursing Education*, 46(12), 562-567.
- Aronowitz, S. (1998). Introduction. In P. Clarke (Ed. & Trans.), *Pedagogy of Freedom: Ethics, Democracy, and Civic Courage* (pp. 1-19). Lanham, MD: Rowman & Littlefield Publishers, INC.
- Bilich, K. (2008). Sharing life stories to keep memories alive. *ThirdAge*. Retrieved from <http://www.thirdage.com/brain-fitness/sharing-life-stories-keep-%20memories-alive>
- Beck, C. & Kosnik, C. (2012). Toward social constructivism preservice education. *Innovations in teacher education: A social constructivist approach*. (pp. 7-26). Retrieved from [http://books.google.com/books?id=cOFAoXNvjzEC&dq=Dewey+social+constructivism&source=gbs\\_navlinks\\_s](http://books.google.com/books?id=cOFAoXNvjzEC&dq=Dewey+social+constructivism&source=gbs_navlinks_s)
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). Educating nurses a call for radical transformation. Stanford, CA: Jossey-Bass [A Wiley Imprint].
- Bran, R. (2010). Message in a bottle telling stories in a digital world. *Procedia Social and Behavioral Sciences*, 2(2), 1790-1793.
- Brown, S.T., Kirkpatrick, M. K., Mangum, D., & Avery, J. (2008). A review of narrative pedagogy strategies to transform traditional nursing education. *Journal of Nursing Education*, 47(6), 283-286.
- Byron, A.S. (2011). Storytelling as loving praxis in critical peace education: A grounded theory study of postsecondary social justice educators. (Unpublished doctoral dissertation). Portland State University, Oregon.

- Carper, B. A. (1978). Fundamental patterns of knowing in nursing. *Advances in Nursing Science*, 1(1), 13-24.
- Christiansen, A. (2011). Storytelling and professional learning: A phenomenographic study of students' experience of patient digital stories in nurse education. *Nurse Education Today*, 31(3), 289-293.
- Clarke, R. & Adam, A. (2012). Digital storytelling in Australia: Academic perspectives and reflections. *Arts and Humanities in Higher Education*, 11(1-2), 157-176.
- Cooper, H. M. (1982). Scientific guidelines for conducting integrative research reviews. *Review of educational research*, 52(2), 291-302.
- Corbett, R.W., Schwartz, M.S., Green, B., Sessoms, A., & Swanson, M. (2013). New media simulations in nursing education: A quasi-experimental study Exploring Learning Outcomes, *CIN: Computers, Informatics, and Nursing*, 31(4), 198-203.
- Daudelin, M. W. (1996). Learning from experience through reflection. *Organizational Dynamics*, 24(3): 36-48.
- Davidson, M. R. (2004). A phenomenological evaluation: using storytelling as a primary teaching method. *Nurse Education in Practice*, 4(3), 184-189.
- Dewey, J. (1997). The meaning of purpose. In J. Dewey (Ed.), *John Dewey Experience and Education* (pp. 67-72). New York, NY: Simon & Schuster. (Reprinted from Kappa Delta Pi, 1938).
- Dialogue (2014). *Meriam-Webster.com*. Retrieved from <http://www.merriam-webster.com/dictionary/dialogue>

- Diekelmann, N. (2001). Narrative pedagogy: Heideggerian hermeneutical analyses of lived experiences of students, teachers, and clinicians. *Advances in Nursing Science*, 23(3), 53-71.
- Discourse (2012). *Meriam-Webster.com*. Retrieved from <http://www.merriam-webster.com/dictionary/discourse>
- East, L., Jackson, D., O'Brien, L., & Peters, K. (2010). Storytelling: An approach that can help develop resilience. *Nurse Researcher*, 17(3), 17-25.
- Ethnography. (2008). *New World Encyclopedia*. Retrieved from <http://www.newworldencyclopedia.org/entry/Ethnography?oldid=685856>.
- Fenton, G. (2014). Involving a young person in the development of a digital resource in nurse education. *Nurse Education in Practice*, 13(2014), 49-54.
- Franz, K., & Nischelwitzer, A. K. (2004). Adaptive Digital Storytelling: A Concept for Narrative Structures and Digital Storytelling build on Basic Storytelling Principles, Adaptive Story Schemas and Structure Mapping Techniques. In *Multimedia Applications in Education Conference (MApEC) Proceedings* (p. 25).
- Freire, P. (1998). There is no teaching without learning. In P. Clark (Ed. & Trans.), *Pedagogy of Freedom: Ethics, Democracy, and Civic Courage* (pp. 29-48). New York: NY: Rowman & Littlefield.
- Gabriel, Y. & Connell, N.A.D. (2010). Co-creating stories: Collaborative experiments in storytelling. *Management Learning*, 41(5), 507-523.
- Ganley, B. (2012). Community, communication, and creativity: Digital storytelling in the liberal arts classroom. In R.M. O'Connell (Ed.). *Teaching with Multimedia* (pp.9-30). New York, New York: Hampton Press Inc.

- Garrety, C.M. (2008). *Digital storytelling: An emerging tool for student and teacher learning*. (Unpublished doctoral dissertation). Iowa State University, Iowa.
- Gazarian, P.K. (2010). Digital stories: Incorporating narrative pedagogy. *Journal of Nursing Education, 49*(5), 287-290.
- Gee, J. P. (2000). Discourse and sociocultural studies in reading. Retrieved from <http://www.readingonline.org/articles/handbook/gee/>
- Guajardo, M., Oliver, J.A., Rodriquez, G., Valadez, M.M., Cantu, Y., & Guajardo, F. (2011). Reframing the praxis of school leadership preparation through digital storytelling. *Journal of Research on Leadership Education (6)*5, 145-161.
- Haigh, C., & Hardy, P. (2011). Tell me a story—a conceptual exploration of storytelling in healthcare education. *Nurse education today, 31*(4), 408-411.
- Hartley, J., & McWilliam, K. (2009). Computational power meets human contact. In J. Hartley, & K. McWilliam (Eds.), *Story circle digital storytelling around the world* (pp. 3-15). West Sussex, United Kingdom: Wiley-Blackwell.
- Houser, J. (2012). *Nursing Research: Reading, Using, and Creating Evidence*. Sudbury, MA: Jones & Bartlett Learning.
- Howe, N. & Strauss, W. (2007). *Millennials go to college*. Great Falls, VA: LifeCourse Associates.
- Hunter, L.A. (2008). Stories as integrated patterns of knowing in nursing education. *International Journal of Nursing Education Scholarship, 5*(1), 1-13.
- Ironside, P.M. (2001). Creating a research base for nursing education: An interpretive review of conventional, critical, feminist, postmodern, and phenomenologic pedagogies. *Advances in Nursing Science, 23*(3), 72-87.

- Ironside, P.M. (2006). Using narrative pedagogy: learning and practicing interpretive thinking. *Journal of Advanced Nursing*, 55(4), 478-486.
- Johanson, L. (2012). Teaching the millennial generation considerations for nurse educators. *Nurse Educator*, 37(4), 173-176.
- Kawashima, A. (2005). The implementation of narrative pedagogy into nursing education in Japan. *Nursing Education Perspectives*, 26(3), 168-171.
- Kenway, J., & Modra, H. (1992). Feminist pedagogy and emancipatory possibilities. In Like, C, Gore, J (Eds.), *Feminisms and critical pedagogy* (pp. 138-166). Retrieved from [http://books.google.com/books?hl=en&lr=&id=qWxx1Xsgv6sC&oi=fnd&pg=PA138&dq=Kenway+and+Modra&ots=m4hVdAATs\\_&sig=Rksn4gfvKk0-GrndmzfwlVrVtYY](http://books.google.com/books?hl=en&lr=&id=qWxx1Xsgv6sC&oi=fnd&pg=PA138&dq=Kenway+and+Modra&ots=m4hVdAATs_&sig=Rksn4gfvKk0-GrndmzfwlVrVtYY)
- Kleiman, S. (2007). Revitalizing the humanistic imperative in nursing education. *Nursing Education Perspectives*, 28(4), 209-213.
- Lambert, J. (2009). *Digital storytelling capturing lives, creating community*. Berkley, CA: Digital Diner Press.
- Leng, J. (2010). Telling a digital story: Jane Leng reveals how online technology helped nursing students learn through shared stories. *Nursing Standard*, 24(25). 61.
- Li, L. (2007). Digital storytelling: Bridging traditional and digital literacies. In *World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education, 2007*(1), 6201-6206.
- LifeScribe. (2012). Rutgers office of instructional and research technology. Retrieved from <http://oirt.rutgers.edu/instruc/tools/livescribe-pen/>.

