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Applying Active Learning Strategy to the Teaching of History within a Multigenerational Community College Classroom

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by

Zachary John Zweigle

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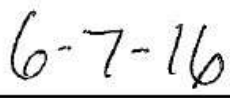
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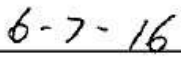
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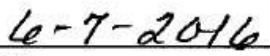
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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree

Zachary John Zweigle

Signature: _____ Date: 7 JUNE 2016

Abstract

Community colleges nationwide struggle with retention and completion of students. The role of two-year institutions is further complicated by the multigenerational diversity of learners. Community college instructors should be prepared to educate students ranging from the traditional-age digital native to a life-long learner 80 or more years in age. Creating a learning environment inclusive of generational learners is central to the mission of the community college. This quantitative study was grounded in two theoretical frameworks. First, Bandura's (1986) social cognitive learning theory provided an understanding for student learning in the social environment. Second, Schön's (1973) organizational learning theory provided an understanding of how educators and administrators use prior experiences to change and improve the learning environment. Five research questions guided this study. The data for these questions were collected from an immediate content recognition task and student engagement survey following a weeklong teaching demonstration. During the demonstration, two groups were taught identical material, one group in a tradition lecture format and the other received in an active learning format. Weeks later, both groups completed a delayed content recognition task to determine retention of information. The results indicated no statistically significance difference when comparing scores of the passive lecture group. However, the results indicated a statistically significance difference for active learners when analyzing overall retention. Scores for active learners decreased on the delayed content task when compared to the immediate task. The findings of this study may be used to assist two-year colleges in determining effective uses of active learning for the multigenerational classroom.

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Chapter One Introduction

Terms such as "sage on the stage" and "the windy professor" are routinely volleyed at instructors who adhere to the old paradigm of passive lecture (Perrotta & Bohan, 2013; Pinder-Grover & Groscurth, 2009; Tai, 2013). For decades, film and television have reinforced the image of students in classrooms or large lecture halls who are hung on the words of an instructor standing front and center (Hughes & Jacobson, 1986; Webster, 2015). Of course, for those who have seen John Hughes' 1986 Hollywood film *Ferris Bueller's Day Off*, the portrayal of Ben Stein's character is meant to satirize the monotone lecturer and resulting boredom of those under his tutelage (Hughes & Jacobson, 1986).

While the passive, instructor-centered lecture has served to educate pupils for centuries, the ever-evolving and non-stop infusion of technology within society is seemingly affecting each succeeding generation's expectation of the learning process (Pinder-Grover & Groscurth, 2009). To further convolute the situation, the two-year community college classroom has, due to open-enrollment and returning non-traditional students, become a multigenerational environment of pupils expecting to be taught in a manner facilitating individual learning and understanding (Sánchez & Kaplan, 2015). To remain relevant and effective, educators must employ new techniques and strategies to keep their students engaged (Morgan, 2013).

This chapter provides an introduction and a brief background of the study on active learning strategies and student engagement in a twenty-first century classroom. A theoretical framework is identified which serves as the overarching guide of the study. The statement of the problem and purpose of the study are also stated. Moreover, this

chapter contains research questions, definition of key terms, limitations and assumptions, and a summary.

Background of the Study

According to Tai (2013), almost 50% of postsecondary students in the United States completed their college-level general history requirements by taking a survey history course at one of America's nearly 1,600 two-year college institutions. Since their inception in 1901, two-year community colleges have become known as teaching institutions in comparison to their four-year university brethren that have obligatory research and publishing requirements for faculty (Cohen, Brawer, & Kisker, 2014; Morgan, 2013). While the primary role of the community college instructor is to teach, the requirements for securing the position are generally similar to a university faculty member, in they are expected to be a content expert holding a masters or doctorate in the field they teach (Cohen et al., 2014).

Without the requirement of coursework that develops teaching skills, an instructors' pedagogical skills are often a perpetuation of their own post-secondary education (Gioffre, 2012; Harris, 2010). According to Harris (2010), "many college and university faculty members still copy the methods by which they were taught and rely on the lecture format for classroom presentations" (p. 3). While the teaching method of a passive lecture format has changed very little for some instructors, the student's expectations have and continue to change as each succeeding generation has far greater exposure to technology (Pinder-Grover & Groscurth, 2009).

The long held perception is the majority of students occupying the college classroom fit the traditional student definition (Diel-Amen, 2011). Diel-Amen (2011)

stated the traditional student is "someone who begins college immediately after high school, enrolls full-time, lives on campus, and it ready to begin college level classes. Yet, such an assumed norm does not reflect the diversity of today's college students" (p. 1). In fact, the traditional aged, full-time student only represents 44.3% of the students nationally (Sánchez & Kaplan, 2015). Alternatively, the majority of the student body is represented by a range of diverse components, which often include mixed age groups, marriage status, responsibility for dependents, veteran or active-duty military status, first generation to attend higher education, need for remediation in reading and mathematics, minority status, and low socio-economic status (Diel-Amen, 2011; Pinder-Grover & Groscurth, 2009; Topper & Powers, 2013). While each of these individual diversity components can provide impetus for exhaustive studies, this particular study focuses on the role of age in the learning process.

Due to the nature of the community college having open-enrollment, there is potential to have students in the classroom who range from mid-teens to nonagenarians (COC News Release, 2015; Hansman & McAtee, 2009; Topper & Powers, 2013; Werth & Werth, 2011). As such, six distinct generations occupy the community college classroom; they are, from youngest to oldest: Generation Z, the Millennial Generation, Generation X, the Baby Boomer Generation, the Silent Generation, and the Greatest Generation (Taylor, 2014). The potential for an instructor to teach students from vastly different generations is no longer only a possibility, but most likely a probability (Levine & Dean, 2012).

It should be noted in this study the Millennial Generation are divided into two age categories. Those individuals born between 1981 and 1997 are proper Millennials and

referred to as Millennials, while those individuals born between 1998 and 2016 are referred to as Generation Z (Igel & Urquhart, 2012; McCrindle, 2014; Ransdell, Kent, Gaillard-Kenney, & Long, 2011). When considering the role of technology in lives of younger Americans, it is important to clearly subdivide those two groups, as research has indicated a distinct difference between those who have known technology since infancy and those who have not; this distinction is often referred to in terms of digital immigrants versus digital natives (Elbert & Cumiskey, 2014; Hansman & McAtee, 2009; Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Pinder-Grover & Groscurth, 2009; Ransdell et al., 2011; Taylor, 2014; Werth & Werth, 2011).

Of those cohorts present in the community college classroom, Millennials represent the largest group and are still defined as the traditional age group of higher education enrollees (Sánchez & Kaplan, 2015). Each cohort of students has some distinct differences in their approaches to learning. Millennials articulate the need for "teamwork, experiential activities, structure, and the use of technology" (Hansman & McAtee, 2009, pp. 424-425). Generation X students express a need for carefully designed plans and defined expectations (Hansman & McAtee, 2009). Ironically Generation Z, which is generally considered one of the most social groups as a result of online social media, struggles with cooperation and teamwork (Igel & Urquhart, 2012). In addition, Generation Z students are often acknowledged for quickly processing information and being very self-directed (Igel & Urquhart, 2012). Igel and Urquhart (2012) suggested instructors should strive to properly implement cooperative learning strategies, as means to remedy the deficiencies of the soon-to-be largest group within higher education (Foss, Foss, Paynton, & Hahn, 2015; Levine & Dean, 2012).

Finally, the remaining cohorts within the community college classroom are the older generations of the Baby Boomers, the Silent Generation, and the Greatest Generation (Taylor, 2014). These groups represent a significantly smaller percentage of the total classroom population, and many have returned to school for the aspects of lifelong learning rather than an inherent need for retooling or career retraining–though career retraining may still be true of some younger Baby Boomers (Sánchez & Kaplan, 2015). Baby Boomers express a need for hands-on learning activities (Hansman & McAtee, 2009). Boomers have been described as workaholics, conservative toward technology, idealistic, and eager to engage in participatory problem solving (Werth & Werth, 2011). While the two older generations are less defined in the higher education realm, these generations rate technology very low, but emphasize intellect, work ethic, morals, and integrity (Taylor, 2014).

With increased scrutiny on enrollment, retention, and completion, institutions of higher education must consider every opportunity to refine the process from onboarding through graduation (Morgan, 2013; Topper & Powers, 2013). While the entirety of the education process is an institutional-wide issue, individual instructors have the most repeated contact with students through the educational process. Thus, it imperative that instructors diligently strive to provide the greatest inclusiveness of generational cohorts and learning types within the classroom (Morgan, 2013). According to Morgan (2013), "The instructors must accept the digital world and get to know who is in their classrooms by engaging in a variety of strategies for instruction" (p. 1). Essentially the classroom becomes increasingly more dynamic as each succeeding generation enters it (Hansman & McAtee, 2009; Levine & Dean, 2012). Recognizing and adapting to the changing

generational climate will allow the community college to continue to remain relevant and continue to fulfill its original mission as it educates the tapestry of the American populace (Sánchez & Kaplan, 2015).

Theoretical Framework

Two theoretical frameworks governed this study. Bandura's (1986) social cognitive learning theory was the basis for examining how students learn within the classroom environment. In addition, Schön's (1973) organizational learning theory and reflective practice model provided background on how educators and administrators adapt and refine the learning environment by learning from previous experiences.

Social cognitive learning theory. Bandura (1986) theorized that much learning takes place through interactions in the social learning environment. The environment provides an opportunity for students to model behaviors and acquire attitudes, beliefs, knowledge, rules, skills, and strategies (Bandura, 1986; Hemmings, 2015; Pajares, 1995; Schunk, 2012). Bandura (1986) makes three assumptions in his theory. The first assumption is explained with a triadic reciprocal model designed by Bandura (1986). Within the triadic model exists interplay of three factors: the person, the environment, and the person's behavior within the environment (Bandura, 1986; Pajares, 1995). The remaining two assumptions consider learning and performance within the social learning environment (Schunk, 2012).

The person or student in the triadic interplay is embodied with some level of self-efficacy, which is defined as a personal belief in one's ability to successfully complete a desired outcome (Garza, Bain, & Kupczynski, 2014; Goroshit & Hen, 2014). Individuals with high self-efficacy generally do not refrain from tasks, while others with low self-

efficacy may allow preconceived notions of failure dictate how they approach a task or whether they avoid altogether (Bandura, 1986; Bandura, 1997; Hemmings, 2015; Pajares, 1995). Thus, self-efficacy plays an integral part in the triadic interplay, as it can influence both a person's behavior, as well as how he or she approach an environment (Barrows, Dunn, & Lloyd, 2013; Costello & Stone, 2012; Hemmings, 2015). Positive psychology on the part of the instructor reinforces the notion of happiness and optimism and may promote perseverance leading to a "subjective well-being" (Costello & Stone, 2012, p. 121).

A person who is positively engaged with the environment can further shape the classroom setting through dynamic interactions with the instructor, the material, or-fellow students (Pajares, 1995; Schunk, 2012). Questions by the student may demonstrate uncertainty of material, which may lead the instructor to reteach the material in a way that produces understanding (Schunk, 2012). Thus, the student has a positive effect on the environment; however, the reverse is also true, as the environment can have a negative impact on the student (Goroshit & Hen, 2014; Hemmings, 2015; Pajares, 1995). Classroom environments with larger enrollments impose limitations on the amount of time an instructor can allocate to each student, leading to an environment that is not encouraging of interaction or interplay between the triadic factors (Goroshit & Hen, 2014; Pajares, 1995).

In addition to the triadic interplay, Bandura's (1986) social cognitive theory makes two additional assumptions, learning versus performance. Learning takes two forms, either enactive or vicarious (Bandura, 1986; Hemmings, 2015; Schunk, 2012). With the practice of enactive learning, the student is actually performing the process

(Phan, 2012). Phan (2012) stated, "Enactive performance accomplishments, derived from authentic experiential base, are the most influential source of information on individuals' self-efficacy beliefs" (p. 197). Vicarious learning is based on observations of individuals perceived as colleagues or peers to the learner, rather than an expert instructor (Beauregard, Rousseau, & Mustafa, 2015; Hemmings, 2015).

While enactive and vicarious learning can individually affect the learner's self-efficacy, when the learner is able to engage in both learning processes, efficacy may be greatly influenced (Hemmings, 2015; Schunk, 2012). Finally, performance considers knowledge or behaviors which have not necessarily been utilized (Bandura, 1986). This previous learning may include declarative knowledge of events, facts, or scripts, as well as procedural knowledge such as algorithms, concepts, or rules (Schunk, 2012). Conditional knowledge provides the basis for the learning to determine when it is appropriate to utilize the aforementioned declarative and procedural knowledge base (Schunk, 2012).

Organizational learning theory. This study utilized Schön's (1973) reflective practice which is rooted in organizational learning theory (Bauer, 1991). According to Schön (1973), society is in a constant state of change. As such, those institutions within society are continually transforming (Morgan, 2013). Understanding the institution is imperative if one is to manage, guide, or influence the transformation (Morgan, 2013; Schön, 1973). Morgan (2013) stated, "Proficient or expertise in learning is necessary to transform an institution as responses to changing situations, requirements, and policies occur. Learning systems must be created and developed that will result in an institution's continuing transformation" (p. 9).

Reflective practice adheres to overarching theory of organizational learning (Argyris & Schön, 1974; Argyris & Schön, 1978; Bauer, 1991; Schön, 1973; Morgan, 2013). While transformation and change are a constant within society, humans are naturally inclined to seek out security (Bauer, 1991). Dewey (1929) was sympathetic toward the human craving for security and constancy, and argued that philosophers conceived of universal fundamental truths to answer the cry for security. With reflective practice, leaders are provided with mechanisms that allow for guidance and management within their respective institutions (Schön, 1973). According to Morgan (2013), Schön conceptualized "that reflective practice is a dialogue of thinking and doing through which one becomes more skillful" (p. 8).

Schön and Argyris (1974; 1978) recognized individuals tend to remedy a situation by changing the strategy instead of questioning the factors that ultimately led to the error. Reflection *in* action has a critical function of providing thought as to how an individual got into a certain dilemma or opportunity, but this type of reflection only provides an on-the-spot experiment (Bauer, 1991). In this way, humans develop and explore new ideas to make sense of a new phenomenon (Schön, 1983). These ideas are tested, which provide understanding for making changes for the better (Schön, 1983). While reflection-in-action is important in reshaping of the environment, it is spontaneous and action-present (Bauer, 1991).

Schön's (1983) model for reflective practice is designed to move the individual from reflection *in* action to reflection *on* action (Morgan, 2013). Reflection *on* action is more purposeful and deliberate, as the individual has time to think through a situation, to discuss, and to reflectively journal (Morgan, 2013; Schön, 1983). Morgan (2013) stated:

In teacher education, reflective practice refers to the process of trainees studying their known teaching methods and determining what works best for the students. The educators need to reflect on their experiences in the classroom and adapt their strategies accordingly. (p. 10)

As the classroom continues to change due to the influx of new generational cohorts, reflective practice provides opportunity to transform the classroom environment (Levine & Dean, 2012; Morgan, 2013; Schön, 1983).

Holistically, Bandura (1986) and Schön's (1973) theories provided the theoretical framework for this study. These theories together demonstrated how the student learns in the classroom environment and how the instructor reflects and learns from the environment to institute necessary changes (Bandura, 1986; Costello & Stone, 2012; Morgan, 2013; Schön, 1973). These theories in tandem reveal a cycle in which the learning environment is reimagined or restructured, and thus made relevant for each successive generation cohort (Bandura, 1986; Schön, 1973).

Statement of the Problem

Statistics from a 2014 report revealed community colleges throughout the United States enrolled over 7 million students annually, approximately 35% of all public postsecondary students (National Center for Education Statistics [NCES], 2014; Topper & Powers, 2013). Yet, while community colleges enroll a significant number of students, completion rates measured in both transfer to other institutions and degree and certificate awards trail behind other sectors of education (Topper & Powers, 2013). Nationally, only 14% of students enrolled complete an award in three years and only 21% within six years (Topper & Powers, 2013).

With the community college playing a vital role for such a large cross section of the American society, there have been increasing initiatives to observe accountability within these institutions (Morgan, 2013). Legislators at national, state, and local legislative bodies, as well as taxpayers, students, and parents, continue to place increasing emphasis on retention rates, graduation rates, and curricula (Morgan, 2013; Topper & Powers, 2013). According to Topper and Powers (2013):

> The national dialogue around the purpose and place of the community college within the 21st century higher education landscape has shifted from emphasizing access–an area in which the community college has tended to excel at–to improving equitable outcomes. (p. 3)

Retention and completion have been much debated topics over the past decade (Foss et al., 2015; Morgan, 2013). Foss et al. (2015) identified three crucial stake-holding groups affected by retention and ultimately completion: students; faculty and administration; and local and national economies. For students, college completion may increase possibility for securing better jobs and providing greater earning potential (Foss et al., 2015). For faculty and administration, retention and completion may affect reputation, as well as funding in the form of federal dollars and donor support (Foss et al., 2015; Morgan, 2013). For local, state, and federal economies, college dropouts can be costly (Foss et al., 2015). According to Foss et al. (2015), lost earnings and taxes from college dropouts may cost the United States as much as $4.5 billion annually.