- Lordly, D. (2007). Once upon a time... storytelling to enhance teaching and learning. *Canadian Journal of Dietetic Practices and Research*, 68(1), 30-36.
- McAllister, M., Tower, M., & Walker, R. (2007). Gentle interruptions: Transformative approaches to clinical teaching. *Journal of Nursing Education*, 46(7), 304-312.
- McCutcheon, M. (2010). Dialogue. *Roget's Super Thesaurus* (4<sup>th</sup> ed.). Cincinnati, Oh: Writers Digest Books.
- Mezirow, J. (2003). Transformative learning. *Journal of Transformative Education*, 1(1), 58-63.
- Monti, E.J., & Tingen, M.S. (1999). Multiple paradigms of nursing science. *Advances in Nursing Science*, 21(4), 64-80.
- Moody, R.C., Horton-Deutsch, S., & Pesut, D.J. (2007). Appreciative inquiry for leading in complex systems: Supporting the transformation of academic nursing culture. *Educational Innovations*, 46(7), 319- 322.
- Moon, J. & Fowler, J. (2008). 'There is a story to be told...' A framework for the conception of story in higher education and professional development. *Nurse Education Today*, 28(2), 232-239.
- Narrative. (2012a). *Miriam-Webster Dictionary Online*. Retrieved from <http://www.merriam-webster.com/dictionary/narrative>
- Narrative. (2012b). *Dictionary.com*. Retrieved from <http://dictionary.reference.com/browse/narrative?s=t>
- National League for Nursing (2003, August 23). *Position statement. Innovation in nursing education: A call to reform*. Retrieved from <http://www.nln.org/aboutnln/PositionStatements/innovation082203.pdf>



- Nvivo10 (2012). *QRS International*. Retrieved from [http://www.qsrinternational.com/products\\_nvivo-server.aspx](http://www.qsrinternational.com/products_nvivo-server.aspx)
- Ohler, J. (2008). *Digital storytelling in the classroom*. Thousand Oaks, CA: Corwin Press
- Patton, M.Q. (2002). *Qualitative research evaluation methods*. Thousand Oaks, CA: Sage.
- Person, E.S. (2006). Revising our life stories: The roles of memory and imagination in the psychoanalytic process, *The Psychoanalytic Review*, 93(4), 665-673.
- Polit, D.F. & Beck, C.T. (2008). *Nursing research: Generating and assessing evidence for nursing practice* (8<sup>th</sup> ed.). Baltimore, MD: Lippincott Williams & Wilkins.
- Porter, B. (2006). Beyond words the craftsmanship of digital products. *Learning & Leading with Technology*. Retrieved from <http://digitales.us/files/BeyondWordsISTE.pdf>
- Quaintance, J.L., Arnold, L., & Thompson, G.S. (2010). What students learn about professionalism from faculty stories: an “appreciative inquiry” approach. *Academic Medicine*, 85(1), 118-123.
- Robin, B. (2011). *Educational uses of digital storytelling*. Retrieved from <http://digitalstorytelling.coe.uh.edu/>
- Rossiter, M., & Garcia, P.A. (2010). Digital storytelling: A new player on the narrative field. *New Directions for Adult and Continuing Education*, 2010(126), 37-48.
- Rudnicki, A.T. (2009). *Coming full circle: Exploring story circles, dialogue, and story in a graduate level digital storytelling curriculum*. (Unpublished doctoral dissertation). University of Houston, Texas.
- Sandelowski, M. (2000). Focus on Research Methods-Whatever Happened to Qualitative Description? *Research in nursing and health*, 23(4), 334-340.

- Sandars, J. & Murray, C. (2009). Digital storytelling for reflection in undergraduate medical education: a pilot study. *Education for Primary Care, 20*(6), 441-444.
- Schwartz, M. (2012). Storytelling in the digital world. *Nurse Educator, 37*(6), 248-251.
- Schwartz, A. (Producer), & Schwartz, M. (Narrator). (2012, February 14). *Domestic Partner Violence* [YouTube video]. Retrieved from <http://www.youtube.com/watch?v=7qEqbXN1iNs&feature=youtu.be>
- Shieh, C. (2005). Evaluation of a clinical teaching method involving stories. *International Journal of Nursing Education Scholarship, 2*(1), 1192.
- Sochacki, S. (2010). *The use of storytelling in nursing education*. (Unpublished doctoral dissertation). Graduate College of Bowling Green State University, Ohio.
- Stacey, G., & Hardy, P. (2011). Challenging the shock of reality through digital storytelling. *Nurse education in practice, 11*(2), 159-164.
- Stanley, M.J.C., & Dougherty, J.P. (2010). A paradigm shift in nursing education: A new model. *Nursing education perspectives, 31*(6), 378-380.
- Story. (2012a). *Dictionary.com*. Retrieved from <http://dictionary.reference.com/browse/story?s=t>
- Story. (2012b). *Merriam-Webster Dictionary Online*. Retrieved from <http://www.merriam-webster.com/dictionary/story>
- Sugiyama, M.S. (2011). The forager oral tradition and the evolution of prolonged juvenility. *Frontiers in Evolutionary Psychology, 2*(133), 1-19.
- Thibodeaux, W.M. (2012). What is a pedagogical tool? *WiseGEEK*. Retrieved from <http://www.wisegeek.com/what-is-a-pedagogical-tool.htm>
- Thomas, A.K., Hannula, D.E., & Loftus, E.F. (2007). How self-relevant imagination affects memory for behavior. *Applied Cognitive Psychology, 21*(1), 69-86.

- Toy, Karina. L. (2013). *Preservice Teachers Engaging With Social Constructivism in Elementary Classrooms*. (Unpublished doctoral dissertation). University of Alberta, Canada.
- Walters, L.M., Green, M.R., Wang, L., & Walters, T. (2011). From heads to hearts: Digital stories as reflective artifacts of teachers' international experience. *Issues in Teacher Education, 20*(2), 37-52.
- Weaver, K., & Olson, J.K. (2006). Understanding paradigms used for nursing research. *Journal of Advanced Nursing, 53*(4), 459-469.
- Werth, E.P., & Werth, L. (2011). Effective Training for Millennial Students. *Adult Learning, 22*(3), 12-19.
- Wyatt, T.H., & Hauenstein, E. (2008). Enhancing children's health through digital story. *Computers Informatics Nursing, 26*(3), 142-148.
- Young, L.E., & Maxwell, B. (2006). Student-Centered teaching in nursing: From rote to active learning. In L. Young & B. L. Paterson (Eds.), *Teaching nursing: Developing a student-centered learning environment*. (pp. 3-19). Retrieved from <http://books.google.com/books?hl=en&lr=&id=cSHaIFhWNdEC&oi=fnd&pg=PA3&dq=Narrative+pedagogy+Young+and+Maxwell&ots=IU2kyZyVbB&sig=zIQRIV0Onmvd5B414HhbTWpV3rg#v=onepage&q=Narrative%20pedagogy%20Young%20and%20Maxwell&f=false>
- Yuksel, P., Robin, B.R., & McNeil, S. (2011). *Educational Uses of Digital Storytelling Around the World*. Retrieved from [http://digitalstorytelling.coe.uh.edu/survey/SITE\\_DigitalStorytelling.pdf](http://digitalstorytelling.coe.uh.edu/survey/SITE_DigitalStorytelling.pdf).