In addition to completion rates, community colleges face another uncertain reality. The open-enrollment nature of these institutions means classrooms are filled with the widest variety of diversity, especially age variance, which may pose difficulties for

instructors (Levine & Dean, 2012; Morgan, 2013). The community college classroom has become a melting pot, consisting of Millennials who are both digital natives, as well as digital immigrants (Ransdell et al., 2011). Generation X and some Baby Boomers, who were once educated in the traditional passive lecture, have been faced with the hard reality of the 2008 Great Recession, and have returned for career retraining (Taylor, 2014). Older generations trickle into the classroom to continue personal, lifelong learning journeys (Sánchez & Kaplan, 2015). Finally, Generation Z is beginning the ascent into adulthood and taking their traditional place in higher education (Igel & Urquhart, 2012; Levine & Dean, 2012). In order to stay relevant, the instructors within the community college classroom must find a means of incorporating the learning styles and requirements of this diverse group (Morgan, 2013).

While new studies continue to consider different perspectives of retention and completion, this study couples the growing generational diversity of the classroom with the issue of retention and completion (Foss et al., 2015). Therefore, the argument is made that an impactful instructor who is mindful of generational diversity and to the various learning styles can develop active and engaging learning strategies that are inclusive of the widest possible range of students (Elbert & Cumiskey, 2014; Foss et al., 2015; Levine & Dean, 2012; Perrotta & Bohan, 2013). Foss et al. (2015) stated, "A genuine emphasis on the quality of undergraduate teaching and learning is the deciding factor that will produce high graduation rates for students" (p. 3).

For an instructor faced with generational diversity in the classroom, research has indicated an educator must employ a wide range of learning strategies in order to be successful when teaching to generationally diverse audiences (Elbert & Cumiskey, 2014;

Gioffre, 2012; Igel & Urquhart, 2012; Morgan, 2013; Moukperian & Woloshyn, 2013; Perrotta & Bohan, 2013; Pinder-Grove & Groscurth, 2009; Ransdell et al., 2011; Sánchez & Kaplan, 2015; Sogunro, 2015; Westermann, 2014). This study does not propose the wholesale adoption of a single new learning strategy. Instead, the instructor utilized best practices from a myriad of seasoned and contemporary learning strategies designed to have the most profound impact on the multiple generations of learners within the community college classroom (Morgan, 2013; Perrotta & Bohan, 2013).

Purpose of the Study

With the potential for so many different generations of students to be present in the community college classroom, all of which approach the learning process with slightly different expectations, it is imperative to identify learning strategies that engage the majority, if not all, classroom participants (Elbert & Cumiskey, 2014; Levine & Dean, 2012; Morgan, 2013; Perrotta & Bohan, 2013). The intent of this study was to develop and examine an active learning format that utilized the best practices of several learning strategies consolidated into one format that is inclusive to as many learners as possible in the classroom. Ultimately, providing an inclusive learning environment should continue to affect persistence and retention of students throughout their college experience (Morgan, 2013). According to Morgan (2013):

Students want to continue studying and ultimately complete as a result of being in a safe environment, having a sense of belonging, and having confidence in their ability to succeed. The classroom instructor has the ability to affect the student's overall college experience. (p. 1)

This study comes at a relevant moment to meet the calls by external stakeholders, such as legislators, parents, taxpayers, as well as the needs of internal constituents like administrators, faculty, and students. As technology continues to shape succeeding generations, similar studies will need to be conducted to ensure the education process remains impactful, meaningful, and inclusive to all generations of learners (Morgan, 2013). Ultimately, this study furthers the evolving national dialogue on the role of the community college in "improving equitable outcomes" for its generationally diverse students (Topper & Powers, 2013, p. 3).

Research questions and hypotheses. The following research questions guided the study:

1. What difference exists, if any, in performance on an immediate content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus students in a passive lecture format?

$H1_0$: There is no measurable significant difference in performance on an immediate content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

$H1_a$: There is a measurable significant difference in performance on an immediate content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

2. What difference exists, if any, in performance on a delayed content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus different generational cohorts in a passive lecture format?

H2$_0$: There is no measurable significant difference in performance on a delayed content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

H2$_a$: There is a measurable significant difference in performance on a delayed content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

3. What difference exists, if any, in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores?

H3$_0$: There is no measurable significant difference in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores.

H3$_a$: There is a measurable significant difference in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores.

4. What difference exists, if any, in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores?

H4$_0$: There is no measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores.

H4$_a$: There is a measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores.

5. What factors related to active learning do different generational cohorts in a college-level survey American history course most often report as being the most effective?

Definition of Key Terms

For the purposes of this study, the following terms are defined:

The Baby Boomer. This term refers to a generation of Americans born between 1946 and 1964 (Elbert & Cumiskey, 2014; Taylor, 2014). Baby Boomers are predominantly the parents of the Millennial Generation (Yahr & Schimmel, 2013).

Delayed content recognition. Delayed content recognition refers to a student's ability to recall classroom content several weeks after being taught (Haynie, 1994). Student volunteers participated in a weeklong teaching demonstration. Delayed content recognition from the teaching demonstration was assessed at the end-of-term using a 12 question multi-choice quiz (Mohammadzadeh, 2012). The elapse between teaching demonstration and the end-of-term delayed content assessment was six weeks (Haynie, 1994).

Generational diversity. The term refers to the variety of generations present in the community college classroom (Elbert & Cumiskey, 2014; Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014). The study recognized the potential for six defined generations starting with The Greatest Generation, The Silent Generation, The Baby Boomers, Generation X, The Millennial Generation, and

Generation Z (Elbert & Cumiskey, 2014; Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014).

Generation X. This term refers to a generation of Americans born between 1965 and 1981 (Elbert & Cumiskey, 2014; Yahr & Schimmel, 2013). This generation has often been branded the dividing line between the young and older generations (Taylor, 2014). Generation X predominantly serves as the parents for Generation Z (Igel & Urquhart, 2012).

Generation Z. Literature and research has yet to fully define this generation. However, some research has begun to define and name this generation (Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014). For the purpose of this study, Generation Z is defined as those individuals born after 1999 (Igel & Urquhart, 2012). Generation Z is referred to as digital natives, as technology has always been present in their lives (Ransdell et al., 2011).

The Greatest Generation. This term refers to a generation of Americans born before 1928 (Taylor, 2014). This generation predominantly lived through the Great Depression, and this generational cohort saw the largest service in the Second World War (Taylor, 2014).

Immediate content recognition. Immediate content recognition refers to a student's ability to recall classroom content immediately after being taught (Haynie, 1994). In this study, student volunteers participated in a weeklong teaching demonstration. Immediate content recognition from the teaching demonstration was assessed at the conclusion of the week using a 12 question multi-choice quiz (Haynie, 1994; Mohammadzadeh, 2012).

The Millennial Generation. This term refers to a generation of Americans born after 1981 (Taylor, 2014). This generational cohort has yet to be bookended and currently spans nearly 35 years (Taylor, 2014). Research has begun to indicate a divide between older Millennials and younger Millennials (Elbert & Cumiskey, 2014; Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014). While generational divisions once adhered to a biological definition of life span between one's own birth and birth of one's offspring, generational cohort divisions are increasingly based on technological distinctions (McCrindle, 2014).

Multiple-choice questions. This type of question is widely used in college and university classrooms throughout the United States (Brookhart, 2015; DiBattista & Kurzawa, 2011). A multiple-choice item consists of two parts. There is a stem, which is also known as the question, and a set of at least two or more answer options (DiBattista & Kurzawa, 2011). Students are expected to select an option that accurately answers the question, thus closing the loop (DiBattista & Kurzawa, 2011; DiBattista, Sinnige-Egger, & Fortuna, 2014).

Open-enrollment. This is a term used to define the admissions and enrollment policies of an educational institution (Cohen et al., 2014). Some institutions may be defined on a spectrum of highly-selective to moderately-selective to non-selective (Cohen et al., 2014). Selectivity may be based on criteria that include grade point average or scores on a certain examination (Cohen et al., 2014). For the purpose of this study, institutions with little to no criteria for selection are referred to as open-enrollment (Cohen et al., 2014).

Passive lecture. A learning format in which the instructor presents a prearranged lecture to an audience of students (Kates, Byrd, & Haider, 2015). There is almost no interaction in the form of questions or discussion between the instructor and students (Kates et al., 2015).

The Silent Generation. This term refers to a generation of Americans born between 1928 and 1945 (Taylor, 2014). Most members of this generation were children during the Great Depression and were too young to see combat during the Second World War (Taylor, 2014).

Survey course. A course typically taken during the first or second year of higher education studies (Gioffre, 2012). Generally, the course provides a broad overview of the discipline in which the course is being offered (Gioffre, 2012).

Limitations and Assumptions

The following limitations were identified in this study. The sample was limited to students enrolled in four different sections of general education survey history courses at a two-year community college located in the Midwest region of the United States. Each section contained between 15 and 30 students. Additionally, researcher bias may have invaded both the passive and active learning formats presented during this study.

The following assumptions were accepted:

1. The responses of the participants were offered honestly and without bias.

2. There was a larger cohort of Millennials in the classrooms, as they still represent the largest group of students in higher education. However, the research questions were designed to consider the possibility of a multigenerational classroom.

Summary

This chapter consisted of an introduction and background to the topic of passive versus active learning strategies and the importance of utilizing these strategies within the multigenerational environment of the community college classroom to boast perseverance and retention (Morgan, 2013). A theoretical framework was identified, which considered both social cognitive theory and organizational learning theory (Bandura, 1986; Schön, 1973). A statement of the problem and purpose of the study were explained. Finally, research questions, definition of key terms, and limitations and assumptions were presented.

In Chapter Two, a theoretical framework is reviewed and presented that supports this study. A review of the literature is presented that first considers the multiple generations represented in the community college classroom. Finally, a survey of the literature pertaining to teaching strategies for the multigenerational classroom is presented.

Chapter Two: Review of Literature

Over the past five decades, the number of Americans over the age of 25 years old with a bachelor's degree or higher increased from 12% in 1971 to 31% in 2012 (Blumenstyk, 2015). The 2012 percentage is further increased to 41% if the two-year degree is added (Blumenstyk, 2015). This increase in total number of students is coupled with a change in the type of college students present in today's higher education learning environments (Deil-Amen, 2011; Werth & Werth, 2011). According to Deil-Amen (2011), perceptions of college students are conceptualized by traditional notions. These notions hold that the traditional student enters college immediately following high school graduation, is enrolled as a full-time student, lives on campus, and requires no remediation or developmental-level coursework (Deil-Amen, 2011). In fact, quite the opposite is true, especially when one considers the American two-year college (Cohen et al., 2014; Deil-Amen, 2011).

The two-year college, commonly referred to as a junior college or community college was founded in 1901 (Thelin, 2011). What began as an opportunity to provide the first two years of an undergraduate liberal arts curriculum was supplemented with the infusion of vocational and technical curriculum by the mid-century (Geiger, 2011; Thelin, 2011; Topper & Powers, 2013). As a result of affordability and geographic access, Thelin (2011) noted two-year colleges "were one of the success stories of the period between the world wars" (p. 250). Enrollment growth in all sectors of higher education continued after the Second World War and throughout the Cold War Era and has been characterized as "the academic revolution" (Geiger, 2011, p. 61).

Following World War II, enrollment within two-year colleges jumped from 149,584 students in the 1940s to 2.1 million students by the 1970s (Thelin, 2011). With increased enrollment, came the need for hundreds of new colleges throughout the country, especially since the 1960s (Blumenstyk, 2015). According to Geiger (2011), "From 1965 to 1972, [two-year community colleges] were opened at a rate exceeding one per week" (p. 60). Today there are nearly 1,600 two-year colleges anchored in communities throughout the United States (Tai, 2013). Collectively, two-year colleges educate over 7 million students, approximately 35% of all undergraduates (National Center for Education Statistics [NCES], 2014). Yet, many two-year institutions have an open-door philosophy, meaning there is virtually no selection process prior for a student to be accepted into the institution (Cohen et al., 2014; Thelin, 2011). Essentially, community colleges are open to the entire cross section of the communities they serve (Thelin, 2011). The spectrum of students can vary from those students needing remedial education to students already possessing bachelor's and master's degrees with the need for retooling (Thelin, 2011).

To accommodate students, community colleges typically offer a variety of programs that culminate with a range of options including technical certificates demonstrating industry readiness or an associate's degree designed for the student transferring to a four-year institution (Thelin, 2011). While the community college represents the front door to higher education, for over 52% of college freshmen, the students within the auspices of these institutions generally do not reflect the storied image of the traditional college student often popularly portrayed (Wang, 2015; Thelin, 2011). A different story resonates from the college classroom. The twenty-first century, two-

year college provides a learning environment for five defined generations, as well as one that remains undefined (Taylor, 2014; Wang, 2015). How an instructor approaches and facilitates learning for a student body which may range from nonagenarians to students in their mid-teens is a consideration for this study (COC News Release, 2015; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014).

Chapter Two is divided into three distinct sections. The first section outlines social cognitive learning theory as the theoretical framework for this study. Multigenerational students represented in the collegiate classroom are the focus of the next section along with discussion in regard to the traditional and the non-traditional student and how these groups have changed as a result of environment, technology, and culture (Sánchez & Kaplan, 2015). In the final section, literature addressing how various multi-generational groups learn in the classroom is presented. The studies provided highlight strategies employed by education professionals to engage the cross-section of students represented in the classroom.

Theoretical Framework

Two theoretical frameworks were used for this study. The first was Bandura's (1986) social cognitive learning theory which provided the basis for examining the classroom environment and how students learn within the social environment. The second was Donald Schön's (1973) organizational learning theory. Within Schön's (1973) organizational learning theory is a reflective practice model which was used to show how educators and administrators use previous experiences to adapt and refine the learning environment.

Social cognitive learning theory. Social cognitive learning theorists have argued the interactions in a social environment produce much of human learning (Schunk, 2012). The social environment provides an opportunity to observe the actions of others (Bandura, 1986). In so doing, students in the classroom environment acquire attitudes, beliefs, knowledge, rules, skills, and strategies (Schunk, 2012). According to Schunk (2012), "Individuals also learn… the usefulness and appropriateness of behaviors and the consequences of modeled behaviors, and they act in accordance with beliefs about their capabilities and the expected outcomes of actions" (p. 118). Bandura's (1986) social cognitive theory makes three assumptions. At the core of this theory is a triadic reciprocal interplay between the following three factors: persons, behaviors, and environments (Pajares, 1995; Schunk, 2012). The second assumption considers the difference between enactive and vicarious learning (Bandura, 1986; Schunk, 2012). Finally, the third makes the distinction between learning and performance (Schunk, 2012).

Triadic reciprocal interactions, self-efficacy, and positive psychology. Bandura (1986), the father of social cognitive learning, stated:

> In the social cognitive view people are neither driven by inner forces nor automatically shaped or controlled by external stimuli. Rather human functioning is explained in terms of a model of triadic reciprocality in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other. (p. 18)

Triadic reciprocality may be demonstrated through the construct of self-efficacy which lies at the center of Bandura's (1986) theory. Self-efficacy is considered the personal component within triadic reciprocal interplay (Schunk, 2012). Bandura (1986) defined

self-efficacy as a future-oriented belief of an individual's own ability to successfully complete a desired outcome (Garza et al., 2014; Goroshit & Hen, 2014). In this way, self-efficacy influences an individual's motivation, thinking, behavior, and feelings (Costello & Stone, 2012). Individuals with low self-efficacy generally doubt their capabilities and have a tendency to shy away from situations in which they have a preconceived notion of failure (Bandura, 1997; Pajares, 1995). However, according to Bandura (1986), self-efficacy can be modified by the other factors within the triadic reciprocal interplay.

Since self-efficacy is one of three factors in the triadic interplay, it can be altered and strengthened by the other two reciprocal factors of behavior and environment (Schunk, 2012).
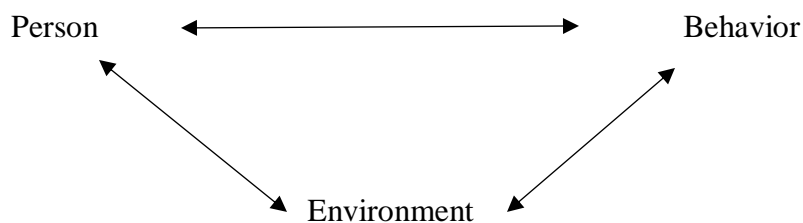
Figure 1. Bandura's triadic reciprocality model of causality (as cited in Schunk, 2012, p. 120).

Researchers in the subfield, positive psychology, view self-efficacy as synonymous with what they term as "subjective well-being" (Costello & Stone, 2012, p. 121). The two similar terms illustrate the way in which individuals "feel about their lives or the quality of their experiences" (Costello & Stone, 2012, p. 121).

As such, positive psychology, which emphasizes positive emotion, engagement, and meaning to reinforce "the scientific unwieldy notion of happiness," may "evoke human strengths such as optimism, perseverance, and interpersonal skills" (Costello & Stone, 2012, p. 121). According to Schunk (2012), strong self-efficacy will encourage

achievement behaviors such as choice of tasks, effort expenditure, skill acquisition, and persistence. Positive self-efficacy can also effect student grades and number of study hours (Garza et al., 2014). Additionally, "Students who perceive themselves as being competent will more likely strive to learn how to do better on challenging tasks such as exams" (Barrows et al., 2013, p. 205). Thus, as mentioned, the behavioral factory actually works to modify self-efficacy (Schunk, 2012).

Similarly in the interplay, environment may also alter self-efficacy (Schunk, 2012). This alteration resulting from environmental factors is demonstrated in research pertaining to students with learning disabilities (Schunk, 2012). According to Costello and Stone (2012), "[learning disabilities] are the largest category of disabilities reported by students receiving services in college–approximately 29%" (p. 121). Often students with learning disabilities harbor a lower sense of self-efficacy (Schunk, 2012). Costello and Stone (2012) noted students with disabilities typically lack belief or confidence in their own personal academic success. This lack of confidence or low self-efficacy can be the result of other individuals within the environment emphasizing perceived attributes of the learning disability rather than the actual abilities of the student (Schunk, 2012).