# APPENDIX A

## INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

[http://epirate.ecu.edu/app/Doc/0/KES3P92GRQVKB6BRA151IR9545/...](http://epirate.ecu.edu/app/Doc/0/KES3P92GRQVKB6BRA151IR9545/)



**EAST CAROLINA UNIVERSITY**  
**University & Medical Center Institutional Review Board Office**  
4N-70 Brody Medical Sciences Building · Mail Stop 682  
600 Moye Boulevard · Greenville, NC 27834  
Office 252-744-2914 · Fax 252-744-2284 · [www.ecu.edu/irb](http://www.ecu.edu/irb)

### Notification of Initial Approval: Expedited

From: Biomedical IRB  
To: [Melissa Schwartz](#)  
CC: [Kathleen Sitzman](#)  
Date: 9/11/2013  
Re: UMCIRB 13-001121

A Descriptive Qualitative Study Exploring how Nurse Educators use Digital Stories in the Classroom.

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(S) is for the period of 9/11/2013 to 9/10/2014. The research study is eligible for review under expedited category #6 and 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
Schwartz confirmation e-mail	Additional Items
Schwartz Demographic Questionnaire	Surveys and Questionnaires
Schwartz Interviewee Note Guide	Interview/Focus Group Scripts/Questions
Schwartz IRB chpt 1-3	Study Protocol or Grant Application
Schwartz Qualtrics E-mail Query	Consent Forms
Schwartzm Probing Question Tree	Interview/Focus Group Scripts/Questions

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IR300000/05 East Carolina U IRB #1 (Biomedical) ICRG0000418  
IR300003781 East Carolina U IRB #2 (Behavioral/SS) ICRG0000418

## APPENDIX B

### E-MAIL QUERY OF FACULTY

Dear (Participant Name),

I am a faculty member and graduate student at East Carolina University College of Nursing in Greenville, North Carolina. (I have read your published work [xxx] on digital stories, or A mutual colleague of ours has recommended I speak with you about your use of digital stories in nursing education). I am asking you to take part in my research entitled, “A descriptive qualitative study exploring how nurse educators use digital stories in the classroom.” Examples of digital stories might include: You Tube videos, short educational movies, and oral storytelling within digital stories.

The purpose of my research is to explore how nurse educators use digital stories in the classroom. Two main issues will be explored: 1) How and for what purpose are nurse educators incorporating digital stories in the classroom? And 2) What benefits and/or problems have been identified in the use of digital stories in nursing education? By doing this research, I hope to gather information that will benefit fellow educators as they use digital stories for educational purposes. Your participation is voluntary.

The inclusion criteria for research participants includes: 1) Nurse educators in BSN programs, 2) Nurse educators who use or have used digital stories in the classroom, and 3) English speaking. The amount of time it will take you to complete this study is expected to be between 30 minutes and 2 hours (one interview by telephone lasting less than 75 minutes and one or more meetings by telephone or through e-mail to review the principal investigator’s transcripts). Probing questions using a semi-structured interview guide will be used and you will be asked to respond in your own words.

Because this research is overseen by the University & Medical Center Institutional Review Board (UMCIRB), some of its members or staff may need to review my data. Your identity will be evident to those individuals who see this information. However, I will take great precautions to ensure that anyone not authorized to see your identity will not be given access.

If you have questions about your rights as someone taking part in research, you may call the UMCIRB Office at phone number 252-744-2914 (days, 8:00 am-5:00 pm EST). If you would like to report a complaint or concern about this research study, you may call the Director of UMCIRB Office, at 252-744-1971.

You do not have to take part in this research, and you can stop at any time. By clicking on the survey link below, you agree to participate in this study.

Thank you for your consideration,

Melissa Schwartz PhD(c), MSN, RNC-OB, Principal Investigator  
East Carolina University College of Nursing  
[Schwartzme@ecu.edu](mailto:Schwartzme@ecu.edu)  
252-638-1658

[Take the Survey](#)

## APPENDIX C

### DEMOGRAPHIC QUESTIONNAIRE

What is the highest level of education you have completed?

- Diploma
- 4-year College Degree
- Masters Degree
- Doctoral Degree

How many years have you been a nurse?

- Less than 5 years
- 6-10 years
- 11-20 years
- 21+ years

How many years have you been teaching nursing in the classroom?

- Less than 5 years
- 6-10 years
- 11-20 years
- 21+ years

What is your gender?

- Male
- Female

Which state, country, or continent do you live in?

- Africa
- Asia
- Australia
- Canada
- Europe
- South America
- United Kingdom
- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota



- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin

What best describes your school setting? Choose all that apply.

- Public
- Private
- Open enrollment
- Competitive enrollment
- BSN program
- MSN program
- PhD program

Please provide a phone number that I may use to contact you.

Please provide the preferred days and time windows that you can be reached.

## APPENDIX D

### INTERVIEW CONFIRMATION E-MAIL

Hello (XXX),

Thank you for agreeing to participate in my study and completing the demographics survey. I look forward to speaking with you on (XXX). Below you will find my intended interview questions, which will help guide our discussion.

How and for what purpose are you incorporating digital stories in the classroom?

- 1) Please tell me the most compelling reasons for your use of digital stories in the classroom.
- 2) How do you go about incorporating digital stories into your teaching practice?

What benefits and/or problems have you identified in the use of digital stories in the classroom?

- 1) How do your students react to the use of digital stories in the classroom?
- 2) Describe the top 3-5 challenges related to digital stories in the classroom.
- 3) Describe the top 3-5 benefits of digital stories in the classroom.
- 4) Would you like to say anything else about digital stories in the classroom to me?

Thank you for your participation,

Melissa Schwartz  
East Carolina University  
3127 Health Sciences Complex  
Greenville, NC 27858  
[Schwartzme@ecu.edu](mailto:Schwartzme@ecu.edu)  
(252)638-1658

## APPENDIX E

### PROBING QUESTION TREE

#### **I. Please tell me the most compelling reasons for your use of digital stories in the classroom.**

##### A. Student interaction:

- a. Tell me what type of interaction you wanted to achieve?
- b. Go to question II.

##### B. Student project:

- a. Tell me more about why you incorporated digital stories as a project.
  1. If for fun go to question I.D.b.
- b. Tell me how you instructed them on the project.
- c. Tell me how you graded them on the project.
- d. Go to question II.

##### C. Introduction to concept:

- a. Tell me about the digital story used to introduce the concept.
  1. Where did you find the digital story?
  2. What were you looking for when choosing the digital story?
    - a. Humor? Tell me why a humor was desired.
    - b. Length (how long did you want the digital story to be and why?)
    - c. Content (did you want it to cover steps to a procedure correctly or were you looking for incorrect steps to prompt class discussion?)
    - d. Educational? Non-Educational? Tell me why.
    - e. Student created? Tell me why?
    - f. Expert created? Tell me why?
    - g. Patient created? Tell me why.
    - h. Go to question II.

##### D. Fun:

- a. Tell me why a humorous digital story aided in making the class fun.
  1. Go to question II.
- b. Tell me why you wanted students/faculty to develop a digital story for fun?
  1. Tell me why you felt student developed digital stories would enhance lecture?
  2. Go to question II.

##### E. Appeal to different learning styles:

- a. What learning styles were you specifically hoping digital stories would appeal to?
  1. Tell me more about how digital stories can aid in Kinesthetic, auditory, visual learning styles.
  2. Go to question II.