Research has demonstrated when a student's feeling of authenticity is increased, his or her self-efficacy improves (Schunk, 2012). Further, when a teacher provides confidence and reinforces success, the student is likely to exhibit positive self-efficacy behaviors as well (Costello & Stone, 2012; Schunk, 2012). According to Gocet-Tekin and Satici (2014), authenticity is defined as:

Approving and representing one's true self, values, beliefs, and behaviors to oneself and others, representing oneself sincerely, and speaking truthfully; but

more precisely, it [authenticity] means presenting oneself in a genuine way,

behaving honestly; being truthful; and taking responsibility for one's emotions

and actions. (p. 2063)

Students with a feeling of authenticity believe their success is deserved, whereas students

without authenticity struggle to master academics; essentially, "they do not believe they

deserve success" (Costello & Stone, 2012, p. 122). Students with positive self-efficacy

are also more willing to seek out challenges and the resources necessary to succeed,

whereas those students with lower self-efficacy may not take on new tasks for fear of

failure (Costello & Stone, 2012; Garza et al., 2014).

The final interplay within the triadic reciprocality model exists between

behavioral and environmental factors (Schunk, 2012). Costello and Stone (2012) stated,

"Higher education professionals have a duty to help all students reach their potential by

creating environments designed to foster learning" (p. 119). If students' behavioral

interaction with the classroom is dynamic, there is opportunity to influence or alter the

instructional environment (Schunk, 2012). By asking questions, the instructor must

momentarily adjust the instruction to address the question (Schunk, 2012). Additionally,

if questions or activities posed by the instructor are answered incorrectly, that instructor

may elect to reteach a particular portion of lesson, rather than move forward with new

material (Schunk, 2012). However, environmental factors may affect behavioral factors

(Schunk, 2012). An example of the environmental impact is the number of students in a

classroom (Goroshit & Hen, 2014). Larger student enrollments in classrooms naturally

impose limitations on what the teacher can accomplish and how much attention can be

allotted to an individual student (Goroshit & Hen, 2014).

Enactive and vicarious learning versus performance. Bandura (1986) stated, "Learning is largely an information-processing activity in which information about the structure of behavior and about the environmental events is transformed into symbolic representations that serve as guides for action" (p. 51). Within this concept, learning takes two forms, either "enactively" or "vicariously" (Schunk, 2012, p. 121). Enactive learning is the result of actually performing a process (Pajares, 1997; Phan, 2012). Successes in the learning process have the effect of raising efficacy appraisals, while repeated failures will have the opposite effect of lowering those appraisals, "especially if the failures occur early in the course of events and do not reflect lack of effort or adverse external circumstances" (Bandura, 1986, p. 399).

Individuals with a heightened self-efficacy resulting from repeated successes are likely to dismiss or minimalize occasional failures as poor planning, insufficient effort, or external situational factors (Bandura, 1986). The individual is unlikely to engage in self-pity, but rather seek out solutions for the faulty strategy that will deliver future successes (Bandura, 1986). As future learning occurs, the individual becomes more conditioned to utilize strategies that have a higher likelihood of success (Schunk, 2012). According to Schunk (2012):

> People who succeed at a task or are rewarded understand that they are performing well. When people fail or are punished, they know that they are doing something wrong and may try to correct the problem. Consequences also motivate people. People strive to learn behaviors they value and believe will have desirable consequences. (p. 121)

While enactive learning provides the most influential source of efficacy because of its roots in authentic mastery, it is not the sole influence on efficacy appraisal (Bandura, 1986; Phan, 2012).

Individuals rely on vicarious learning experiences as well (Bandura, 1986). In this form, learning takes place absent of obvious performance by the individual (Schunk, 2012). Phan (2012) stated, "Vicarious experiences, as a second source, alter self-efficacy beliefs through transmission of competencies and social comparison. Observing other individuals' successes or failures may assist in the formation of one's own sense of competence" (p. 197). Sources of vicarious learning commonly include television, DVD, reading, and other forms of digital media (Schunk, 2012). According to Beauregard et al. (2015), "Vicarious learning is structured around the observation of a person identified as similar to the self, who is not perceived as an expert, successfully leading an intervention in a similar context" (p. 2). Schunk (2012) added:

> Vicarious sources accelerate learning over what would be possible if people had to perform every behavior for learning to occur. Vicarious sources also save people from personally experiencing negative consequences. We learn that poisonous snakes are dangerous through teaching by others, reading books, watching films, and so forth, rather than by experiencing the unpleasant consequences of their bites! (p. 121)

Individually, enactive and vicarious learning influence a learner's efficacy appraisal; however, when used in tandem, the learner often has greater opportunity to develop complex skills (Phan, 2012; Schunk, 2012). For example, professional athletes learn techniques through observation, as well as practice (Schunk, 2012). Similarly, Schunk

(2012) stated, "Students observe teachers explain and demonstrate skills. Through observation, students often learn some components of a complex skill and not others. Practice gives teachers opportunities to provide corrective feedback to help students perfect their skills" (pp. 121-122). Ultimately, learners must recognize modeled behaviors are valuable, otherwise they may not meaningfully engage in those behaviors (Pajares 1995; Phan, 2012; Schunk, 2012).

Within social cognitive theory, Bandura's third assumption "distinguishes between learning and performance of previously learned behaviors" (Schunk, 2012, p. 122). Students who persist through the education process typically acquire learning that is not always performed (Phan, 2012; Schunk, 2012). This learning may include declarative knowledge such as facts, scripts, events in a story, and organized passages from songs and poems, procedural knowledge such as algorithms, concepts, and rules, and conditional knowledge, which considers when to use declarative or procedural knowledge and why it is important (Schunk, 2012). Schunk (2012) provided the following example:

> Students might learn that skimming is a useful procedure for acquiring the gist of a written passage and might learn a strategy for skimming, but may not employ that knowledge to promote learning until they are at home reading a text. (p. 122)

Social cognitive theory provides the framework for how students learn within the educational environment (Schunk, 2012). How students learn, how students perform, and the triadic reciprocal interplay between environment, behavior, and person are at the core of the three assumptions considered within the theory (Bandura, 1986; Pajares, 1995; Schunk, 2012).

Organizational learning theory. While conducting work on organizational learning theory during the late 1960s and early 1970s, Schön (1973) recognized change was an unavoidable aspect of life (Morgan, 2013). Schön (1973) argued for the existence of an afterlife within life, which he defined as "a calm, stable state to be reached after a time of troubles" (p. 9). For those individuals or practitioners who have lost a stable state, their responses are typically anti-responses in the form of a "return to the last stable state," "revolt… total rejection of the past," and/or "mindlessness… attempt to escape" (Schön, 1973, p. 28-29). Essentially, these responses are a form of denial from the reality of the situation (Schön, 1973). Schön (1973) argued as a result of technology, change and loss of the stable state had become exponential over the last two hundred years. Thus for Schön (1973), the lack of a constant or stable state should be met with mechanisms that allow practitioners to manipulate and direct environmental changes (Bauer, 1991; Morgan, 2013). Working in collaboration, Argyris and Schön (1978) developed the concepts of single-loop and double-loop learning, which became their reflective practice model.

Reflective practice. Schön's (1973) reflective practice, which is rooted in organizational learning theory, was used for this study (Bauer, 1991). According to Schön (1973), society and its institutions exist in a constant state of transformation and change. As such, it remains imperative that institutions of higher education effectively manage, influence, and guide the change (Morgan, 2013; Schön, 1973). For the learning environment, Morgan (2013) maintained educators should have a level of proficiency, if not expertise, in respect to that environment. This proficiency is necessary to respond to situational changes, shifting requirements, and new or different governing policies

(Morgan, 2013). However, recognizing change occurs upon reflection of previous practices within that environment (Argyris & Schön, 1978).

Reflective practice clings to the overarching theory of organizational learning (Argyris & Schön, 1974; Argyris & Schön, 1978; Bauer, 1991; Morgan, 2013; Schön, 1973). According to Morgan (2013), "Reflective practice involves thoughtfully considering one's own experiences in applying theory to practice" (p. 8). While Schön (1973) stressed the role of change in society, it is acknowledged human beings have conditioned themselves to resist change (Bauer, 1991). For Bauer (1991), many human beings are insecure when operating out of their comfort zone, as such they are naturally apt to seek out security. Dewey (1929) was sympathetic to human conditioning and the need for constancy within society. Dewey (1929) argued philosophers dating back to ancient civilizations conceived of universal fundamentals that govern human existence (Bauer, 1991). To combat the insecurity of change, reflective practitioners developed the mechanisms that allow guidance and management of change (Argyris & Schön, 1974; Argyris & Schön, 1978; Bauer, 1991; Schön, 1973; Morgan, 2013).

Schön and Argyris (1974; 1978) noted the process of change should follow a prescribed procedure. Some attempts at reflective practice fall short, as practitioners, when faced with an error, endeavor to modify a situation with a sudden shift in strategy (Schön & Argyris, 1974; 1978). Instead, practitioners must purposefully question the factors that ultimately brought about the error in the first place (Schön & Argyris, 1974; 1978). Schön (1983) conceived a model in which practitioners would advance from reflection *in* action to reflection *on* action (Morgan, 2013; Schön, 1983).
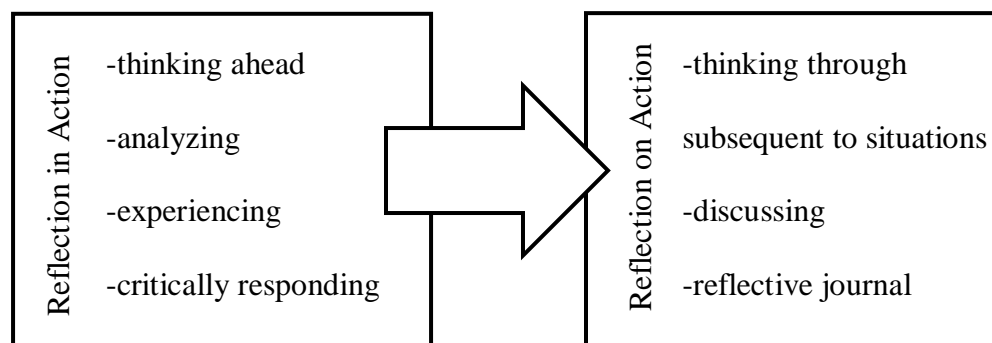
Figure 2. Schön's model (as cited in Morgan, 2013, p. 10).

This shift in process is not to say reflection *in* action lacks a critical function (Schön, 1983). On the contrary, reflection *in* action provides the means by which the individual or practitioner thinks through the process that brought him or her to a certain dilemma or opportunity (Bauer, 1991). Reflection *in* action is critical when one needs to adjust the situation on-the-spot, but it does remain spontaneous and action-present (Bauer, 1991).

With Schön's (1983) model, the practitioner moves from the more spontaneous reflection *in* action to reflection *on* action (Morgan, 2013). Reflection *on* action allows the educator to scrutinize the previous event by journaling and discussing (Morgan, 2013; Schön, 1983). The educator can take those reflections, and paired with new information or theories, can design a strategy to be employed in a future situation (Schön, 1983). This process is more deliberate and purposeful than merely reflecting *in* action (Schön, 1983). Reflection *on* action provides a cyclical process by which practitioners can continue to change the learning environment (Morgan, 2013). As the community college classroom continues to be reshaped by the emergence of new generational cohorts, reflective practice is a mechanism by which the practitioner can constantly reevaluate that

generationally diverse learning environment (Levine & Dean, 2012; McCrindle, 2014; Morgan, 2013; Topper & Powers, 2013).

Together, Bandura (1986) and Schön (1973) provided the theoretical framework for this study. Bandura's (1986) theory demonstrated how student participants in the classroom respond to environment. Schön (1973) theorized the instructor reflects and learns from the environment to institute necessary changes (Bandura, 1986; Costello & Stone, 2012; Morgan, 2013). In tandem, these theories exhibit a cycle by which the classroom learning environment is shaped and structured (Bandura, 1986; Schön, 1973). This structure is important, as both generational student and the instructor must sculpt a classroom atmosphere that facilitates learning for the widest possible generational audience (Bandura, 1986; Schön, 1973).

The Multigenerational Classroom

In June 2015, Ms. Doreetha Daniels graduated from College of the Canyons, a community college in Santa Clarita, California, with an associate's degree at the age of 99 years old (COC News Release, 2015). While the story of Daniels demonstrates a record-breaking honor, Daniels is likely not the only member of the Greatest Generation to be represented in the higher education classroom (Taylor, 2014). The emergence of lifelong learners means students in their mature stages of life are returning to the classroom (Sánchez & Kaplan, 2015).

Definitions adhering to the term "generation" vary. In 1953, Mannheim (as cited in Amayah & Gedro, 2014) contended a generation is a "group of people who were born and raised in a similar social and historical atmosphere" (p. 38). More recently,

researchers have stated generation is categorized by "birth years, age location, and significant life events at critical developmental stages" (Amayah & Gedro, 2014, p. 38).

Each generation is a product of its environment, and a great emphasis is placed on the generation's formative years, whether these generations are shaped by the austerity of the Great Depression, the suspicion of the Cold War Era, or the exponential growth in technology of the modern age, each has its distinctions (Levine & Dean, 2012; Igel & Urquhart, 2012). Until recently, the definition of a generation has changed very little (McCrindle 2014). A generational cohort was defined by the lifespan of individuals from their birth until the birth of their offspring; typically this span was figured at 20-25 years (McCrindle, 2014). This birth-to-birth biological definition is changing "in response to new technologies, changing career and study options and shifting societal values" (McCrindle, 2014, p. 1).

With a slight modification to the definitions provided by Taylor (2014), it is possible to establish six generations occupying the collegiate classroom (Werth & Werth, 2011). This modification occurs when one considers the presence of the mid-teen high school student who is dual-enrolled in the college classroom (Igel & Urquhart, 2012; Taylor, 2014). In this section, literature pertaining to the various generational cohorts present in the community college classroom is featured.

Generation Z. The natural course of events means high school teens, defined in this study as Generation Z, or those born starting in 1999, will begin arriving to the community college classroom in the next two years (Igel & Urquhart, 2012; Rose, Gosman, & Shoemaker, 2014; Taylor, 2014). The insights one may gain through research are valuable considering this group will soon be the traditional student in the classroom

(Cohen et al., 2014; Igel & Urquhart, 2012). According to Igel and Urquhart (2012), "Some consider members of Generation Z to be smarter, more self-directed, and more able to quickly process information than previous generations; but there is one thing they may not be–team players" (p. 16).

Generation Z is considered to be very social, but their social environment tends to involve a digital degree of separation, such as texting or social media, from their contacts (Igel & Urquhart, 2012). According to Rose et al. (2014), "In 2012, 78% of American youth surveyed reported they owned a mobile phone, 37% owned smartphones, and 23% owned a tablet computer" (p. 18). As the availability of smart devices has increased, the number of teens with mobile phones has increased to 88%, with 73% of those being smartphones (Anderson, 2015).

Social media and texting have created a post-literate environment (McCrindle, 2014). Generation Z has witnessed the morphing of printed word into electronic text complete with revealing emotional mood through emoticons (McCrindle, 2014). As a result of Generation Z's digital capability, or perhaps digital reliance, educators are rethinking their approach to instruction (Rose et al., 2014). Some keen educators have added assignments that promote mobile learning (Rose et al., 2014).

The classroom as a whole is shifting, many young students use Powerpoint instead of a traditional poster board when giving reports (McCrindle, 2014). Further, textbooks have been replaced by laptops, and Wikipedia has nearly replaced Encyclopedia Britannica in the classroom (McCrindle, 2014). According to McCrindle (2014), this younger generation is more concerned with the qualitative than the quantitative; he stated, "In these post-modern times statistics don't influence with the

same power as story" (p. 102). Generation Z is the most socially empowered and technologically literate, but they may lack the overall ability to cooperate in-person in a social situation (Igel & Urquhart, 2012; McCrindle, 2014).

Digital natives versus digital immigrants and traditional versus nontraditional students. Terms such as "Digital Native" and "Digital Immigrant" have become nearly colloquial in modern society (Czerniewicz & Brown, 2012, p. 2; Gallardo-Echenique, E., Marqués-Molías, L., Bullen, M., & Strijbos, J., 2015, p. 156). According to Gallardo-Echenique et al. (2015), the term "Digital Native" was devised by Marc Prensky in 2001. Combining the terms "Digital Native" with "Digital Immigrant" establishes clear distinctions between digital learning groups (Czerniewicz & Brown, 2012, p. 2; Gallardo-Echenique et al., 2015). According to Gallardo-Echenique et al. (2015), "the terms [Digital Natives and Immigrants] distinguish between those who were not born into the digital world and those who have grown up familiar with multiple technologies" (p. 164). These distinctions between "Digital Natives" and "Digital Immigrants" are important, as technology is increasingly becoming more dominant in higher education, and classroom instructors need to be prepared to approach these learners respective of their individual backgrounds and digital abilities (Czerniewicz & Brown, 2012).

As researchers and journalists continue to consider the elements that divide and define the Millennial Generation and Generation Z, distinctions between digital learning are important (Levine & Dean, 2012; McCrindle, 2014; Sánchez & Kaplan, 2015; Taylor 2014). So while the terms "Digital Natives" and "Digital Immigrants" are not biological generational classifications, the mainstream adoption of digital technology overlaps the biological definition of lifespan (Gallardo-Echenique et al., 2015; McCrindle, 2014).

Further, with Generation Z taking up the mantle of "Digital Native" and the biological divide placing the start of their generation in 1999, the definition of a traditional student and the distinctions of digital learning overlap with Generation Z (Gallardo-Echenique et al., 2015; Igel & Urquhart, 2012; McCrindle, 2014). In this way, digital technology may emerge as the definition that defines and ultimately separates Generation Z from all previous generations (Igel & Urquhart, 2012).

Academic researchers and educational administrators have long defined the traditional college student as one who enters higher education right after high school at or around the 18 years of age (Cohen et al., 2014). The student is typically enrolled full-time and living on or near campus (Diel-Amen, 2011; Sánchez & Kaplan, 2015). With the continual reshaping of the educational environment due to the influence of digital technology, the dynamic of digital commuting to college campuses may become increasingly more prevalent among Generation Z (Levine & Dean, 2012). Thus the notion the traditional student lives on or around campus may be abandoned, leaving the brick and mortar campuses for predominantly non-traditional students (Blumenstyk, 2015; Cohen et al., 2014; Diel-Amen, 2011).

The next generational cohorts break from the traditional student as they represent mature adult learners at various stages of life (McCrindle, 2014). Some entered the workforce immediately following high school, while others received an initial degree in higher education but determined the need to return to school for the next stage of their careers (Topper & Powers, 2013). For groups of learners, enrolling in higher education to retool for the second or third stage of their career, the approach to education is very pragmatic (Sogunro, 2015). According to Sogunro (2015), "adult learners perceive

learning as a means to an end and, therefore, [they] value learning experiences only if they are relevant and applicable to their needs" (p. 29). Sogunro (2015) further added, "They [adult learners] prefer problem-focused and hands-on-learning activities that are relevant to their immediate needs" (p. 29). While Sogunro (2015) does not segregate results based on generational cohorts, it remains relevant to mention the findings as they apply to some within the broad spectrum of adult learners.

The Millennial Generation. The Millennial Generation, a term that defines individuals born between 1981 to the present, are the predominant generation in the higher education classroom (Elbert & Cumiskey, 2014; Howard, 2014; Pinder-Grover & Groscurth, 2009; Taylor, 2014; Werth & Werth, 2011). For the purpose of this study, the 36-year timespan was divided, thus the Millennial Generation stops at the culmination of 1998. Millennials have been shifting their perspective of the world (Werth & Werth, 2011). Having grown up in the high emission decades of 1980s and 1990s, Millennials are realizing their impact on the world (Taylor, 2014). This generation is concerned with both environmental and social issues (Taylor, 2014).

While this generation may not entirely be defined as digital natives, most Millennials have had access to technological resources for a majority of their lives and have become reliant on technology (Elbert & Cumiskey, 2014; Howard, 2014; Ransdell et al., 2011; Werth & Werth, 2011). Pinder-Grover and Groscurth (2009) asserted, "Researchers indicate that Millennial students appreciate being able to work together, use technology to interact with each other and seek information" (p. 2). According to Werth and Werth (2011), "[Millennials] are team oriented, exhibit confidence and optimism, are pressured, have a strong desire to achieve, are peace keepers, and are accepting of those

from varied cultural backgrounds" (p. 13). Other researchers suggest Millennials are "special, sheltered, confident, conventional, team-oriented, achieving and pressured… having a focus on social interaction and connectedness" (Gallardo-Echenique et al., 2015, p. 165).

Yet, this tendency toward working together or collaboration, as well as confidence, has earned Millennials the reputation of being too casual in the workforce (Elbert & Cumiskey, 2014; Werth & Werth, 2011). Werth and Werth (2011) stated:

Millennials as individuals [exhibit] a casual attitude towards employers, possessing a higher degree of loyalty to their personal lives than their employer, display a propensity to challenge rules, expect instant gratification, and value a fun, flexible work environment where coworkers are friends. (p. 13)

Elbert and Cumiskey (2014) confirmed Millennials are self-important, disloyal, and impatient. Ultimately, educators should harness the Millennial Generation's eagerness to learn, skilled collaboration, and goal-focused nature (Howard, 2014). Successful cooperative learning strategies can be employed in the classroom that emphasis these attributes (Çolak, 2015; Elbert & Cumiskey, 2014; Hansman & McAtee, 2009; Howard, 2014; Igel & Urquhart, 2012; Mohammadjani & Tonkaboni, 2015; Pinder-Grover & Groscurth, 2009; Werth & Werth, 2011).

Generation X. The generational span for Generation X ranges between 1965 and 1980 (McCrindle, 2014; Taylor, 2014: Werth & Werth, 2011). Generation X has been categorized by some to be the dividing line between young and old when it comes to issues, and others have deemed it the in-between generation (Taylor, 2014). Generation X recognizes how much has changed within society during their lives, and these recognized

changes translate into anxiety, which shows through in the way they raise their children (McCrindle, 2014).

Predominately, Generation X are the parents of Generation Z (McCrindle, 2014). Generation X has become known for their tendency to over-parent or be more involved in the lives of their children than those parents of previous generations (McCrindle, 2014; Taylor, 2014). This has been explained by the fact this generation has a much smaller household with a fewer number of children resulting in more time to over-parent (McCrindle, 2014). As Generation Z matures and enters higher education, further research can be conducted, and a better snapshot of Generation X's impact on Generation Z can be determined. In the meantime, research reveals characteristics of Generation X in their own right (Hansman & McAtee, 2009; Howard, 2014; Werth & Werth, 2011).

Generation X prefers carefully laid out plans as they want to know precisely what is expected upon entering the learning situation (Hansman & McAtee, 2009). Generation X has also been characterized as practical, self-reliant, pessimistic, and individualistic (Yahr & Schimmel, 2013). Additionally, Generation X favors long-term planning; they are eager to know future assignments, which include assignment parameters, sequential steps toward completion, and nothing left to instructor interpretation (Hansman & McAtee, 2009). According to Werth and Werth (2011):

> Generation X learners have been depicted as relying heavily on human experience in developing, understanding, and embracing the postmodern educational landscape where one depends on himself/herself to create meaning. There is a general lack of belief in things beyond one' own existence, and social cohesion. (p. 13)

The former statement complicates the generational relationships in the educational environment when one considers Millennials are characterized by teamwork, networking, and social learning (Werth & Werth, 2011). Therefore, if an educator elects to use cooperative learning strategies in the multigenerational classroom, instructions for successful completion of the assignment should be very detailed (Igel & Urquhart, 2012). Additionally, the assignment should be designed with mechanisms that allow for both individual accountability, as well as cooperative components necessary to reinforce interdependence between group members (Çolak, 2015; Igel & Urquhart, 2012; Mohammadjani & Tonkaboni, 2015).

When it comes to technology, Generation X grew up in a largely analog world, as opposed to their Generation Z children who are the first "Digital Natives" to attend college (Levine & Dean, 2012). Unlike Generation Z with almost instant and constant access to information on the internet, Generation X did not have information as readily available during their formative educational years (Levine & Dean, 2012). However, according to Yahr and Schimmel (2013), Generation X is "technology capable" and "computer oriented" (p. 3).

The Baby Boomers. The Baby Boomer Generation spans the years between 1946 and 1964 (Clemente, 2010; McCrindle, 2014; Taylor, 2014). This generation is so named because of the high birthrates in the years immediately following World War II (McCrindle, 2014). Boomers remain the largest generation and now the wealthiest generation (Elbert & Cumiskey, 2014). Baby Boomers have witnessed paramount political changes during the span of their lives (Clemente, 2010; Howard, 2014; Taylor, 2014). Older boomers were young adults during the political scandals of Watergate and

the fatigue of a protracted war in Vietnam (Clemente, 2010; Hansman & McAtee, 2009; Taylor, 2014). Although most of this generation were not involved in the marches and protests, Baby Boomers came to age in an era of social unrest, and have been typified as the cohort to challenge authority (Howard, 2014).

Baby Boomers have been labeled as competitive, idealistic, wary of authority, and self-absorbed workaholics (Werth & Werth, 2011). Further, according to Werth and Werth (2011), "Members of this generation have been characterized as having a desire to work efficiently and believing in participatory problem solving" (p. 13). Boomers see employment as an opportunity for self-fulfillment, and they look to play a meaningful role in the workplace (Howard, 2014). This generation has expressed the need for a more hands-on active learning approach using three-dimensional and manipulative materials (Hansman & McAtee, 2009). Baby Boomers are motivated by goals, seek face-to-face communication, and have a tendency to micromanage (Elbert & Cumiskey, 2014). While this group leans toward independent tasks, they are also willing to engage in groups (Elbert & Cumiskey, 2014; Werth & Werth, 2011). Boomers remain conservative when it comes to technology (Werth & Werth, 2011).

Literature regularly suggests Generation Z is the most technologically literate of the generational cohorts; however, researchers should not be quick to dismiss the effectiveness of older generations and their use of technology (Anderson, 2015; Czerniewicz & Brown, 2012; Gallardo-Echenique et al., 2015; Igel & Urquhart, 2012; Ransdell et al., 2011). According to Ransdell et al. (2011), "Older cohorts of learners can be better online learners in that they can 'go beyond the information given' and make inferences about the material" (p. 931). Ransdell et al. (2011) further stated, "Older

students [born in 1960 or earlier] contributed more original postings to discussions, earned higher grades in the class, and were higher in critical thinking skill than younger learners" (p. 931). While the modalities of the traditional in-class and online environments differ, research indicates some of the older generations are embracing technology when it comes to education (Ransdell et al., 2011).

The Silent Generation. The Silent Generation spans the years 1928 to 1945 (Elbert & Cumiskey, 2014; Taylor, 2014). Some researchers have referred to this group by such terms as "Builders" or "Matures" (McCrindle, 2014, p. 9; Werth & Werth, 2011, p. 12). With the exception of very few, this generation largely was not of age to participate in World War II (Taylor, 2014). While the Silent Generation did not serve in World War II, most of their adolescence was spent living through both the war and the Great Depression (McCrindle, 2014; Taylor, 2014). The Silent Generation also lived through the post-war prosperity of the 1950s, though some did see service in both the Korean and Vietnam Wars (McCrindle, 2014, Taylor, 2014). This generation is incredibly conservative, and an overwhelming majority of the Silent Generation voice frustration with the government (Taylor, 2014).

The Silent Generation has a profound respect for authority, commitment to both employer and industry, and a loyalty to a brand (Howard, 2014; McCrindle, 2014). According to Howard (2014), "Loyal, hardworking and dependable are all traits that this generation has carried with them into the workplace" (p. 9). This generation has a desire for clear rules, and they expect an employer to provide structure (Howard, 2014). It is likely this generation spent a majority of their lives without digital technology; however, Americans aged 65 years and older have become late adopters of technology (Smith,

2014). A 2014 survey revealed 77% of those aged 65 years and older have cellular phones, and 59% use the internet (Smith, 2014).

The Greatest Generation. The Greatest Generation is defined as anyone born before 1928 (Taylor, 2014). This generation has also been referred to as the G.I. Generation because they came of age during World War II (Taylor, 2014). This was the first generation to take advantage of the Servicemen's Readjustment Act of 1944, also known as the G.I. bill (Adams, 2000).

About 2.2 million or roughly one-third of all World War II veterans attended higher education between 1944 and 1960, which is quite telling of the G.I. Bill when considering only 1.5 million attended higher education in 1939 (Adams, 2000). The Greatest Generation is characterized by a strong work ethic, loyalty to their employer, with a continued belief in the 'American Dream' (Clemente, 2010). Very little contemporary research exists regarding this generation in the modern higher education classroom. However, it is likely their presence in higher education is due to a desire to engage in lifelong learning (Sánchez & Kaplan, 2015).

Learning Strategies for the Multigenerational Learner

The multigenerational classroom has become increasingly more prevalent in higher education over the last 40 years (Sánchez & Kaplan, 2015). The number of students aged 25 years and older has increased from 27.8% in 1970 to 42.3% in 2011 (Sánchez & Kaplan, 2015). According to Sánchez and Kaplan (2015):

Consideration of the multigenerational classrooms is not just with the confluence of differently-aged students and teachers at the same learning premises, but it is primarily with how differences in their ages can be framed in ways that contribute

to content- and interaction-rich intergenerational teaching-learning processes. (p. 476)

Instruction until recently has been largely unchanged (Killian & Bastas, 2015).

The passive lecture model is well ingrained, often it is how the instructor was taught, and thus how the instructor continues to teach (Pinder-Grover & Groscurth, 2009). Research has indicated active learning strategies will improve overall student engagement (Bowen et al., 2011; Horn & Staker, 2015; Killian & Bastas, 2015; Perrotta & Bohan, 2013; Sheldon, 2012). However, an instructor should consider using best practices from various strategies to engage the different generations in order to ensure an inclusive learning environment (Hansman & McAtee, 2009; Killian & Bastas, 2015; Morgan, 2013; Sánchez & Kaplan, 2015). An inclusive learning environment that facilitates student engagement has an effect on overall student retention and persistence, which remains critical issue for institutions of higher education (Morgan, 2013).

Each learner is unique, thus one pedagogical style does not provide for the diverse needs of all students within the learning environment (John, Thavavel, Jayaraj, Muthukumar, & Jeevanandam, 2016). According to John et al. (2016), effective learning requires "learner centric adaptive learning by personalizing with relevant content based on the learner's goals, style, habits and prior knowledge" and "learner centric social learning based on the goals, learning style and behavioral patterns of similar learners" (p. 21). When considering the diversity of learning styles within the multigenerational classroom, utilizing a broad range of effective teaching pedagogies balances the needs of the individual learner, as well as the social environment as a whole (John et al., 2016; Sánchez & Kaplan, 2015). Assignments and whole lessons are structured correctly with a

variety of different learning pedagogies; therefore, different generational cohorts have a tremendous opportunity to learn from each other in the same environment (Sánchez & Kaplan, 2015).

       Technology–a generational divide. For decades, technology has been infused into the classroom (Levine & Dean, 2012). Broadly speaking, technology can be represented as older analog or newer digital applications (Koehler, Mishra, & Cain, 2013; Volkom, Stapley, & Malter, 2013). Technology is trending toward the newer digital applications, but the use of these applications in the classroom may not always be so straightforward (Koehler et al., 2013). Technology can create an interesting dichotomy in the classroom, especially if the instructor and students are not of the generational cohort (Koehler et al., 2013; Levine & Dean, 2012).

       Levine and Dean (2012) surveyed college students to gain insights on their adaption to technology; according to the authors, one student remarked, "It's only technology if it happened after you were born" (p. 20). This remark is very telling of the mindset many have and perhaps do not realize (Levine & Dean, 2012). For adults born after the advent of the telephone, radio, or television, using those devices seems intrinsic (Levine & Dean, 2012). Yet, those same adults remark with surprise when a toddler is observed navigating a digital device (Levine & Dean, 2012). It is essentially a technological immersion (Koehler et al., 2013; Levine & Dean, 2012). While younger generations seem to effortlessly grasp new technologies, seasoned classroom instructors can be challenged by this new learning curve (Koehler et al., 2013).

       Jameson (2013) argued educators and administrators are ill-equipped to manage or promote technologies in schools. Developments in technology have happened rather

unexpectedly and without much overarching direction (Jameson, 2013). As such,

Jameson (2013) argued, "There is a potential threat to the existence of higher education

institutions if rapid e-leadership adaption to innovations is not forthcoming" (p. 912). It

should be noted the argument stands; integrating technology into the classroom by

education professionals has been difficult (Jameson, 2013; Koehler et al., 2013).

However, research has indicated younger students, as well as older adults, adapt well and

are confident with the use of technology in the classroom (Czerniewicz & Brown, 2012;

Gallardo-Echenique et al., 2015; Yau & Cheng, 2012). While there may be a struggle

with the adaption process with no single, correct method for implementation, integration

of technology is valuable to the learning process both inside and outside of the

environment and should be addressed with all due haste (Jameson, 2013; Koehler et al.,

2013; Levine & Dean, 2012).

Koehler et al. (2013) argued at the core of good teaching are three components:

"content, pedagogy, and technology" (p. 14). Content and pedagogy have been staples of

education for millennia, yet technology is a far more recent addition (Jameson, 2013).

The resulting addition of digital technology has changed the learner and learning

environment (Levine & Dean, 2012). Changes as a result of digital technology have

pitted the expectations of the learners against the traditional education system (Levine &

Dean, 2012). As mentioned previously within this chapter, the digital generational divide

exists with Generation Z (Igel & Urquhart, 2012; Levine & Dean, 2012).

Students in higher education operate on a 24-hour clock, with access to materials

anywhere and any hour (Levine & Dean, 2012). The learning environment has become

more diverse with the addition of "cloud computing, social media platforms, tablet and

mobile apps, digital portfolios, crowdsourcing facilities, wikis, blogs, podcasts, video conference, massive open online courses" and the list continues (Jameson, 2013, p. 890). Yet, with fixed semesters, fixed schedules, and fixed locations, the educational system has not quite adapted to the learner's demand (Levine & Dean, 2012). The student entering the college classroom today will likely demand more than just incremental changes to the structure and offerings of college courses (Cohen et al., 2014; Igel & Urquhart, 2012; Levine & Dean, 2012). It is imperative educators and administrators consider digital influences as they examine new strategies and modalities for delivering content and material to students (Alm, 2015; Leaver & Kent, 2014).