## **II. How do you go about incorporating digital stories into your teaching practice?**

### **A. Placement of digital story for class**

1. Before lecture.
  - a. Tell me why you incorporate the digital story before lecture?
  - b. Go to question III.
2. Middle of lecture.
  - a. Tell me why you include the digital story in the middle of class.
  - b. Go to question III.
3. Before break.
  - a. Tell me why you include the digital story before break.
  - b. Go to question III.
4. After break.
  - a. Tell me why you include the digital story after Break?
  - b. Go to question III.
5. End of lecture.
  - a. Tell me why you incorporate the digital story after the lecture?
  - b. Go to question III.

## **III. How do your students react to the use of digital stories in the classroom?**

### **A. Like.**

1. Tell me about the positive responses/reactions received.
  - a. Go to question IV.

### **B. Dislike.**

1. Tell me about the negative responses received.
  - a. Go to question IV.

### **C. Have not inquired.**

1. Tell me why you have not inquired.
  - a. Go to question IV.

## **IV. Describe the top 3-5 challenges related to digital stories in the classroom.**

### **A. Time**

1. Tell me about issues pertaining to time.
  - a. Go to next challenge or question V.

### **B. Resources**

1. Tell me about issues pertaining to resources.
  - a. Go to next challenge or question V.

### **C. Finding appropriate digital story**

1. Tell me about issues pertaining to finding appropriate digital stories.
  - a. Go to next challenge or question V.

### **D. Scheduling the development of a digital story.**

1. Tell me about issues pertaining to scheduling the development of a digital story.
  - a. Go to next challenge or question V.

**V. Describe the 3-5 benefits of digital stories in the classroom.**

- A. Breaks up monotony of listening to lecturer.
  - 1. Tell me why you feel the need to break up the monotony of listening to the lecturer.
    - a. Go to question next benefit or question VI.
- B. Appeals to different learning styles.
  - 1. Tell me about the different types of learning styles that you feel digital stories appeals to.
    - a. Go to next benefit or question VI.
- C. Prepares students to work in the 21<sup>st</sup> century.
  - 1. Tell me how you feel it prepares students to work in the 21<sup>st</sup> century.
  - 2. Will you provide some examples on how digital stories have assisted students entering today's job market.
    - a. Go to next benefit or question VI.
- D. Promotes empathy.
  - 1. Tell me how you feel it promotes empathy.
  - 2. Will you provide some examples supporting how digital stories have promoted empathy in your students?
    - a. Go to next benefit or question VI.

**VI. Would you like to say anything else about digital stories in the classroom to me?**

**Thank you for taking part in my study. I will e-mail you a copy of the transcripts for your review. I may also contact you by phone or through e-mail in the event I have additional questions for purposes of clarity. For anonymity, I am going to stop the recording now. I do have one final question, do you know of anyone that you can recommend that has experience with digital stories in the classroom and might be willing to participate?**

## APPENDIX F

### ADDITIONAL TABLES

Table F1

*Compelling Reason One: Capturing Their Attention through Media*

---

<b>Reason</b>	<b>Illustrative quotes</b>
Capturing their attention through media	P1 The simple fact is movies or pictures with story combined are just more interesting to watch than pure text. So students enjoy it. You find most people would rather watch movies than read a textbook. Over the years, we've tried to use different media in our classroom. You know, to see what will work with our students. And the simple fact is, it seems that movie type media is the best. It really gets their attention.
	P1 The most compelling reason is quite simply it's a good medium, it gets people's attention, so they enjoy it, and it's something they are very comfortable with.
	P4 . . . to me the thing that makes it so special is that it's from a personal perspective. That there is one in the two hour period. And so you really get their attention.
	P9 I use it to capture their attention and to develop interest in a topic area. Not necessarily to give them all the information that they need, but just to capture their attention so that they're interested in learning more.
	P10 I think attention getting and holding their interest because I think that sometimes people just come to class and . . . they're expecting the same old thing. And usually they know that a clip is usually just going to be something short and lots of times it's funny or compelling or something like that. And so, it immediately catches their attention, and they are going to watch it right off the bat.
	P10 . . . depending on what I'm using it for. I put it right at the beginning or sometimes in the middle. If I'm using it to arouse emotion or to get attention, I try to put it at the beginning . . .
	P11 It goes to their attention to grasp it. The media itself, I think, is probably what captures them . . .
	(continued)

---

Table F1 (Continued)

Reason	Illustrative quotes
Capturing their attention through media	
<i>Students are used to this medium of learning</i>	<p>P1 But you know the idea is, we have to build a medium to meet students at least part way. . . . So, anytime we can teach a way that is comfortable then I think we're probably several steps ahead.</p> <p>P1 It is intuitive for modern students. They do digital stories all the time anyway.</p> <p>P2 I had students previously write and read their narratives . . . but students would just, um, look at their paper and read and it was just not really very compelling or interesting to listen to. So . . . I thought, with these students being so used to video and multimedia messaging that to be able to tell stories in a multimedia fashion would be much more . . . interesting. And I was right.</p> <p>P4 Well, this is a technology generation, you know, um, I have two daughters in that age group and I noticed they watch TV, they have their phone, their texting, and they are studying, and they're reading all the same time. Um, and so they are bombarded with information from the time they get up to the time they go to bed. And I think to maintain their interest you have to use different types of media and different types of input um, to help them to learn.</p> <p>P4 I think we have to realize in teaching who our audience is. Um, we often teach how we were taught, but we need to teach how our audience learns and so I think that's important with that generation we are teaching now. That we use all the media that we have.</p>

Table F2

*Compelling Reason Two: Change Things up a Bit*

---

<b>Reason</b>	<b>Illustrative Quotes</b>
Change things up a bit	<p data-bbox="493 409 1219 661">P2 I want them to approach their learning with some joy and excitement. I don't want it to feel like a burden. . . .I hope the digital story will remove some of those barriers to what can be a burden writing a paper, or trying to do something in a traditional way. And that they can because they don't get much opportunity to express themselves in a very creative way a lot of times. So, I think, it's just kind of refreshing and it's different from anything they've had to do before.</p> <p data-bbox="493 695 1219 814">P6 The impact of the variety that drama can bring. That leads to memory retention, and learning, and improved discussion of that topic-would probably be my big reason. Change things up a bit.</p> <p data-bbox="493 848 1219 1178">P10 I think attention getting and holding their interest because I think that sometimes people just come to class and their sort of ho hum and they're expecting the same old thing. . . . It breaks things up. It sets a different tone in the class than you would get if you were just going to lecture. I think maybe as I've taught more that I've come to decide that you have to break things up and you have to sort of keep them guessing. So they don't say, "Here we go. We're going to lecture again." You know, I want them to come say, "Well, that's what she did last week, I wonder what she's going to do this week."</p>

---



Table F3

*Compelling Reason Three: A Sharing Experience*

---

<b>Reason</b>	<b>Illustrative Quotes</b>
A Sharing experience	<p data-bbox="493 411 1227 499">P1 But it seems that the ones, digital stories, they had the most fun with. They had the most fun sharing and other people enjoyed watching them.</p> <p data-bbox="493 533 1227 590">P2 . . . nobody is forced to share them in public unless they want to</p> <p data-bbox="493 623 1227 680">P9 . . . using the digital stories was a way for me to get the students to share their experiences with other students.</p> <p data-bbox="493 714 1227 982">P12 . . . we kind of produced photographs holding up signs of what death and dying meant to them, and what it made them think about, and what it made them feel . . . I asked all the students to kind of . . . send . . . photographs of themselves . . . holding up something . . . but also ask maybe their family and friends what they thought, and if they wanted to be a part of this. . . It was about getting the message around, beyond the classroom. I wanted to send the message beyond the classroom . . .</p> <p data-bbox="493 1016 1227 1262">P12 In class, they have to write this . . . post to this board with just a few lines on it that made them almost focus down what their core feelings were about death and dying, and what they were scared of, and what they were frightened of. So, it was condensing it down and seeing everyone else's and share it together in a kind of a shared endeavor . . . and then publicize it, and put it out there, we emailed it around, and put it on YouTube. It gets them to be kind of aware of these things . . .</p>