Social learning. Social learning, also referred to as group learning, has been found by researchers to have profoundly positive effects on young learners (Igel & Urquhart, 2012). Social learning provides a broader theoretical framework for which cooperative and team-based learning adhere (Bandura, 1986; Mohammadjani & Tonkaboni, 2015). When using cooperative learning, students are considered one component in a group dynamic within the classroom (Igel & Urquhart, 2012). Team-based instruction provides structure by which the concept of a team is reinforced to the grouped students (Killian & Bastas, 2015). It is understood students in a team have a much greater connection with each other (Killian & Bastas, 2015).

The overall premise behind social, cooperative, and team-based learning theories is human beings gain and offer knowledge through interactions with their peers (Bandura, 1986). Igel and Urquhart (2012) reported researchers at Mid-continent Research for Education and Learning conducted a series of studies on cooperative learning. Their findings revealed well-designed cooperative instruction garnered a 17-percentile-point

gain, "In other words, a student performing at the 50th percentile under normal conditions would be expected to improve to the 67th percentile when learning under well-designed social conditions" (Igel & Urquhart, 2012, p. 17).

Drawbacks to this learning strategy have emerged, as many teachers report some students do most of the work, while others coast through (Igel & Urquhart, 2012). Igel and Urquhart (2012) argued there are three principles for successful cooperative learning; "teach group processing and interpersonal skills," "establish cooperative goal structures within groups," and "provide mechanisms for individual accountability" (pp. 17-19). Not all students possess strong cooperative skills when placed in groups (Çolak, 2015; Igel & Urquhart, 2012; Mohammadjani & Tonkaboni, 2015). However, if students are selected for leadership positions within their groups, social cognitive theorists surmise leadership skills exhibited by peers will often be learned and modeled by others (Bandura, 1986; Çolak, 2015; Igel & Urquhart, 2012). Students engaged in the social learning environment often learn more than content taught within the environment; they also learn appropriate social behaviors (Schunk, 2012). In addition to a leadership structure, a cooperative goal should also be established (Mohammadjani & Tonkaboni, 2015).

Cooperative learning. The concept of cooperative learning began to appear in research in the 1960s (Mohammadjani & Tonkaboni, 2015). According to Mohammadjani and Tonkaboni (2015), at that time, "competitive learning dominated educational thoughts, individual learning that was mainly based on the works of Skinner about programmed learning and behavioral changes, was challenged" (p. 108). Cooperative learning sets about establishing a goal within the group social learning environment as such interdependence is promoted among individual participants

(Ebrahim, 2012; Eslamiyan, Saeedi, & Jarosz, 2013; Igel & Urquhart, 2012; Mohammadjani & Tonkaboni, 2015). According to Kent, Wanzek, Swanson, and Vaughn (2015), cooperative learning allows for peer-mediated instruction which promotes a sociocultural framework that stresses language and communication.

While cooperative learning is based on group structure, the instructor should not completely ignore the individual within the learning environment (Igel & Urquhart, 2012; Kent et al., 2015). Although cooperative learning promotes group learning, the instructor must also provide mechanisms that reveal individual accountability for the students within the group (Igel & Urquhart, 2012). In this way, students are engaged in group interests and group success, as well as personal success (Igel & Urquhart, 2012; Kent et al., 2015).

Several research studies have demonstrated the positive attributes of cooperative learning on overall student success as well as individually learned skills and behaviors (Ebrahim, 2012; Eslamiyan et al., 2013; Igel & Urquhart, 2012; Mohammadjani & Tonkaboni, 2015). According to Mohammadjani and Tonkaboni (2015), students engaged in cooperative learning developed higher levels of creativity. The creativity was perhaps stimulated as a result of observing the creative abilities of other students within the group (Mohammadjani & Tonkaboni, 2015). Additionally, students in cooperative learning environments developed greater social skills than those students in a traditional lecture format (Ebrahim, 2012). While the class room itself is a social environment, there are means by which an instructor can intensify those social interactions within the environment (Mohammadjani & Tonkaboni, 2015). Eslamiyan et al. (2013) found cooperative learning yields higher scores on evaluation tests. The results of the study also

discovered a greater satisfaction on the part of students who participated in cooperative group learning versus those in a standard lecture format (Eslamiyan et al., 2013).

Mohammadjani and Tonkaboni (2015) examined the role of discussion within cooperative learning environments. Individuals often bring to the group different thoughts, opinions, and beliefs (Mohammadjani & Tokaboni, 2015). In their research, Mohammadjani and Tokaboni (2015) found a somewhat controlled discussion allowed individuals to express individual ideas. Mohammadjani and Tonkaboni (2015) further purported, "since matters are assessed and discussed with reasons and each person defends his/her opinion, a positive and synergistic atmosphere exists and people defend each other and complement each other's thoughts" (p. 111). Ultimately, Ebrahim (2012) found cooperative learning to be similar to the experiences of daily life for students when they are outside of the classroom engaged in conversation with friends, siblings, parents, and relatives.

Team-based learning. In the 1970s, Larry Michaelsen, a faculty member at the University of Oklahoma, conceived team-based learning (Killian & Bastas, 2015; Leisey, Mulcare, Comeford, & Kudrimoti, 2014). The team-based learning method is a slight iteration from the cooperative learning method in that group is replaced by a team (Killian & Bastas, 2015). Çolak (2015) stated, "working in teams–and thereby engaging an environment and context closer to real-life–increases students' critical thinking skills and supports their ability to put theory into practice" (p. 19).

Teams represent a longer-term instructional strategy than that of a group (Killian & Bastas, 2015; Leisey et al., 2014). According to Kent et al. (2015), team-based learning has four key elements. For the first element, students are divided into permanent teams

(Kent et al., 2015). Second, students engage in a learning process that assures both individual and group accountability for comprehending the content (Igel & Urquhart, 2012; Kent et al., 2015). Third, team activities provide problem-solving and choice-making tasks for learning new material (Kent et al., 2015; Killian & Bastas, 2015). Finally, there should be a peer-evaluation process that culminates the team-based learning exercise (Kent et al., 2015).

Killian and Bastas (2015) stated, "Teams, in this sense, are different from groups in that they demand a higher level of commitment to the welfare of the group and consequently a higher level of trust among the group members" (p. 55). However, classroom instructors should carefully consider the strengths of each student before they begin selecting members of the team (Kent et al., 2015). Researchers have revealed Team-Based Learning leads to an environment of engagement (Leisey et al., 2014). According to Leisey et al. (2014), "classrooms showed a balance between peer engagement (51%), engagement with the instructor (21%), and time for reflection and writing (28%)" (p. 172).

For the problem-solving and choice-making tasks, the instructor should consider a wide variety of different source materials to provide to students (Perrotta & Bohan, 2013). Students in a history course are often required to refer to different primary and secondary sources when discussing history (Perrotta & Bohan, 2013; Tai, 2013). The multiple source approach allows the student to draw on traditional printed works, as well as to use digital devices in class to uncover multimedia images, maps, speeches, newsreels, and documentaries (Perrotta & Bohan, 2013; Tai, 2013). These sources become interactive tools that allow students to cooperate with their team members, open

a dialogue with their instructor, and facilitate problem solving as directed by the instructor (Igel & Urquhart, 2012; Killian & Bastas, 2015; Leisey et al., 2014; Morgan, 2013; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015; Tai, 2013). Finally, a thorough evaluation tool should be developed which allows the instructor to gage individual and group learning (Kent et al., 2015). Additionally, the instructor should seek feedback from individual team members to determine the effectiveness of the team-based learning activity (Igel & Urquhart, 2012; Perrotta & Bohan, 2013).

Social and cooperative learning in the digital media age. Considering the influence of digital technology, and the certain changes in modality or delivery of coursework, educators need to begin examining the use of digital social media platforms to connect social learning outside of the traditional seated classroom environment (Alm, 2015; Blattner & Lomicka, 2012; Okoro, Hausman, & Washington, 2012; Rohr, Costello, & Hawkins, 2015; Rosli et al., 2015). In the past decade, Facebook, which is an online social media networking website, has gone from being banned in schools to being used widely in academia (Alm, 2015; Leaver & Kent, 2014). On August 28, 2015, it was reported in *The Guardian*, a British national daily newspaper, that Facebook had 1 billion people log into the site in a single day, which is one-seventh of the world's population (Alm, 2015). There should be no question of the far-reaching ability this platform can have for educators (Alm, 2015; Leaver & Kent, 2014; Volkom, Stapley, & Malter, 2013). However, figuring out how to appropriately and innovatively deploy Facebook, as well as other social media platforms, may be a challenge for educators (Blattner & Lomicka, 2012; Okoro et al., 2012).

Facebook was initially started as an intra-campus socializing network at Harvard University in 2004 (Blattner & Lomicka, 2012). At its center, Facebook is a dialogue-based platform, so for instructors wishing to create an online social environment, the mechanism exists (Alm, 2015; Blattner & Lomicka, 2012; Okoro et al., 2012). The responsibility is placed on the instructor to utilize the tools found within the digital media platform to create a social learning environment (Okoro et al., 2012).

Facebook provides opportunities not necessarily available in other platforms (Alm, 2015). While the dialogue is at the core of this social media network, the conversation between users is not limited to just text; a user can post images, videos, articles, and news stories within their feed, or share within a closed group (Blattner & Lomicka, 2012). In this sense, a variety of sources may be utilized which engage the learning styles of different students (Perrotta & Bohan, 2013; Tai, 2013). With the safety and privacy of learners involved, the instructor should consider utilizing a private group within Facebook, which allows the group moderator to add only those individuals who belong in the environment (Chen, 2015). For Chen (2015), Facebook "fosters self-initiated learning by allowing students to develop personal links amongst themselves" (p. 96).

In addition to Facebook, Twitter, which began in 2006, is the second most popular social media network (Evans, 2014; Feliz, Rocoy, & Feliz, 2012). Twitter is a micro-blogging social media platform that requires users to share ideas, opinions, and thoughts in postings of 140 individual characters or less (Rohr et al., 2015). These size-specific postings are known as tweets, which can stand alone, be shared by way of reposting, or can become part of a larger conversation by means of a hashtag (Rohr et al., 2015). A

hashtag may be added to a tweet, thus allowing the tweet to become searchable as it is indexed with all other tweets containing the same hashtag (Ross, Maninger, LaPrairie, & Sullivan, 2015). This index of tweets has the effect of building a community or network around the hashtag, as they are generally linked to event or a particular common interest (Ford, Veletsianos, & Resta, 2014). An example of one of these communities is #PhDChat, which began by a group of doctoral students in the United Kingdom (Ford et al., 2014). The PhDChat hashtag has grown into a vibrant community and now receives hundreds of new tweets each day from around the world (Ford et al., 2014).

Research on the role of digital social media networks within learning environments is still limited (Evans, 2014; Ross et al., 2015). However, some studies are beginning to examine the effectiveness of digital social media on interaction, performance, and engagement (Evans, 2014; Ford et al., 2014; Rohr et al., 2015). For Rohr et al. (2015), Twitter should be closely linked to classroom activities and content, as well as relevant in terms of timing of tweets (Rohr et al., 2015). According to Evans' (2014) study, a strong relationship between Twitter usage and student engagement was found. Twitter has not only become a creative tool for engagement within the classroom learning environment, but also as a professional development tool for faculty as well (Ford et al., 2014). Ross et al. (2015) recommended administrators should consider the use of Twitter as a professional development tool to connect faculty and ideas across the campus community.

Within education there are proponents and opponents to utilizing social media platforms, especially when the school or institution may already have a digital platform, such as Blackboard (Okoro et al. 2012). There are advantages to using Facebook, Twitter,

and other social media as a tool (Blattner & Lomicka, 2012). Students are familiar with the social media platform, they perceive it as a trusted environment, and it is associated with leisure rather than work, becoming part of the daily routine (Blattner & Lomicka, 2012; Chen, 2015; Okoro et al., 2012). Additionally, with the availability of high speed internet, smart devices, and user-friendly applications, the student can be connected to the learning environment in more places than ever before, which is valuable to Generation Z (Chen, 2015; Igel & Urquhart, 2012; Levine & Dean, 2012; Rose et al., 2014).

While it is certainly difficult to predict the future role of social media within higher education, huge strides toward incorporating online networking platforms have been made over the past decade (Blattner & Lomicka, 2012; Chen, 2015; Okoro et al., 2012). Further research must be conducted to determine the most viable and appropriate approaches for using different available online media platforms. However, educators and administrators should not waste too much time exploring online social platforms, as it is evident in research younger generations are already beginning to push higher education toward uncharted territory in the realm of access and technology (Igel & Urquhart, 2012; Levine & Dean, 2012; Rose et al., 2014).

Problem-based learning. The historical origins of problem-based learning emerged in the 1960s at McMaster University in Canada (Blackburn, 2015). Problem-based learning is set apart from traditional pedagogies, as it does not involve repetitive memorization of facts and figures (Barber, King, & Buchanan, 2015). Instead, according to Barber et al. (2015), "students brainstorm problems, arrange possible solutions, decide collectively on their learning objectives, do individual work to seek out necessary information, then report back to synthesize and apply their new knowledge collectively"

(p. 59). In this, problem-based learning provides a departure from the passive environment of dull lecture, to a classroom environment more authentic to what students would encounter in the professional realm once they leave school (Barber et al., 2015).

According to Blackburn (2015), problem-based learning pedagogy has become increasingly more popular in higher education in recent years. Problem-based learning lessons allow students to develop problem-solving skills, as well as critical thinking (Blackburn, 2015). In order for this to occur, Trekles (2012) recommended an effective problem-based learning lesson "should ensure that the problem is clear, interesting, relevant, promotes teamwork in some way, and stimulates self-directed learning" (pp. 5-6). Problem-based learning has the added benefit of pushing student knowledge beyond what is presented in the classroom, as it encourages students to seek out additional information and use it in a way that solves a particular problem (Levitt, McKeage, & Rangachari, 2013; Trekles, 2012). Beyond knowledge, a paradigm that places importance on the problem itself and the need to solve a given problem is created (Barber et al., 2015; Blackburn, 2015).

In problem-based learning, classroom interactions are intensified, because students must lean on their peers and the instructor to make discoveries in the hope of leading to a solution to the problem (Levitt et al., 2013; Raiyn & Tilchin, 2015; Sheldon, 2012). Students begin to facilitate their own self-directed studies as they identify learning gaps and develop viable solutions (Barber et al., 2015). Sern, Salleh, Sulaiman, Mohamad, and Yunos (2015) noted, problem-based learning usually involves interdisciplinary contents when approaching the problem from the beginning. So while problem-based learning was initially used to educate students in a medical program, it is

not discipline specific (Barber et al., 2015; Blackburn, 2015; Sern et al., 2015). According to Levitt et al. (2013), "It can be appropriate to use [problem-based learning] for courses in disciplines such as social studies and history, where multiple perspectives exist and information must be gleaned from a variety of sources" (p. 187).

With the role of digital technologies in the classroom, an educator can provide students with the opportunity to explore resources beyond the confines of the classroom as they conduct their investigation of the problem (Barber et al., 2015). Perrotta and Bohan (2013) encouraged the use of multiple sources in the realm of social studies and history, which lends well to problem-based learning in the digital age. The internet is host to historical primary and secondary sources including images, speeches, videos, biographies, and other assorted documentaries (Blattner & Lomicka, 2012; Levine & Dean, 2012; Perrotta & Bohan, 2013; Tai, 2013). Digital social media can lend to further collaboration and sharing of resources outside of the brick and mortar learning environment (Barber et al., 2015).

Summary

In this chapter, an overview of two theoretical frameworks guiding this study was presented. Bandura's (1986) social cognitive learning theory provided understanding for how students learn within the social classroom environment. Bandura's (1986) theory was paired with Schön's (1973) organizational learning theory. Schön's (1973) reflective practice model was based on his own organizational learning theory. Bandura (1986) and Schön's (1973) theories in tandem provided a holistic understanding of the classroom, student behavior, and the classroom environment.

Bandura (1986) made three assumptions in his social learning theory. The first assumption is a triadic reciprocal interplay that exists between three factors: learner, behaviors, and environment (Pajares, 1995; Schunk, 2012). Essentially the learner, when engaged in the learning environment, has the opportunity to observe the behaviors from his or her peers (Schunk, 2012). For Bandura (1986), behaviors shape both the environment and the learner. Further, the environment, which consists of peers, instructors, and physical space has an influence over the behavior of the individual (Schunk, 2012). The triadic reciprocal interplay ultimately creates a vibrant and dynamic environment (Pajares, 1995; Schunk, 2012). The instructor must understand and respond to the environment to effectively manage the students and learning within the classroom (Bandura, 1986).

The last two assumptions in Bandura's (1986) theory are enactive versus vicarious learning and the difference between learning and performance. The separation in enactive and vicarious learning exists between students who learn by actually performing the task versus students who merely witness the learning (Bandura, 1986; Schunk, 2012). The former, enactive learning, can produce heighten self-efficacy in students who receive affirmation for repeated successes in performing the learning tasks (Pajares, 1995; Phan, 2012). Individually, enactive and vicarious learning can lead to success; additionally, when used in the tandem, the two styles have proven very effective (Beauregard et al., 2015; Phan, 2012; Schunk, 2012). Finally, Bandura's (1986) third assumption separates between learning and performance of previously learned behaviors. Examples of previous learning may include declarative knowledge like memorization of facts or scripts, procedural knowledge such as concepts or algorithms, or conditional

knowledge, which is an understanding of when to utilize declarative and procedural knowledge (Schunk, 2012).