---

Table F4

*Compelling Reason Four: Seeing, Hearing, and Feeling*

---

Reason	Illustrative quotes
Seeing, hearing, and feeling	
<i>Seeing and hearing</i>	P3 They actually see and hear the emotion. You can't really tell that when you're lecturing about it . . . . The most appealing thing, you can hear it right from the patient, the nurse . . . .
	P4 I think in nursing school they learned about so many different disease process that they memorize the cold facts and they don't really see how it affects the patient themselves and the people that love them . . . . to hear a different voice gets their attention.
	P5 Once you hear it and then you watch it. I just think it cements that information in their minds.
	P6 . . . a good recording that might grab the student's attention better than me relaying something to them secondhand and they hear something . . . you need to see it to grasp a real picture of it.
	P7 I think that it really helps students to see that these are people's real lives, these are what people are dealing with day in and day out, and, you know, these are not just stories, they are real people, they're real stories, and I think that, that really helps.
	P8 I think that the students they don't learn only by listening. They learn by seeing, doing, and they are to use all the senses.
	P9 . . . in general students like to see and hear at the same time.
	P11 . . . there's also this sort of power there attached to students hearing those experiences in a classroom setting . . . .
	P12 We have all lost things or people. How can we relate? I think we need to see that, hear that, rather than to be told the cold facts about it.

(continued)

---

Table F4 (Continued)

Reason	Illustrative quotes
Seeing, hearing, and feeling	
<i>Seeing and hearing</i>	<p>P12 I think it's the digital story that highlights how people experience that and how people empathize. We have all lost things or people. How can we relate? I think we need to see that, hear that, rather than to be told the cold facts about it. So, I think that those kinds of areas are useful.</p>
<i>Feeling</i>	<p>P3 . . . students can hear and you then you know feel that person speaking . . . students can really hear and see what's going on, an actual demonstration of the story, what's going on, you know for that value.</p> <p>P4 So, I feel like being able to see it as well as hearing a different voice makes it as good for them and they are able to retain it because they remember the story that went along with that information.</p> <p>P11 I think that they help the students feel more like what it's like to be in that position.</p> <p>P12 I think moving images with expressions of feeling emotion really taps into our students feelings . . . much more from a story that makes them feel than a book that makes them think.</p> <p>P12 I think things that are hard to quantify and really need to be felt rather than understood. Things like spirituality. Things like grief and loss. I think it's quite hard for us to teach from a technical perspective, from the cognitive, from the fact and figures type approach. I think really we need to look at what is the group's responses and how does it make people feel. I think it's the digital story that highlights how people experience that and how people empathize. We have all lost things or people. How can we relate? I think we need to see that, hear that, rather than to be told the cold facts about it. So, I think that those kinds of areas are useful.</p>
	(continued)

Table F4 (Continued)

Reasons	Illustrative quotes
<p>Seeing, hearing, and feeling</p> <p><i>Touches the Affective Domain</i></p>	<p>P2 I would just say it is a very enjoyable way to, you know; get at some more of the affective learning domain. It's certainly the way I use it.</p>
	<p>P3 . . . I like using digital stories because it gets to that affective domain, that students can really hear and see what's going on, an actual demonstration of the story . . .</p>
	<p>P3 I would say the most compelling reason I use digital stories is that it gets through the affective domain for teaching.</p>
	<p>P8 . . . normally use short clips from YouTube or music to open up the window to the mind, um; I hope I use the correct word when I say the affective, emotional teaching.</p>
	<p>P12 . . . the biggest benefit is it taps into that emotional domain, the affective domain.</p>
	<p>P12 I've actually found that a very pragmatic, didactic teaching style of just working in the cognitive domain didn't really seem to engage them, didn't really seem to gather, or make them feel, or think . . . by using digital stories, using video, audio, linking those together . . . really kind of brought home the emotional side of practice as well as kind of the technical . . . more cognitive . . . rational kind of elements.</p>
	<p><i>Gains Patient Perspective</i></p> <p>P4 I think in nursing school they learned about so many different disease processes that they memorize the cold facts and they don't really see how it affects the patient themselves and the people that love them.</p>
	<p>P7 I think that it really helps students to see that these are people's real lives, these are what people are dealing with day in and day out . . . these are not just stories, they are real people, they're real stories, and I think that, that really helps.</p>
	<p>P11 . . . we do a lot of work with service user's actually delivering teaching and facilitating those. And some of those people made digital stories themselves and they can use their stories as part of their teaching sessions and use them as those triggers for their facilitative discussions. ...I think that they help the students feel more like what it's like to be in that position.</p>
	<p>(continued)</p>

Table F4 (Continued)

<b>Reason</b>	<b>Illustrative quotes</b>
Seeing, hearing, and feeling	<p data-bbox="302 415 451 476"><i>Gains Patient Perspective</i></p> <p data-bbox="488 415 532 443">P12</p> <p data-bbox="570 415 1214 569">And I thought this was powerful, this can change people's views and perspectives and they can understand things that are much more intangible such as compassion, and care, and love, much more from a story that makes them feel than a book that makes them think.</p>

Table F5

*Compelling Reason Five: Feel, Intuit, Think (FIT)*

---

Reason	Illustrative Quotes
Feel	P4 . . . I feel like being able to see it as well as hearing a different voice makes it as good for them . . .
	P5 I feel that digital stories . . . after I have spoken the words to the students that to use an example as a digital story . . . reaches a different part of the brain.
	P8 . . . I'm doing this very much based on what I feel will work.
	P9 . . . it's my feeling that the stories draw students into the experience of it . . .
Intuit	P2 . . . my intuition was that they want to do things a little bit differently.
	P8 I am very much using my own intuition and I've been a teacher for a really long time. And so I have some intuition for what will work and for what will not work among these groups, and in these age groups.
Think	P2 . . . I think the students enjoy not having another paper to write . . . I think people just engage better with the story.
	P4 . . . I think in nursing school they learned about so many different disease processes that they memorize the cold facts and they don't really see how it affects the patient themselves and the people that love them.
	P4 I think it's, in my opinion . . . I think it gives them a better retention of information . . . to hear a different voice gets their attention.
	P5 And I think that enhances learning.
	P7 I think as a method of teaching . . . they add to that quality . . . to that teaching session.
	P12 I think it's quite hard for us to teach from a technical perspective, from the cognitive, from the fact and figures type approach. I think really we need to look at what is the group's responses and how does it make people feel.

---

Table F6

*Incorporating Digital Stories Method One: Digital Stories Embedded in PowerPoint*

---

<b>Method</b>	<b>Illustrative Quotes</b>
Digital stories embedded in PowerPoint	P3 . . . when I'm making . . . my PowerPoint's . . . . I will . . . embed the link in there and then it goes right to it.
	P4 Mainly, I use YouTube videos . . . . and I embed them in my PowerPoint . . . . I like to embed them because that way it doesn't really delay it from going out to YouTube, and bringing it in, and you know to me when you have to minimize one screen and bring up another it kind of breaks . . . the momentum that you've got going on . . .
	P5 I learned how to embed a video so that all you had to do is click on the link and it goes right there to the video.
	P10 . . . I try to embed it into my PowerPoint . . .
	P11 I would be more likely to download them and put them in the PowerPoint. Just so I know that they will work.
<i>Where to embed</i>	P3 . . . talk about it . . . . Then after we've discussed it, I show them what happened.
	P4 . . . now that we've discussed . . . I want you to watch this video . . . then they will watch the video, and then . . . I let that stay for a minute just so they can self reflect on what they've seen and then we start to talk about it.
	P6 I gave them some information before showing them the video so they wouldn't go into it cold and be completely unknowing of what they were going to see.
	P8 . . . I talk to them before just for them to open up and understand the film clip.
	P10 I put it right at the beginning or sometimes in the middle. If I'm using it to arouse emotion or to get attention, I try to put it at the beginning . . . if it goes with a specific topic that really is not sort of an introduction then I just embed it where ever it fits . . .