While Bandura (1986) considered the social learning environment, Schön (1973) considered the role of the instructor within his organizational learning theory. Schön (1973) recognized an unavoidable element of change within the human condition. With change comes the loss of a stable state (Morgan, 2013). Within education, the loss of a stable state can result in a myriad of responses ranging from positive and structured, to anti-responses of rejection and mindlessness (Schön, 1973). To provide some coherence within a changing environment, Schön (1973) developed a reflective practice model. Within this model, an educator considers his or her experiences and thus uses those experiences to inform future decisions (Argyris & Schön, 1974; Argyris & Schön, 1978; Bauer, 1991; Morgan, 2013). Schön's (1973) reflective practice model provides a framework for educators to move from reflection *in* action, which relates to the spur-of-moment decisions typically made in the classroom, to reflection *on* action, which includes journaling, discussing the situation with others, and developing a plan of action for future situations.

In addition to the theoretical framework, this chapter included a review of literature pertaining to the various generational cohorts present in the community college classroom. Overall, six generations can be found within the classrooms of higher education (McCrindle, 2014; Taylor, 2014). These generations include, from youngest to oldest: Generation Z, with birthdates ranging from 1999-2016; Generation Y, also known as the Millennial Generation, born between 1981 and 1998; Generation X, born between 1965-1980; the Baby Boomers, with birthdates ranging from 1946-1964; the Silent

Generation, born between 1928-1945; and finally, the Greatest Generation, born before

1928 (Clemente, 2010; Elbert & Cumiskey, 2014; Igel & Urquhart, 2012; Levine &

Dean, 2012; McCrindle, 2014; Pinder-Grover & Groscurth, 2009; Sánchez & Kaplan,

2015; Taylor, 2014; Werth & Werth, 2011). All six generational cohorts include a variety

of social norms and significant life events carried into the classroom, which translate into

how material is learned and understood (Amayah & Gedro, 2014). Additionally, with

each succeeding generation, the role of digital technology is more pervasive within the

learning environment and shapes how these generations approach learning (Anderson,

2015; Gallardo-Echenique et al., 2015; Levine & Dean, 2012; McCrindle, 2014; Rose et

al., 2014).

Finally, with so many different generations present in the higher education

classroom, the third section of this chapter included a review of literature pertaining to

effective learning strategies. The influences of digital technology have changed the

dynamic of not only the classroom but the educational system as a whole (Blumenstyk,

2015). However, an educator should not solely assume technology leads to a generational

gulf of separation; on the contrary, research has indicated older generations are making

the migration and effectively using technology as well (Anderson, 2015; Czerniewicz &

Brown, 2012; Gallardo-Echenique et al., 2015; Igel & Urquhart, 2012; Ransdell et al.,

2011).

Social learning is at the core of learning strategies presented within this chapter

(Bandura, 1986). While social learning theory provided an overall framework, Chapter

Two was further subdivided into cooperative learning and team-based learning (Killian &

Bastas, 2015; Mohammadjani & Tonkaboni, 2015). Social, cooperative, and team-based

learning is vital as research has demonstrated Generation Z lacks social skills in the classroom; thus, these strategies indicate a benefit for the Generation Z, which needs the skills, as well as Millennials who thrive in these skills (Çolak, 2015; Igel & Urquhart, 2012; Mohammadjani & Tonkaboni, 2015). However, the instructor should consider opportunities for both team and individual successes within these cooperative dynamics (Igel & Urquhart, 2012).

In problem-based learning, individuals and teams are asked to think critically through an issue as a means of solving the problem, which is of great benefit to Generation X and Baby Boomers (Levitt et al., 2013; Taylor, 2014; Trekles, 2012). Generation X prefers carefully laid plans with specific expectations, and Baby Boomers remain competitive and eager to make a meaningful contribution (Clemente, 2010; Hansman & McAtee, 2009; McCrindle, 2014). A well-designed assignment that pairs problem-based and team-based learning can fulfill dynamics that engage the generational spectrum (Elbert & Cumiskey, 2014; Killian & Bastas, 2015; Leisey et al., 2014; Levitt et al., 2013; Sánchez & Kaplan, 2015; Werth & Werth, 2011). Educators should strive to provide the most authentic environment possible, which engages a host of resources, rather than stay isolated in the vacuum of the traditional classroom (Barber et al., 2015). The role of these different pedagogies, when amalgamated, emerge as a new paradigm within education for the multigenerational learning environment (Blackburn, 2015; Blattner & Lomicka, 2012; Gonzalez, 2014; Horn & Staker, 2015; Levine & Dean, 2012; Morgan, 2013; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015).

In Chapter Three, the methodology for this study, including the research questions and hypotheses is discussed. The research design is presented and ethical considerations

are addressed. The population and sample of the study are also discussed. Additionally, instrumentation, data collection, and data analysis are reviewed. An analysis of the findings is presented in Chapter Four, and further discussion of the findings, as well as the conclusions are presented in Chapter Five.

Chapter Three: Methodology

Nationwide, community colleges struggle with retention and persistence of students, as well as low overall completion rates (Morgan, 2013; Topper & Powers, 2013). While accountability for these low rates is an institution-wide issue, quality instruction in the classroom can have influence over whether a student is successful (Foss et al., 2015; Morgan, 2013). Due to the open-enrollment nature of the community college, there is a growing generational spectrum with older lifelong learners at one end and younger digital natives at the other (Cohen et al., 2014; Igel & Urquhart, 2012; Sánchez & Kaplan, 2015; Topper & Powers, 2013). These learners are no longer taught individually by the time they reach the level of higher education, thus the instructor must recognize and adjust classroom instruction to fit the diverse needs of the student body (Cohen et al., 2014; Morgan, 2013). For this study, the diversity component centered on generational learning differences, which coexist within the multigenerational community college classroom (Levine & Dean, 2012; McCrindle, 2014; Sánchez & Kaplan, 2015; Taylor, 2014; Topper & Powers, 2013).

Generational diversity has led to a significant amount of research in the past few decades; however, as a result of exponential growth in technology since the turn of the millennial century, the youngest generation is unlike any generation before it (Igel & Urquhart, 2012). The community college instructor has perhaps one the most diverse multigenerational classrooms in human history (Sánchez & Kaplan, 2015; Topper & Powers, 2013). In this study, contemporary research on how the six generations present in today's community college classroom learn effectively was utilized. With that information, an experiment was designed that amalgamated several different active

learning strategies into a weeklong active learning module intended to appeal to the widest ranging audience in order to create an inclusive multigenerational teaching strategy (Bandura, 1986; Çolak, 2015; Igel & Urquhart, 2012; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Tai, 2013).

In order to most effectively investigate the success of this teaching demonstration, a quasi-experiment quantitative study was conducted (Bluman, 2015; McGowan, 2011). In this chapter, a review of the studied problem and the purpose of the research are provided. The research questions guiding the study are restated. A discussion of the research design is included. The ethical considerations, population and sample for this study, instrumentation, as well as information about the process used for the collection of the data are identified. Lastly, the procedures used to analyze the data and interpret the results are discussed.

Problem and Purpose Overview

Student success, retention, and persistence degree toward completion are goals of higher education institutions (Morgan, 2013). With community colleges being the front door to higher education for over half of all postsecondary students, it is imperative these institutions remain committed to best practices and the most effective learning strategies in order to stay relevant (Cohen et al., 2014; NCES, 2014; Tai, 2013; Topper & Powers, 2013). However, with a generationally diverse student population in the community college classroom, the challenges faced by the instructor become more difficult (Igel & Urquhart, 2012; Levine & Dean, 2012; Sánchez & Kaplan, 2015; Sogunro, 2015; Topper & Powers, 2013; Werth & Werth, 2011).

The intent of this study was to investigate and determine a learning strategy that accounted for the various learning requirements of all generational cohorts within the community college classroom. Research indicated creating a positive learner-centered classroom results in a heightened self-efficacy of students, sense of belonging, confidence, and produce a desire to persist and succeed (Morgan, 2013; Phan, 2012). Morgan (2013) stated, "The classroom instructor has the ability to affect the student's overall college experience" (p. 1).

Research questions and hypotheses. The following research questions guided the study:

1. What difference exists, if any, in performance on an immediate content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus students in a passive lecture format?

$H1_0$: There is no measurable significant difference in performance on an immediate content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

$H1_a$: There is a measurable significant difference in performance on an immediate content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

2. What difference exists, if any, in performance on a delayed content recognition task for different generational cohorts in a first-year college-level American history

survey course who participated in an active learning format versus different generational cohorts in a passive lecture format?

H2$_0$: There is no measurable significant difference in performance on a delayed content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

H2$_a$: There is a measurable significant difference in performance on a delayed content recognition task for different generational cohorts who participated in an active learning format and different generational cohorts who participated in a passive lecture format.

3. What difference exists, if any, in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores?

H3$_0$: There is no measurable significant difference in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores.

H3$_a$: There is a measurable significant difference in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores.

4. What difference exists, if any, in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores?

H4$_0$: There is no measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores.

H4$_a$: There is a measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores.

5. What factors related to active learning do different generational cohorts in a college-level survey American history course most often report as being the most effective?

Research Design

The research approach selected for this study was a quantitative design. Quantitative, qualitative, and mixed method approaches were considered for this study; however, quantitative research was appropriate as it considered numerical distinctions when analyzing variables (Creswell, 2014; Fraenkel, Wallen, & Hyun, 2012). According to Creswell (2014), "These [independent and dependent] variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures" (p. 4).

Qualitative design differs from quantitative in that there is more emphasis placed on the situation, events, and viewpoints of the participants (Fraenkel et al., 2012). Creswell (2014) stated, "Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social of human problem" (p. 4). In qualitative research, an issue is considered in a much more complex and detailed manner (Creswell, 2014). Qualitative design also remains more flexible, whereas a quantitative design is based on an already formulated and defined set of hypotheses (McGowan, 2011). Essentially, quantitative research relies on closed-ended questions, while qualitative utilizes open-ended questions (Creswell, 2014). While the researcher does not deny the validity of qualitative approach for certain studies, it was determined a quantitative approach was appropriate for this study.

Within the quantitative approach, a quasi-experimental type research design was selected for this study in order to determine the effectiveness of an active learning strategy designed for the multigenerational community college classroom (Bluman, 2015; Creswell, 2014). McGowan (2011) referred to a true experimental type when he stated, "It is commonly known that a well-designed randomized experiment is the best method for establishing efficacy of any intervention, be it medical, behavioral, or educational in nature" (p. 1). This study slightly differed in nature from a true experimental study. In an experimental study, subjects are randomly assigned to groups, and the treatment each group receives is assigned randomly (Bluman, 2015). Instead this study was conducted on four intact groups of existing classroom students. According to Bluman (2015):

> Sometimes when a random assignment is not possible, researchers use intact groups. These types of studies are done quite often in education where already intact groups are available in the form of existing classrooms. When these groups are used, the study is said to be a quasi-experimental study. The treatments, though, should be assigned at random. (p. 19)

While quasi-experimental research represents a slight variation in the practice of overall randomization, it remains largely aligned with the overall definition and execution of the experimental design (Bluman, 2015; Creswell, 2014; Fraenkel et al., 2012). Fraenkel et al. (2012) further stated, "Experimental research is one of the most powerful research methodologies that researchers can use. Of the many types of research that might be used, the experiment is the best way to establish cause-and-effect relationships among variables" (p. 265).

Experimental statistical studies typically have at least one independent and one dependent variable (Bluman, 2015). According to Bluman (2015), "The independent variable in an experimental study is the one that is being manipulated by the researcher. The variable is also called the explanatory variable. The resultant variable is called the dependent variable or the outcome variable" (p. 19). An experiment research design has two basic conditions; first, two or more methods are compared and assessed (Fraenkel et al., 2012). Second, the independent variable is manipulated by the researcher (Fraenkel et al., 2012).

Experimental research typically has two or more groups represented in the study, one group utilized as a control and the remaining group or groups receive the experimental treatment or treatments (Bluman, 2015). Experimental research is used to determine whether a specific treatment influences an outcome (Creswell, 2014). In order to measure the influence, the researcher provides a specific treatment to group, while withholding it from another group (Creswell, 2014). Ultimately both groups are scored on their outcomes (Bluman, 2015; Creswell, 2014).

Manipulation and control are advantages to using the experimental study; however, there are also disadvantages in utilizing this type of study (Bluman, 2015). Often experimental studies take place in unnatural settings such as a special classroom environment or laboratory, which may lead to a number of problems (Bluman, 2015; Fraenkel et al., 2012). One post-experimental problem may be the study is not easily replicated in a natural setting (Bluman, 2015). Another disadvantage is the Hawthorne effect. The effect was discovered in 1924 when researchers found workers in Western

Electric's Hawthorne Plant began changing their behavior in a way that actually affected the results of the study (Bluman, 2015).

While the latter of these disadvantages cannot be avoided, concern for the former should be minimal, as the classroom environment will not change. Student participants took part in the experimental study in the same classroom they were a part of throughout the previous weeks of the semester. Ultimately a quantitative quasi-experimental approach was selected for this study, as a researcher is most likely to draw more clear-cut interpretations from the results of this type of research (Fraenkel et al., 2012; McGowan, 2011). Barring a slight variation in the randomization of participants, a quasi-experimental statistical study is the most conclusive of the scientific methods (Fraenkel et al., 2012; McGowan, 2011).

Ethical Considerations

Each participant received an Informed Consent Form and Recruitment/Invitation to Participate letter, which described in detail the purpose of the research, any possible risks, and an opportunity to opt out of the study at any time without negative effects (see Appendix A). Students participating in this voluntary study remained nameless. Quizzes completed at the end of the weeklong study were only identified by whether the student participated in the experimental active learning design or the passive lecture design. Students also identified their generational cohort. End of term comprehensive final exam scores were similarly identified by whether the student came from the experimental or lecture design. Once again, students were asked to identify their generational cohort. Student's course grades were not affected by this study, either as a result of participation

in the study or by opting out of the study. Additionally, students were not rewarded or penalized in any way for either their participation or opting out of the study.

Students participating in the active learning format were asked to voluntarily complete a brief 11 question survey with specific questions about the various components of the active learning format. Students did not specifically identify themselves within the survey. However, students voluntarily participating in both the active and passive teaching demonstrations were asked to identify their generational cohort on both assessment quizzes. Additional students participating in the active learning demonstration identified their generational cohort on the survey as well.

For the purposes of confidentiality and security, all printed information, including data, quizzes, exams, and surveys were kept in a locked file cabinet in the researcher's workplace office. All electronic files were kept in a password protected file on the secure server at the researcher's workplace. All documents will be saved for the period of three years following completion of the research project. Documents will be promptly destroyed after a three-year period.

Population and Sample

The population for this study was student participants from a regional comprehensive community college system in the Midwest of the United States (Cohen et al., 2014; College Catalog, 2015). The college system encompasses three campuses, two educational centers, and a robust offering of online courses. The college has an approximate annual enrollment of 14,000 students (College Catalog, 2015). In order for students to complete their general education course requirements for either transfer to a four-year institution or specific degree completion, they must satisfy a social science

requirement. Students may take survey courses within the discipline of history as a means of completing the social science requirement. There are no prerequisites for students taking history courses, thus the course is open to the entire cross-section of the generationally diverse college student body.

The course selected for this study was the second of a two course sequence in United States history. The course title is: *U.S. History II: American Civil War to the present*. Individual offerings of courses are known as sections. For this study, four traditional seated sections offered at two campuses within the college system were selected from the spring 2016 schedule based on enrollment size of each section. The number of students enrolled in each section ranged between 15 and 30. It was the aim of the researcher to have a range of 60 to 80 student participants equally divided between the two groups receiving active or passive learning models. Keeping with the definition of a quasi-experimental study, those sections that received the active learning treatment and sections that received the passive lecture were randomly selected.

Instrumentation

For this study, two groups were established using four sections of a traditional seated survey American history course. The experimental group consisted of a random selection of three sections and received a weeklong active learning strategy designed around the learning styles of the various generational cohorts present in the community college classroom (see Appendix B). The lecture group received passive lectures over the same week based on the same material as the active learning strategy. At the conclusion of the weeklong teaching demonstration, both groups received a 12 question multiple-

choice quiz designed to assess immediate recognition of content and material taught or facilitated during the study (see Appendix C).

Multiple-choice questions were utilized, as the nature of these questions allow for broader coverage of the topics (DiBattista et al., 2014). Additionally, multiple-choice questions were more reliable to score when compared to open-ended written constructed-responses of short answer or essay type questions (Brookhart, 2015; DiBattista et al., 2014). Even for the most objective evaluator, open-ended written answers invite the opportunity for instructor-bias to interfere while assessing the answer (Brookhart, 2015; DiBattista et al., 2014). The specific type of multiple-choice question used for this study were the "all of the following are correct, except" option (DiBattista et al., 2014, p. 169). This form of question provides only one incorrect answer to the material pertaining to that question, with the remaining answers correct to the material; thus the students must identify and select the answer incorrect to the material and the question (DiBattista et al., 2014).

However, multiple-choice questions do receive criticism (Brookhart, 2015). According to Brookhart (2015), "Multiple-choice questions draw criticism because many people perceive that they test only recall or atomistic, surface-level objectives and do not require students to think" (p. 36). Other opponents of multiple-choice questions claim students merely guess on these questions when they are unable to remember the correct answer, as such students are not engaged in higher-level cognitive processing (DiBattista et al., 2014).

Much of this criticism for multiple choice questions has been refuted by researchers, who claim students rarely make blind guess; instead, students have shown to

make informed guesses, which constitute critical examination of the question and the applicable material (Brookhart, 2015; DiBattista & Kurzawa, 2011; DiBattista et al., 2014). Proponents of multiple-choice questions insist "they do not require extensive written or spoken answers, just a choice. Students without well-developed oral or written language skills can still show their thinking skills" (Brookhart, 2015, p. 36).