---

Table F7

*Incorporating Digital Stories Method Two: Digital Stories Embedded in the Virtual Learning Environment*

---

<b>Method</b>	<b>Illustrative Quotes</b>
Digital Stories embedded in the virtual learning environment	<p>P1 So far, we've been just using them as an adjunct so the students can on their own time go view them on Blackboard . . . that way they can see the digital stories and review them . . .</p> <p>P7 We have modules where they have to go and access them . . . Then they can navigate through them from day-to-day as well and return to them.</p> <p>P9 . . . students view . . . them and comment on them in a discussion board . . . I just leave it online so then the students can watch them at their leisure instead of being forced to watch . . . 15 of them in a row.</p> <p>P12 . . . people very kindly allowed their stories to be presented on the National Health Service Website to be seen by others . . . I use those. We kind of embed those into our . . . virtual learning environment.</p>

---



Table F8

*Incorporating Digital Stories Method Three: Digital Stories to Prompt Discussion*

---

Method	Illustrative Quotes
Digital stories to prompt discussion	<p>P2 . . . they produce a 3 to 5 minute digital story that simply tells the story of an ethical worry and then they get posted to our e-learning website and I asked them to view each other's digital stories and let me know which ones they think would make a good classroom discussion and we watch. . . . we use it in class as a live discussion; I think it just works better . . . . it became clear to me that . . . after listening to a couple of years of these digital stories that . . . students wanted to talk about [them] . . . I call it finding their voice . . . . And the discussion is usually very rich. I mean these are really difficult situations often that um, the students want to talk about them. And so we spend a lot of time actually sometimes 20 minutes just talking about one three minute video. . . . rather than trying to have a full class after an exam. . . . we do this . . . no need to take notes just come and sit and we talk. . . . it happens only on two occasions during the semester. So, we only really watch a total of eight throughout the whole semester.</p>
	<p>P3 I give them reflection questions so they can talk, they can reflect on it, and then I get them to talk about it in a group setting. . . .what we usually do is let them discuss it in groups of 3 to 4 to make it a little easier. And then they select a spokesperson in each of the groups and then when we're done with that the spokes person will give us feedback and talk to us about what they discussed in their small groups.</p>
	<p>P4 We will talk about the disease process and then I will say something along the lines . . . now that we've discussed it . . . I want you to watch this video about how it actually impacted a family. . . .they will watch the video . . . then I will usually say . . . now that you've actually seen the video . . . I just want to reiterate to you that these are actually patients that we're caring for not just disease processes and not just facts that you're memorizing, but these will be patients you will be caring for . . . usually immediately when the video goes off there is a real silence in the classroom. And I let that stay for a minute just so they can self reflect on what they've seen and then we start to talk about it.</p>

(continued)

---

Table F8 (Continued)

Method	Illustrative Quotes
Digital stories to prompt discussion	P6 A digital story helps them visualize and see and it opens up a lot of doors for discussion.
	P7 They do generate a lot of discussion.
	P8 . . . I talk to them before just for them to open up and understand the film clip. And then I show them the film . . . . Then they see what my point is in the video clip and they understand what I said before, and it opens it up for discussion.
	P9 . . . students . . . view multiples of them and comment on them in a discussion board.
	P10 We do that discussion right at the beginning related to the video. And we have about 45 minutes or so of lecture time where we're using the PowerPoint . . . about 45 minutes or so of discussion afterwards. Case study and discussion combined.
	P11 . . . we do a lot of work with service user's actually delivering teaching and facilitating those. And some of those people made digital stories themselves and they can use their stories as part of their teaching sessions . . . as . . . triggers for their facilitative discussions. . . . we then use the digital stories that they created within the teaching . . . . we use them as triggers . . . so the students would watch . . . the digital story . . . . Then they would brainstorm or discuss the . . . significant areas that would arise from that particular digital story, and then they go and do research on those elements, and then they bring it back, and get feedback, and discuss what they've learned, and teach each other . . .

(continued)

Table F8 (Continued)

Method	Illustrative Quotes
Digital stories to prompt discussion	<p>P12 We have a strong users and carer’s group here at [name omitted for confidentiality] and we notice that telling a story time and time again is quite hard for them. So, what we do is film quite a lot of these and we use those in the classroom to try and kind of promote discussion and debate. . . . I think sometimes it's the breaking of the methodology of how you teach by using different means of, maybe some information giving, then a digital story, and they've created some bulls groups and then getting feedback from those groups. Using twitter as well to get some back channel discussions about how people feel or think about that-we've used that before.</p>
<i>Frameworks and models to guide discussion</i>	<p>P2 I use an ethical framework to debrief it. . . .we basically have a little pneumonic we ask them what are the facts, what are the ethical problems, who are the stakeholders, what are the options . . . and how do we know if we've made any difference? Or how could we reevaluate the situation.</p> <p>P7 . . . they look at that digital story and there's a summative assessment where they have to consider this service users healthcare needs using a model of healthcare . . . Naidoo and Wills, "Dimension's of Health Model." . . . we ask students to apply the dimensions such as how someone might be affected physically by a condition, how they might be affected emotionally . . . . And these are different dimensions, the students are asked to consider, but they have to look at the digital story first.</p> <p>P12 . . . we base our assessments on asking students to pick one of those stories and to . . . look at the different domains of health that might need some nursing input and care . . . . how does this illness appear to affect this person emotionally, psychologically, and spiritually? What is the domain of sexual health, physical health that might be affected . . . we use it as a kind of . . . assessment process . . . that people engage in . . . and look at the condition, and research more on that condition . . .</p>

Table F9

*Incorporating Digital Stories Method Four: Digital Stories to Assess the Storyteller's Healthcare Needs*

---

<b>Method</b>	<b>Illustrative Quotes</b>
Digital stories to assess the digital storyteller's needs.	<p>P7 We have generally around I'd say 8 to 10 digital stories for them to access. And they have to choose one, and they look at that digital story and there's a summative assessment where they have to consider this service users healthcare needs using a model of healthcare . . . . And we ask students to apply the dimensions such as how someone might be affected physically by a condition, how they might be affected emotionally, and so on. And these are different dimensions, the students are asked to consider, but they have to look at the digital story first. And then they write a summative assessment about this patient or service user's experience, and how they might be affected by their particular health condition, or health needs.</p> <p>P11 . . . we use them as triggers . . . so the students would watch . . . the digital story . . . . Then they would brainstorm or discuss the . . . significant areas that would arise from that particular digital story, and then they go and do research on those elements, and then they bring it back, and get feedback, and discuss what they've learned, and teach each other . . . .</p>

---

Table F10

*Incorporating Digital Stories Method Five: Digital Stories Created as a Project to Share*