The same 12 multiple-choice questions used at the conclusion of the weeklong study were also utilized during the end of term. The student participants were again asked to voluntarily answer questions prior to completing their end-of-course final exam. The questions did not factor into the student's overall score on exam. Results of these questions were used to determine whether students were able to retain the information over a period several weeks following the experiment, thus measuring the delayed recognition of the material (Mohammadzadeh, 2012).

Students participating in the active learning format were asked to complete a survey (see Appendix D). The survey was a modified instrument based on a design developed by Perrotta and Bohan (2013). The survey was originally published in a 2013 article on student engagement in community college undergraduate history courses (Perrotta & Bohan, 2013). Permission to use the survey instrument was obtained from the lead author of the study (see Appendix E). The developers of the original survey reported the survey effectively revealed students' attitudes toward their active-learning strategy experiment, thus adding to the reliability of the survey's use in this study (Perrotta & Bohan, 2013).

Questions in the survey were designed to gauge students' attitudes toward the active learning format of instruction they received. Students answered the questions using

a Likert-type scale, which is a self-reporting instrument commonly used in educational research to gauge a person's attitude and indicate the extent of their agreement (Fraenkel et al., 2012). Students responded by choosing one of six options on the scale including *strongly disagree, somewhat disagree, disagree, somewhat agree, agree, or strongly agree* (Perrotta & Bohan, 2013).

Reliability and validity. Creswell (2014) stated, "Reliability refers to whether scores to items on an instrument are internally consistent, stable over time, and whether there was consistency in test administration and scoring" (p. 247). Furthermore, in quantitative research, validity refers to whether a researcher can draw inference from scores on different instruments (Creswell, 2014). Information from the multiple-choice questions and the survey were used in tandem to demonstrate validity of the study (Brookhart, 2015; DiBattista et al., 2014). First, using the quiz questions both directly after the weeklong experiment and during the end-of-course final exam helped determine if students understood the material immediately following the experiment, but also students had better delayed content recognition and retention of the material (Mohammadzadeh, 2012).

In order to ensure comprehension and validity of the quiz questions used for this study, the 12 multiple-choice questions were piloted on a group of sophomore community college students taking a second-level history course at the same regional community college targeted in this study. However, it should be noted those students were not participating in the study (Creswell, 2014; Fraenkel et al., 2012). The students in this pilot evaluated whether the questions were written clearly and could be understood.

In addition to the individual questions being piloted, a preliminary version of the weeklong active learning strategy was piloted during the fall 2015 semester. The pilot group consisted of sophomore college students in a second-level history course at the same regional community college targeted in this study. Students in the course had already completed their first-level American history survey courses as a prerequisite for enrollment in the second-level history course. The preliminary pilot appeared successful, and students provided feedback on the components of the active learning strategy.

Data Collection

Research began once approval was granted by Lindenwood University's institutional review board and the institutional review board of the regional Midwest comprehensive community college targeted for this experiment (see Appendix F and G). Four individual course sections were identified from the spring 2016 schedule, with the courses being divided between two groups of two classes each. For the purpose of control, all four sections were taught or facilitated by the researcher during the weeklong experiment. The researcher facilitated the active learning module with one group, as well as delivered the same content to a second group in the form of a traditional passive lecture. The experimental teaching model was designed around material from a specific era of American history. Due to the chronological nature of a survey history course, material is taught in a sequence, thus the teaching demonstration commenced once it was time for that historical era to be taught.

Students from both groups taking part in the experiment were notified two weeks prior to the start of the experiment and were asked to provide consent in the form of a signed letter. Students had the choice to participate in the weeklong teaching

demonstration, the multiple-choice immediate content recognition quiz, the end-of-term delayed content recognition quiz, and the survey. Though, it should be noted the survey was only administered to those volunteer students participating in the active learning demonstration. On another note, the results from students who self-identified as being under the age of 18-years-old were omitted.

Students could choose to participate in the weeklong teaching demonstration but elect to not participate in the immediate and delayed content recognition quizzes or the survey. Students could also elect to not participate at all, which would mean they would opt out of the teaching demonstration, immediate and delayed content recognition quizzes, and the survey. For those students electing to not participate at all, the researcher made all lecture notes and materials available through the online learning management system, which every student in every course is enrolled in at the beginning of the semester. Additionally, the instructor and researcher were available throughout the weeklong demonstration and during the remaining weeks of the semester for students with questions regarding the instruction and content material.

The active learning experiment utilized aspects of the various different learning strategies discussed in the literature of Chapter Two (Perrotta & Bohan, 2013). Student participants worked with content material in visual, auditory, and kinesthetic formats (Tai, 2013). Students engaged in the interplay of group work (Igel & Urquhart, 2012). Participants also engaged in role playing throughout the experiment to complete a problem-based exercise that involved some aspects of gamification (Codish & Ravid, 2014; Sheldon, 2012; Yahr & Schimmel, 2013). Students were asked to incorporate technology to uncover information from web-based sources, which included written

material, images, maps, and video (Ransdell et al., 2011; Werth & Werth, 2011). The active learning environment consisted of a partially flipped classroom (Gaughan, 2014; Westermann, 2014). Ultimately, student participants were asked to present their findings to the researcher and their classmates (Gioffre, 2012).

The lecture group received a lecture in a traditional format. The researcher presented the identical content material as the active learning strategy. Students were seated in a traditional lecture hall format with students facing the front of the room. The researcher presented a verbal lecture paired with related visual content in the form of a Powerpoint presentation. The researcher invited and answered questions throughout the lecture format. The passive lectures took place during the same weeklong period as the active learning format.

At the end of the weeklong experiment, student participants in both the active learning and passive learning formats were given an identical quiz of 12 multiple-choice questions to assess their immediate recognition of the taught content material (Brookhart, 2015; DiBattista et al., 2014; Mohammadzadeh, 2012). Additionally, participants in the active learning format were asked to complete a survey with questions considering the effectiveness of the teaching module. Questions included a Likert-type scale for statistical analysis. The survey also asked participants to identify their generational cohort.

At the end of the semester, student participants were provided with the same 12 multiple-choice questions from the quiz following the weeklong teaching demonstration (Brookhart, 2015). Those identical questions were used again for the purpose of determining delayed recognition. This allowed the researcher to determine if the active learning format facilitated better long-term retention of the taught content material.

Student participants again identified their generational cohort. Once all data were collected, the researcher began analysis.

Data Analysis

Discrete data from the multiple-choice quiz questions were analyzed using the *t*-test statistical technique (Bluman, 2015). A *t*-test was the appropriate analysis due to the need to compare the means of two samples (Bluman, 2015). The two sample *t*-test was run to compare immediate and delayed content recognition of the passive learning format versus the active learning format (Bluman, 2015). In addition, the two sample *t*-test was also used to compare both passive and active learners' overall content material retention against their own immediate and delayed content recognition (Bluman, 2015).

Data from the student engagement survey were analyzed using descriptive analysis (Bluman, 2015). Active learning participants answered survey questions on a Likert-type scale, providing opinions on what active learning strategies were most effective during the weeklong lesson (Fraenkel et al., 2012). Surveys were categorized based on identified generational cohorts. Results from questions two through eleven contained within the surveys were tallied in order to determine what active learning strategies were indicated by each generation cohort to be the most effective during the weeklong active learning demonstration.

Summary

The methodology utilized for this study was described in this chapter. The focus of this study was to test an active learning model against a passive learning model on students from various multigenerational backgrounds at a community college in the Midwestern region of the United States. This quantitative quasi-experimental study was

designed to determine if the independent variable, active learning instruction effected the dependent variable, student success. The chapter restated the hypotheses guiding this study. The sample population and instrument planned for this study were discussed in this chapter. Finally, data collection and the process for analysis were discussed.

Chapter Four: Analysis of Data

Over the past 115 years, the two-year community college has been a higher education alternative to the traditional four-year institution for millions of students (Cohen et al., 2014). The open-enrollment nature of community colleges often results in a more diverse student body than the traditional four-year institution (Levine & Dean, 2012; Morgan, 2013). For this study, generational diversity was the focus (Elbert & Cumiskey, 2014; Taylor, 2014). Community college administrators nationwide are also faced with the issue of low semester-to-semester student retention, as well as persistence to completion (Cohen et al., 2014; Elbert & Cumiskey, 2014; Foss, et al., 2015; Morgan, 2013; Perrotta & Bohan, 2013).

While the "sit and get" passive lecture has been a pervasive means of instruction for centuries, it may not always be the most effective for the generationally diverse classroom (Morgan, 2013). The purpose of the study was to identify several cohesive teaching strategies, that when amalgamated into one larger lesson, would engage the various different generational cohorts present in the community college classroom (Hansman & McAtee, 2009; Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Rose et al., 2014; Sánchez & Kaplan, 2015; Taylor, 2014). Researchers have demonstrated that an impactful and dynamic instructor who is cognizant of generational diversity and deploys strategies to engage students will have far greater success with retention and persistence to completion (Cohen et al., 2014; Elbert & Cumiskey, 2014; Foss, et al., 2015; Morgan, 2013; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015).

During a weeklong period of instruction, one group of students was taught using the active learning format, while another group of students received the same material

through a passive lecture format (Kates et al., 2015; Morgan, 2013; Perrotta & Bohan, 2013; Pinder-Grover & Groscurth, 2009). At the end of the weeklong instruction period, students in both the passive lecture and the active learning format were asked to complete a 12 question multiple choice quiz assessment to determine immediate content recognition of material (Brookhart, 2015; DiBattista, et al., 2014; Haynie, 1994; Mohammadzadeh, 2012). Several weeks later, the result from both the immediate content recognition and the delayed content recognition multiple choice quizzes were used to address research questions one through four in this study (Brookhart, 2015; Mohammadzadeh, 2012).

Additionally, students participating in the active learning format were asked to complete a survey of questions on a Likert-type scale designed to gauge student opinion on the various strategies utilized during the active learning format (Fraenkel et al., 2012). The survey instrument used was modified, with permission, from a study conducted by Perrotta and Bohan (2013). Eleven questions in total were asked on the survey. The first question asked students to identify their generational cohort, which began with the Greatest Generation, 1900 through 1927; followed by the Silent Generation, 1928 through 1945; Baby Boomers, 1946 through 1964; Generation X, 1965 through 1980; the Millennial Generation, 1981 through 1998; and finally, Generation Z, 1999 through 2016. For survey questions two through 11, students provided responses by choosing one of six options including: *strongly agree, somewhat agree, agree, disagree, somewhat disagree, or strongly disagree* (Perrotta & Bohan, 2013). The results of the active learning survey were used to address research question four within this study.

Respondent Demographics

This study was conducted at a comprehensive community college district in the Midwest region of the United States (College Catalog, 2015). Four individual sections of an American history survey course were selected from the schedule of courses at two of the campuses within the community college district (College Catalog, 2015). There were 82 students enrolled in the four course sections utilized for this study, of which 69 of those students participated in one of two teaching demonstrations.

The four sections were divided into two groups. One group of two sections was taught by means of a traditional passive lecture format. A total of 36 students participated in the traditional passive lecture format. The second group of two sections was taught by means of the active learning format. A total of 33 students participated in the active learning format. Once both groups had participated in their respective different teaching demonstrations, a total of 69 students from both teaching demonstrations completed the immediate content recognition assessment. Additionally, the 33 students participating in the active learning strategy also completed a survey regarding their perceptions of the active learning strategy.

Weeks later, the researcher returned to the four course sections to administer a second identical version of the quiz assessment to determine delayed content recognition. A total of 69 students participated in the delayed content recognition assessment. All of the 69 students who participated in the teaching demonstration and the immediate content recognition task also participated in the delayed content recognition task. While an argument was made for the possibility of six defined generations to be present in the community college classroom, only three of those generational cohorts participated in

this study. The participating generational cohorts were the Baby Boomers, Generation X, and the Millennial Generation (McCrindle, 2014; Taylor, 2014).

While it was assumed the Millennial Generation would have the largest presence in the classroom, the research questions were designed to consider the availability of all six generations within the learning environment (McCrindle, 2014; Taylor, 2014; Werth & Werth, 2011). The course sections were not pre-checked for the presence of different generational cohorts prior to be selected for the teaching demonstration. In the end, 93% of the participants self-identified in the Millennial Generation cohort. With an age range of 18-35 years, the Millennial Generation still consists of a majority of students within higher education (Sánchez & Kaplan, 2015). The remaining 7% of participants either selected the Baby Boomer Generation or Generation X, which demonstrated a multigenerational presence in the classroom, but did not provide a large enough sample to calculate.

Data Analysis

For Research Question One, a 12 question multiple choice quiz was deployed in order to ascertain immediate content recognition of the material taught during the weeklong teaching demonstration (Brookhart, 2015; DiBattista et al., 2014; Mohammadzadeh, 2012). The quiz questions aligned with the material taught in both the active learning and passive lecture formats. Following completion of the quiz by the student participants, the researcher scored the assessment with the number of correct questions out of a score of 12. The scores were then entered into an Excel spreadsheet for analysis. The only identifying information asked of the students was their generational cohort.

For Research Questions Two, an identical 12 question multiple choice quiz was deployed to determine delayed content recognition of information for student participants in both the active learning and passive lecture formats (Brookhart, 2015; DiBattista et al., 2014; Mohammadzadeh, 2012). The delayed content recognition task was given seven weeks after the weeklong teaching demonstrations. The researcher scored the quizzes with the number of correct questions out of a score of 12. The scores were then entered into an Excel spreadsheet for analysis. The only identifying information asked of the students was their generational cohort.

Research Questions Three and Four were analyzed using data from the immediate and delayed content recognition tasks. For Research Question Three, performance on the immediate content recognition task was compared to the delayed content recognition task for passive lecture learners. Similarly, for Research Question Four, performance on both tasks were compared for learners in the active format.

For Research Question Five, a student engagement survey was deployed. Student respondents completing the survey were asked to select one of six responses on a Likert-type scale. Each of the possible responses were assigned a value with *Strongly Agree* receiving a score of six on one end of the scale, and *Strongly Disagree* receiving a score one on the other end. Respondents participating in the survey were born into one of two different generational cohorts. The scores for each survey question were separately calculated for each generational cohort. A mean score was calculated for the responses provided by each generational cohort for each survey question to determine an average (Bluman, 2015). Additionally, the standard deviation was used to determine the dispersal of results on the Likert-type scale (Bluman, 2015).

Research question one. *What difference exists, if any, in performance on an immediate content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus students in a passive lecture format?* For Research Question One, the results of the immediate content recognition task from student participants in both the passive lecture and active learning formats were analyzed. For this question, a two-sample *t*-test was utilized (Bluman, 2015). Results for Research Question One are shown in Table 1.

Table 1

T-test for the Immediate Content Recognition Task

Statistic	Results
t Stat	-.798
p-Value	.428
df	55.791
mean (Lecture)	8.944
Std. Deviation (Lecture)	2.540
mean (Active)	9.515
Std. Deviation (Active)	1.660

Note. N = 69; Lecture sample size = 36; Active sample size = 33.

A confidence level of 95% or $\alpha = .05$ was selected to determine significance for this study. According to Bluman (2015), 90, 95, and 99% are the three most commonly used confidence intervals. For this question, the result of $p = .428$ was greater than the confidence level of $\alpha = .05$. Because the results were higher than the confidence level set, a statistical significant difference could not be determined (Bluman, 2015). Thus, the null hypothesis for Question Number One was not rejected.

Research question two. *What difference exists, if any, in performance on a delayed content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus different generational cohorts in a passive lecture format?* For Research Question Two, the results of the delayed content recognition task from student participants in both the passive lecture and active learning formats were analyzed. The results of the analysis are reported in Table 2.

Table 2

T-test for the Delayed Content Recognition Task

Statistic	Results
t Stat	-.007
p-Value	.994
df	58.274
mean (Lecture)	7.972
Std. Deviation (Lecture)	2.591
mean (Active)	8.121
Std. Deviation (Active)	1.815

Note. N = 69; Lecture sample size = 36; Active sample size = 33.

For this question, a two-sample *t*-test was utilized (Bluman, 2015). For this question, a confidence level of 95% or $\alpha = .05$ was also selected (Bluman, 2015). The results garnered a confidence level of $p = .994$ which was greater than the confidence level of $\alpha = .05$. Again, because the results were higher than the confidence level set, a statistical significant difference could not be determined. At a 5% level of statistical significance, the null hypothesis was not rejected.

Research question three. *What difference exists, if any, in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition*

scores? For Research Question Three, the results of the immediate and delayed content

recognition tasks from student participants in the passive lecture format were analyzed.

For this question, a two-sample paired *t*-test was utilized (Bluman, 2015). The results of

this analysis are reported in Table 3.

Table 3

Paired t-test for Passive Learners Comparing Recognition Tasks

Statistic	Results
t Stat	1.629
p-Value	.112
Std. Deviation	3.581
mean	.972

Note. N = 69.

For this question, a confidence level of 95% or α = .05 was selected (Bluman,

2015). The result was p = .112 which was greater than the confidence level of α = .05.

Because the results were higher than the confidence level set, a statistical significant

difference could not be determined. At a 5% level of statistical significance, the null

hypothesis was not rejected.

Research question four. *What difference exists, if any, in scores obtained by*

active learners when comparing immediate recognition scores and delayed recognition

scores? For Research Question Four, the results of the immediate and delayed content

recognition tasks from student participants in the active learning format were analyzed.