---

<b>Method</b>	<b>Illustrative Quotes</b>
Digital stories created as a project to share	<p>P1 . . . we have also done . . . videos using actual digital stories created by the students and so we break up clinical groups and then have them create a digital story about some aspect of OB nursing . . . they are creating presentations . . . 3 to 5 minutes. They were given subjects like birth control. I think there were 11 total digital stories. And they had to . . . in little groups of 5 to 6, create content, upload it, and . . . put it on Blackboard.</p> <p>P2 . . . tell a story about an ethical worry that they encountered in clinical practice.”</p> <p>P2 . . . they produce a 3 to 5 minute digital story that simply tells the story of an ethical worry and then they get posted to our e-learning website and I asked them to view each other’s digital stories and let me know which ones they think would make a good classroom discussion and we watch . . . I have usually between 40 and 50 students in my class . . . So, we select . . . two or three on a couple of occasions and watch them.</p> <p>P9 They have to summarize what their site is like, what their population is like, and . . . And they get to . . . experience vicariously what the other clinical sites are like . . . I have 85 students in the class . . . there are about 17 clinical groups and each clinical group prepares a digital story at the end of the year.</p> <p>P12 I got my group to do a small video . . . we kind of produced photographs holding up signs of what death and dying meant to them, and what it made them think about and what it made them feel. We put that into an audio visual presentation with a kind of a musical background and somebody wrote a poem . . . it was all about what we call advanced care planning. It was all about discussing your wishes, letting people know . . . . It was in a group of like 70 . . . . I didn't want to make it a summative assignment, mainly because I thought people would feel obliged to be a part of it. Actually, I wanted people to want to be a part of it rather than forcing them to.</p>

---

Table F11

*Student Reactions Theme One: No Negatives, Very Positive*

---

	<u>No Negatives</u>		<u>Very Positive</u>
P2	I don't really think I've heard any negative feedback from it.	P3	. . . very positive results about using, seeing digital stories in the classroom . . . . I've had very positive reactions when students are able to view them, talk about them, discuss them, and reflect about them.
P3	. . . no real negatives.	P5	Positive . . . they were very receptive to it . . . they learned from it.
P4	I haven't received any negative feedback form the students regarding using them.	P7	. . . they had very positive feedback . . .
P5	I did not see any negative emotions etc.	P8	Mostly they say, they remember the digital stories and they remember the music and I get positive feedback from it.
		P11	It's really always been evaluated and rated positively . . . we've always had quite positive feedback.

---

Table F12

*Student Reactions Theme Two: Students and faculty enjoy*

---

Theme	Illustrative quotes
Students and faculty enjoy watching	P1 The simple fact is, movies or pictures with story combined are just more interesting to watch than pure text. So students enjoy it.
	P2 I enjoy the excitement of the reflection I hear. It's much nicer to listen to digital stories instead of grading papers. Um, and I just enjoy it so much more. And I think the students enjoy not having another paper to write . . . . Well let's see they're a much more enjoyable assignment.
	P5 I think it's just enjoyable. I think the students enjoy it . . . . "[omit name] we enjoyed that."
	P9 I think it's when they see everybody else's that's when they see the value of it . . . they enjoy watching them.
	P12 They enjoy the idea of actually doing something different.
<i>Enjoy watching others</i>	P1 I don't have any hard data to back that up. But it seems . . . They had the most fun sharing and other people enjoyed watching them.
	P2 They enjoyed watching others . . . others videos.
	P9 And they really, really enjoy watching everybody else's . . . I think it's when they see everybody else's and that's when they see the value of it. . . the biggest benefit is . . . all the students get to see what all the other students did in their clinical.

---

Table F13

*Student Reactions Theme Three: Students like them*

---

<b>Theme</b>	<b>Illustrative Quote</b>
Students like them	P2 I do get evaluated feedback that students will say that they really, really liked it. It was a great assignment.
	P6 . . . the student's reaction was that they really liked that. It was easier for them to grasp what was going on.
	P8 Commonly they say that this was a good way of teaching. I really liked this way . . . you made me understand.
	P9 I get a lot of feedback that they like that.
	P12 I think some people are very visual learners and . . . kinesthetic kind of learners that like to do it, and discussing, and being part of something, as opposed to reflection, sitting back, thinking about information that is coming at them.

---



Table F14

*Student Reactions Theme Four: Wow! Ooh! and Aah!*

---

<b>Theme</b>	<b>Illustrative Quote</b>
Wow! Ooh! and Aah!	P5 “Wow!” “Ooh” I mean, it was just like, “I know, wow, that is the circle of violence right there!” So, it just sort of hit home and made it more real for the students.
	P6 Well, seeing that quick little thing and the chest tube and trocar going between the ribs. I’ve got students going “Ooh” “Aah” “Ooh” . . . How long is it going to take me to explain that? And they still couldn’t visualize it if all I was doing was trying to talk them through it, and tell them what it would look like, and what was happening . . .

---

Table F15

*Student Benefits Theme One: Greater Depth of Discussion*

---

Theme	Illustrative quotes
Greater depth of discussion	P2 . . . the discussion is really very rich.
	P2 . . . greater depth of discussion of the topic.
	P6 The impact of a variety that drama can bring. That leads to memory retention, and learning, and improved discussion of that topic.
	P6 A digital story helps them visualize and see and it opens up a lot of doors for discussion.
	P7 They do generate a lot of discussion.
	P11 . . . because of that emotional reaction to things that it really initiates some in-depth discussion. And we go into sort of a different depth of discussion . . .
	P11 The media itself, I think, is probably what captures them and then the point is made really succinctly. . . I find them to be really powerful and they go straight to the point that we want to make.

---

Table F16

*Student Benefits Theme Two: Making a Point*

---

Theme	Illustrative quotes
Making a point	P2 . . . she makes a point . . . that sickle cell patients often have poorly managed pain . . . the senior level student can get to that level. But you know it's something useful to make a point for the junior student.
	P2 . . . it's just another way for me to make my point. To get my point across and lecture instead of just standing up there and saying, "Oh' you know research shows sickle-cell . . ." I can actually have a real life example from a student that makes that point.
	P6 . . . you can bring home so many points so quickly with a story.
	P7 . . . watch one that emphasized a particular issue and then use that particular digital story to make the point.
	P8 I want to go straight to the point. And I want it to be an eye-opener or something that really gets straight to what I want them to see, understand, grasp.
	P10 It makes points in ways that you can't make verbally through lecture.
	P11 The media itself, I think, is probably what captures them and then the point is made really succinctly.
	P11 I find them to be really powerful and they go straight to the point that we want to make.

---

Table F17

*Student Benefits Theme Three: Engaging the student*

---

<b>Theme</b>	<b>Illustrative quotes</b>
Engaging the student	P1 Quite simply, they are engaging . . . it engages the student no question about it. Student created videos engage more than anything else.
	P2 . . . I think people engage better with a story.
	P5 They are more engaged.
	P11 . . . have a real impact on the students and seem to really, really engage in them . . . I think they feel really engaged by them and often quite moved by the content . . .
	P12 . . . I think it engages different learning styles- that is one key thing.

---

Table F18

*Student Benefits Theme Four: Promoting Reflection*

---

<b>Theme</b>	<b>Illustrative quotes</b>
Promoting reflection	<p data-bbox="493 409 1226 556">P2 I'm using it to teach students to reflect on their practice. P3 When you hear someone, you can really get them to reflect on what it is they hear afterwards. Whereas, if you just tell them something about it you might not get that type of reaction from them, or that reflection from them.</p> <p data-bbox="493 588 1226 714">P3 When you hear someone, you can really get them to reflect on what it is they hear afterwards; whereas, if you tell them something about it you might not get that type of reaction from them or that reflection from them.</p> <p data-bbox="493 745 1226 808">P4 I let that stay for a minute just so they can self reflect on what they've seen and they we start to talk about it.</p> <p data-bbox="493 840 1226 966">P11 I think we've put a lot of thought into how they've used them. Well, we've made sure if there's any kind of emotional reaction to them. Then we have the right kind of follow-up procedures and processes and we discuss and reflect on it.</p>

---

Table F19

*Student Benefits Theme Five: Promoting Empathy*

---

<b>Theme</b>	<b>Illustrative quotes</b>
Promoting empathy	P7 They might want to talk about empathy for example. How you might develop the skill empathy. So they might decide to have a look at one of those particular digital stories. To think about the concept of empathy.
	P9 . . . it's my feeling that the stories draw students into the experience of it and develop more sympathy and empathy and compassion . . .
	P11 . . . students can react emotionally . . . it hits some emotional button for them where they get upset. So, you have to make sure support is in place for that. So, they can reflect on that, the reasons why . . . if it's a larger group it's more difficult to notice if people do become upset . . . It's easy to put into place in small groups . . . It's just really the opportunity for them to, as a follow up with discussion with the facilitator or to their personal teacher. If it's a bigger issue, then we can use counseling services . . . I think that they help the students feel more like what it's like to be in that position . . . it can promote empathy.
	P12 I think it's the digital story that highlights how people experience that and how people empathize.

---

Table F20

*Student Benefits Theme Six: Development of Critical Thinking*

---

<b>Theme</b>	<b>Illustrative quotes</b>
Development of Critical Thinking	P6 I do see improved critical thinking when students see a concept from a different type presentation. They hear it in lecture, they can read it, they get it in digital stories, and we reflect on them, and we talk about it. And I think that combination improves their critical thinking.
	P7 Sometimes students want a bit more, a bit more story . . . then they have to use their thinking skills, their analytical skills, and try to think of these different dimensions of health.
	P12 I think created video helps develop skills in people to be more problem solving.

---

Table F21

*Student Benefits Theme Seven: Use of Information Technology Skills*

---

P2	To have a different modality, and to sort of showcase their skills.
P7	I think another usefulness of it is about students developing their information technology skills . . . they learn skills of how to navigate around a site and how to navigate the story itself. How to access the different aspects of the story and how to link through to the hyperlinks . . . and then they can look around the topic area as well.
P9	They learn how to communicate . . . and showcase their work . . . . share it with other students and they learn the technology of it . . . . they learn how to make a presentation that's different than a PowerPoint . . .
P12	. . . they develop digital skills and creative skills and I think that's a real benefit to them.

---



Table F22

*Challenges Theme One: Finding an Appropriate Story*

---

Theme	Illustrative quotes
Finding an appropriate digital story	P1 I just found out that two weeks ago, that as of this summer 48 hours of video is uploaded every minute to YouTube . . . that's almost double from a year and a half ago. It's an incredible amount of stuff. The vast majority is not really good . . . useful from a teaching perspective. There's probably 10-15% on YouTube that is, in fact, geared toward teaching.
	P3 . . . I don't think we have that many resources. If there are where are the masses? . . . I'm not sure there are as many as there should be. . . To actually find a story to watch that's a challenge.
	P4 . . . finding a digital story that adds depth to the discussion . . . finding one within my time limit . . . finding factual information not one that has errors . . .
	P5 . . . I want to use more, but I don't know other than using a Google search how to find great stories . . . that fit what I am teaching.
	P9 . . . unless one fell in my lap about the content that I wanted to share, I haven't known where to go.
	P10 . . . finding them . . . I went through a lot last night when I was searching . . . finding them . . . is really challenging.
	P12 I think finding the right material can sometimes be a challenge. . . Finding the right thing can be quite time-consuming to do . . . it can take time to hit on the right ones.

(continued)

---

Table F22 (Continued)

Theme	Illustrative quotes
Finding an appropriate digital story	
<i>Where to find them</i>	
P1	I use YouTube a lot.
P3	I get some from YouTube, sometimes Google . . . . The American Heart Associations and sometimes some of the websites . . . . that's a good place to get some of those stories.
P4	I was surprised with the selection that I found on YouTube . . . a lot of pharmaceutical companies put out things . . . .
P5	I like to use . . . YouTube videos . . . .
P6	I have used some things that I have found on YouTube . . . .
P7	. . . We access other digital stories here [place omitted] by the National Health Service . . . . the patientstories.uk they've got some stories.
P8	From YouTube . . . .
P10	I go to Google if I'm not seeing something on YouTube.
P11	. . . Patient Voices Program . . . which is sort of a repository of hundreds of different digital stories that have already been created.
P12	There are a lot of what we call personal stories on patients with certain conditions . . . And these people very kindly allowed their stories to be presented on the National Health Service Website to be seen by others . . . I find quite a few on YouTube . . . I would say that would be my main source . . . the exploratory of YouTube if I did not create it myself.

Table F23

*Challenges Theme Two: Legal Issues*


---

<b>Theme</b>	<b>Illustrative Quotes</b>
Legal Issues	P1 . . . we can't just upload pictures after John wrecked his car and he's in the emergency room . . . there's that confidentiality piece to worry about. How do you get around that?
	P2 I think I get a . . . little cautious about fair use . . . I want to make sure there is no copyright infringement . . . I suppose if somebody has put it up there then . . . it would not be a HIPPA violation.
	P3 . . . go through some hoops . . . you have to make sure they have all the right things signed first.
	P7 That comes with difficulty, in that there was not a standard consent format . . .
	P9 I'm still concerned about patient confidentiality. So, we tell them it's only for the classroom.
<i>Consent</i>	P1 We do record our students if they're using any media for our class that they do have releases . . . if they are filming somebody we have to have a written release from that person to use their image.
	P2 I basically have a little sheet that says . . . You can use my digital story in other classes or you cannot use my digital story in other classes. I tell them this is not part of their grade and if they don't want me to use it its perfectly fine, I understand.
	P7 I don't remember where we got it, but there was a consent form . . . she also gave us written consent for the material, as well as future use of the materials.
	P9 People give permission for the students to use their photog.
	P11 The Patient Voices Program has got their own consent and release procedure . . . they basically ask where they would be happy for their digital story to be shown. So, it could not be shown or released to the public, or another website, or if they would prefer for it to be used in teaching by people that they know . . . they kind of give their permission for where it should be shown and in what context.
	P12 . . . we do it with patients and carer's we do have a form that they sign and they are aware of what the intentions are, and they consent to it.

---

Table F24

*Challenges Theme Three: Ability to Assess Student Learning From Digital Stories*


---

<b>Theme</b>	<b>Illustrative quotes</b>
Ability to assess student learning from digital stories	P1 . . . we need to create a better way of actually saying which one of these digital stories worked for them. Which one really did hold their attention? And actually learn from?
	P2 . . . you have to think about whether or not it's effective learning. Just because I enjoy it and just because the students enjoy it does it make a difference? Does it meet a learning objective? Because we really shouldn't be doing in the class unless it's based on a learning objective . . . . I struggle with that.
	P6 . . . lots of students get caught up with the dramatics of the song, and the entertainment value of it . . . I'm not sure it's more of the information or it's more of that entertainment aspect . . .
	P12 . . . I think I would have to convince my colleagues that it was something that . . . was a structured objective assessment of ability and it really kind of measured people's ability against learning outcomes . . . and very clear learning objectives for that particular module.

---

Table F25

*Challenges Theme Four: Time in Class to Show Digital Stories*

---

<b>Theme</b>	<b>Illustrative quotes</b>
Time in class to show Digital stories	P1 Presenting digital stories does take time that's why we've gone to [putting] them on Blackboard.
	P2 Time. I wish I had time to watch every single one of them.
	P5 . . . let me take that back you may not want to use this example, because I did not . . . show it in class. I was going to, but I did not have time.

---

Table F26

*Challenges Theme Five: Students Don't Always Recognize the Intended Point*

---

<b>Theme</b>	<b>Illustrative quotes</b>
Student's don't always recognize the intended point	P1 I want you to know as a teacher often times what I considered the most informative was not what the students considered the most informative.
	P6 Sometimes . . . student's failure to capture what I've seen as a valued relevancy of a . . . digital story . . . or maybe they hadn't seen what I was hoping they would see and get out of it.
	P12 . . . the challenge would be . . . the discovery . . . where . . . digital stories might lead you, might not be where you think.

---