For this question, a two-sample paired *t*-test was utilized (Bluman, 2015). See Table 4 for

the results.

Table 4

Paired t-test for Active Learners Comparing Recognition Tasks

Statistic	Results
t Stat	3.112
p-Value	.004
Std. Deviation	2.573
mean	1.394

Note. N = 69.

For this question, a confidence level of 95% or $\alpha = .05$ was selected (Bluman, 2015). The result was $p = .004$ which was less than the confidence level of $\alpha = .05$. At a 5% level of statistical significance, the null hypothesis was rejected and the alternative hypothesis was supported. There was a measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores.

Research question five. *What factors related to active learning do different generational cohorts in college-level survey American history courses most often report as being the most effective?* In order to determine what aspects of the active learning strategy were most effective for student participants, a student engagement survey was deployed at the conclusion of the weeklong teaching demonstration. The survey contained a total of 11 questions. The mean and standard deviation for the Millennial Generation and Generation X are reported in Table 5.

Table 5

Mean and Standard Deviation for the Active Learning Strategy Survey.

Question Number	Mean Gen. X	Mean Millennials	Std. Deviation Gen. X	Std. Deviation Millennials
2	6	4.87	0	0.94
3	5	5.32	1	1.02
4	6	5.45	0	0.84
5	5.5	4.77	0.5	1.13
6	6	5.42	0	0.83
7	4.5	4.58	1.5	1.21
8	4.5	4.58	1.5	1.34
9	5	4.48	1	1.36
10	4.5	4.52	1.5	1.39
11	6	4.90	0	1.09

Note. $N= 2$ for Gen. X; $N= 31$ for Millennials; Survey Question One does not appear on this table, as the question is not rooted in descriptive statistics.

Survey question one. *Please select the year range in which you were born.* Respondents were asked to provide their age by selecting one of six options. The six options corresponded with the six generational cohorts identified within this study. While a majority of the respondents identified themselves as the Millennial Generation, 1981 through 1998, there were two respondents who selected Generation X, 1965 through 1980. These results were on par with the researchers predictions, as the Millennial Generation represents a majority of students enrolled in higher education throughout the United States (Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014).

Survey question two. *I think the instructions for completing the assignment were clearly laid out.* The active learning strategy required detailed instructions to guide students during the weeklong exercise. It was important to determine whether the instructions were clearly stated and understandable. For this survey question, 100% of respondents born between 1965 and 1980 strongly agreed the instructions were clearly

laid out. Student respondents born between 1981 and 1998 answered agreeably on the Likert-type scale, with 25.8% selecting a score of six, 45.2% selecting a score of five, and 22.6% selecting a score of four. Only 6.4% of respondents born between 1981 and 1998 answered disagreeably with 3.2% selecting a score of three on the Likert-type scale and 3.2% selecting a score of two. Based on these results, a mean score in regard to the clarity of the instructions was calculated at 4.87 with a standard deviation of 0.94.

Survey question three. I think having a specified problem to solve helped the team organize the information. Research indicated a well-designed problem-based learning activity or lesson intensifies classroom interactions. In problem-based learning, the passive classroom environment is replaced by an active dynamic that is more relatable to real life activities. While respondents born between 1965 and 1980 were agreeable to the problem-based learning activity, the responses were split with 50% selecting a score of six on the Likert-type scale and 50% selecting a score of four.

Respondents born 1981 and 1998 were similarly split across the agreeable spectrum as to their opinions of problem-based learning. On the Likert-type scale, 38.7% selected a score of six, 19.3% selected a score of five, and 38.7% selected a score of four. Only 3.2% of respondents answered disagree on the Likert-type scale. Based on these results, a mean score in regard to the helpfulness of problem-based learning was calculated at 5.32 with a standard deviation of 1.02.

Survey question four. I think a digital device (tablet, lap-top, or smartphone) helped with this project. Digital technology in the form of laptops, tablets, smart phones, and other digital devices have become increasingly more prevalent in the classroom over

the past two decades. Research conducted for this study indicated both younger, as well older generations have adapted well to the integration of technology in the classroom.

For this survey question, 100% of respondents born between 1965 and 1980 strongly agreed digital devices were an effective aid in completing the active learning project. While the results were more dispersed for respondents born between 1981 and 1998, this survey question garnered the most strongly agreed responses. On the Likert-type scale, 67.7% of respondents born between 1981 and 1998 selected a score of six, 9.7% selected a score of five, and 22.6% selected a score of four. There were no disagreeable respondents. Based on these results of the survey question regarding the helpfulness of digital devices in the classroom, a mean score of 5.45 was calculated, and a standard deviation of 0.84 was determined.

Survey question five. *I think working in small teams on activities with multiple different documents (i.e. textbook, video, speeches, printed sources, maps, etc.) contributes to my engagement in a history class.* The multiple source approach allows students to draw from a variety of different sources, which may include images, maps, speeches, newsreels, and documentaries when studying history. These sources can be used to open a dialogue between the researcher, the students, and the material or subject. Having a variety of sources can better facilitate problem solving within the classroom.

For Survey Question Five, 50% of respondents born between 1965 and 1980 strongly agreed and the other 50% somewhat agreed multiple sources contributed to engagement. Student respondents born between 1981 and 1998 were mostly agreeable on the Likert-type scale, with 38.7% selecting a score of six, 16.1% selecting a score of five, and 29.0% selecting a score of four. However, 16.1% of respondents who were born

between 1981 and 1998 selected disagree on the Likert-type scale. Based on these results, a mean score was calculated at 4.77 with a standard deviation of 1.13.

   Survey question six. *I think instructor support during team activities contributes to my engagement in a history class.* The instructor is integral to the classroom environment, in that he or she provides support for students. Feedback and encouragement from an instructor in the classroom can lead to positive self-efficacy of students. Ultimately instructor support is a component of Bandura's (1986) triadic reciprocal model, which is rooted in social cognitive learning theory and central to the theoretical framework of this study.

   For Survey Question Six 100% of respondents born between 1965 and 1980 strongly agreed that instructor support contributed to student engagement in the classroom. Of student respondents born between 1981 and 1998, 64.5% selected a score of six, 13.0% selected a score of five, and 22.6% selected a score of four on Likert-type scale. There were no disagreeable answers from respondents born between 1981 and 1998. Based on these results, a mean score in regard to the role of instructor support in the classroom was calculated at 5.42 with a standard deviation of 0.83.

   Survey question seven. *I think discussing history topics in small teams contributes to my engagement in a history class.* Team-based learning is an adaptation on group learning. Research has shown that students are more favorable to the notion of a team rather than a group. The notion of team represents a long-term strategy in which students engage in a learning process where both the individual and other group members are accountable for the success of the group as a whole.

For Survey Question Seven, respondents born between 1965 and 1980 were divided on the role of team-based learning. Of those respondents, 50% strongly agreed, while 50% of respondents disagreed. Student respondents born between 1981 and 1998 were divided as well with their responses on the Likert-type scale, with 32.2% selecting a score of six, 19.3% selecting a score of five, 25.8% selecting a score of four, 19.3% selecting a score of three, and 3.2% selecting a score of two. Based on these results, a mean score in regard to the use of team-based learning in the classroom was calculated at 4.58 with a standard deviation of 1.21.

Survey question eight. I think collaborating with peers contributes to my engagement in a history class. Cooperative learning sets a common goal for the team to complete. With this common goal, interdependence is promoted among the individual participants in the group. For Survey Question Eight, respondents born between 1965 and 1980 were divided as to whether collaboration with peers increased engagement in the history classroom. Of those respondents, 50% strongly agreed, while 50% of respondents disagreed. Student respondents born between 1981 and 1998 were divided as well with their responses on the Likert-type scale, with 29.0% selecting a score of six, 32.2% selecting a score of five, 19.3% selecting a score of four, 9.7% selecting a score of three, 6.4% selecting a score of two, and 3.2% selecting a score of one. Based on these results, a mean score in regard to collaboration with peers was calculated at 4.58 with a standard deviation of 1.34.

Survey question nine. I think asking and answering questions in a group setting contributes to my engagement in a history class. Similar to question eight, if a strong cooperative environment is attained, interdependence on peers is reached. Individual

students should freely engage in questioning of their peers, as well as the instructor. Cooperative learning closely resembles the experiences students will encounter in their daily lives outside of the classroom as they interact with family, friends, colleagues, and relatives. For Survey Question Nine, 50% of respondents born between 1965 and 1980 strongly agreed that cooperative learning contributed to their engagement in the learning environment, and the other 50% agreed. Student respondents born between 1981 and 1998 were divided on the role of cooperative learning in the classroom. Of the respondents born between 1981 and 1998, 29.0% selected a score of six, 25.8% selecting a score of five, 22.6% selecting a score of four, 12.9% selecting a score of three, 6.4% selecting a score of two, and 3.2% selecting a score of one on the Likert-type scale. Based on these results, a mean score in regard to collaboration with peers was calculated at 4.48 with a standard deviation of 1.36.

Survey question ten. I think having individual jobs within the team allowed the team to complete its overall task. While the dynamic of the team is important to creativity and social interactions, it is necessary to have opportunities for individual student success as well. Students, especially Generation Z and younger members of the Millennial Generation, are more self-directed, and their involvement with others often includes a degree of separation created as result of interactions through digital devices. This individuality can manifest into a reluctance by the younger generations toward the team dynamic, thus is it important to provide individual tasks that align and support the overall goal of the team.

For Survey Question Ten, respondents born between 1965 and 1980 were divided as to whether having an individual job allowed the team to complete its overall task. Of

those respondents, 50% strongly agreed, while 50% of respondents disagreed. Student respondents born between 1981 and 1998 were divided on the role of individual jobs within the team. Of the respondents born between 1981 and 1998, 32.2% selected a score of six, 19.3% selecting a score of five, 29.0% selecting a score of four, 12.9% selecting a score of three, and 6.4% selecting a score of one on the Likert-type scale. Based on these results, a mean score in regard to collaboration with peers was calculated at 4.52 with a standard deviation of 1.39.

   Survey question eleven. *I think multiple-choice quiz questions are an accurate method for evaluating learning.* In order to determine both immediate content recognition following the weeklong teaching demonstrations, as well as delayed content recognition at the end of term, a multiple choice quiz was developed and deployed to assess learning of material. The multiple choice quiz aligned with the material taught only during the weeklong exercise. The quiz contained 12 questions, with one of four answer options per question. Respondents taking part in the active learning strategy were asked to provide feedback on the use of a multiple choice assessment quiz.

   For Survey Question Eleven, 100% of respondents born between 1965 and 1980 strongly agreed with the use of a multiple-choice assessment tool. Of ttudent respondents born between 1981 and 1998, 32.2% selected a score of six, 38.7% selected a score of five, and 22.6% selected a score of four. Only 6.4% of participants born between 1981 and 1998 were disagreeable with 3.2% selecting a score of three on the Likert-type scale and 3.2% selecting a score of one. Based on these results, a mean score in regard to the accuracy of the multiple-choice quiz evaluation method was calculated at 4.90 with a standard deviation of 1.09.

Summary

The purpose of this study was to determine if there was a statistically significant difference in performance of students within different generational cohorts participating in an active learning format versus students in different generational cohorts participating in a passive lecture format. The study was conducted at a regional comprehensive community college in the Midwest of the United States (Cohen et al., 2014; College Catalog, 2015). The study was guided by five research questions, with data collected from immediate and delayed content recognition task, as well as a student satisfaction survey.

The first question was used to measure performance on an immediate content recognition assessment of students participating in the active and passive learning formats. The second question guided the researcher in measuring performance on a delayed content recognition assessment of students participating in the active and passive leaning formats. The third and fourth questions were used to determine if students learned the material more effectively overall in one learning format versus the other format. The fifth question guided the researcher in determining what aspects of the active learning format were most effective as reported by student participants on the student engagement survey.

For Research Question One, the result of the two sample *t*-test was $p = .428$, which was greater than the confidence level of $\alpha = .05$, thus the null hypothesis was not rejected (Bluman, 2015). There was no measurable significant difference in performance on an immediate content recognition task for students who participated in active learning format and different generational cohorts who participated in passive lecture format. For

Research Question Two, the result of the two sample t-test was $p = .994$, which was greater than the confidence level of $\alpha = .05$, thus the null hypothesis was not rejected (Bluman, 2015). There was no measurable significant difference in performance on a delayed content recognition task for students who participated in active learning format and different generational cohorts who participated in passive lecture format.

For Research Question Three, the result of the two sample paired t-test was $p = .112$, which was greater than the confidence level of $\alpha = .05$, thus the null hypothesis was not rejected (Bluman, 2015). There was no measurable significant difference in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores. For Research Question Four, the result of the two sample paired t-test was $p = .004$, which was less than the confidence level of $\alpha = .05$, thus the null hypothesis was rejected (Bluman, 2015). There was a measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores.

The student engagement survey provided informative results beyond the scores garnered from the immediate and delayed content recognition tasks. The survey allowed the researcher to determine what individual aspects of the active learning strategy student participants reported as favorable at the conclusion of the weeklong strategy. On the Likert-type scale 85% of respondents born between 1965 and 1980 were agreeable to the questions presented on the student engagement survey. Similarly, respondents born between 1981 and 1998 were agreeable to the questions on the Likert-type scale with a total of 88.4%.

In Chapter Five, the findings determined within this study are presented. Each of the four research questions are discussed, and conclusions are disclosed. Implications of this study are presented. Finally, recommendations for further research and study are proposed.

Chapter Five: Summary and Conclusions

The two-year community college has had a unique and very relevant place in the history of higher education (Cohen et al., 2014; Thelin, 2011). The image of the two-year college has become synonymous with affordability, high quality, and open-access to education (Cohen et al., 2014). Students attending America's community colleges typically represent a diverse background, as well as an accurate cross section of the communities within the service region (Cohen et al., 2014; Thelin, 2011). In recent years, semester-to-semester retention and persistence to completion has been waning (Foss et al., 2015; Morgan, 2013; Topper & Powers, 2013).

At the same time, the typical open-enrollment nature of the community college has resulted in an increasingly diverse multigenerational student body, which was at the core of this study (Cohen et al., 2014; Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014). Furthermore, with the exponential growth in digital technology over the past two decades, the role of a classroom instructor is being redefined. While these factors can lead to a problematic dichotomy between students and faculty, there also exists an opportunity for instructors (Koehler et al., 2013; Levine & Dean, 2012).

Generational diversity is as prevalent as any other diversity component in the classroom, especially when one considers the "Digital Native" and "Digital Immigrant" (Czerniewicz & Brown, 2012, p. 2). This study took the leading research and definitions for each generational cohort and made some slight alterations (Elbert & Cumiskey, 2014; Igel & Urquhart, 2012; Levine & Dean, 2012; Taylor, 2014; Topper & Powers, 2013; Werth & Werth, 2011). One alteration resulted in a clear delineation of the Millennial

Generation, born between 1981 and 1998, and Generation Z, born between 1999 to 2016, for this study (Igel & Urquhart, 2012; Taylor, 2014). In this way, the definition of the traditional 18 to 22-year-old college-aged student aligns with the most current research on students considered to be digital natives (Blumenstyk, 2015; Cohen et al., 2014; Czerniewicz & Brown, 2012; Igel & Urquhart, 2012; Levine & Dean, 2012).

Within in the next couple of years, Generation Z will become the majority of higher education students (Igel & Urquhart, 2012; Levine & Dean, 2012). This study considered the division of the youngest generation from the preceding five generations when designing the active learning format. The learning characteristics for each generational cohort were explained in Chapter Two. This study enhanced the existing literature by considering the classroom inclusive to all generational cohorts simultaneously, and applying the most effective active learning strategies for the complete multigenerational environment.

In order to remain relevant, instructors need to embrace new teaching styles which are inclusive of generational diversity (Levine & Dean, 2012; Taylor, 2014). An effective educator who is able to connect with students, may ultimately increase retention and completion (Morgan, 2013). Therefore, in order for two-year community colleges to remain relevant, faculty must be encouraged to aggressively provide education that inspires and encourages the diverse communities in which they serve (Blumenstyk, 2015; Levine & Dean, 2012; Morgan, 2013). The purpose of this study was to develop and assess an active learning format using the best practices of several learning strategies amalgamated into one format and inclusive of as many learners as possible in the classroom. Ultimately, this project perpetuates the growing national dialogue on the role

community colleges play in "improving equitable outcomes" for the generationally diverse students in attendance (Topper & Powers, 2013, p. 3). Within this chapter are the findings and conclusions from the research. Implications for practice are described, and recommendations for future projects on this topic are suggested.

Findings from Research

While there was an assumption the Millennial Generation would be the largest cohort in the learning environment, the research questions were written to consider a multigenerational environment (McCrindle, 2014; Taylor, 2014; Werth & Werth, 2011). The course sections receiving the teaching demonstration were selected randomly. These random courses were not pre-checked to determine whether multigenerational cohorts existed in the learning environment. In the end, 93% of the participants selected 1981 to 1998 for their birth year, which placed those student participants in the Millennial Generation cohort. With an age range of 18-35 years, the Millennial Generation still encompasses a majority of students attending higher education (Sánchez & Kaplan, 2015). The remaining 7% of participants either selected 1946 to 1964 or 1965 to 1980 for their birth year, which demonstrates a multigenerational presence in the classroom, but the number of students in each generational category did not provide a large enough sample to calculate.

Research question one. The first research question guiding this study was: *What difference exists, if any, in performance on an immediate content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus students in a passive lecture format?* The H_0 accompanying this research question stated there was no measurable

significant difference in performance on an immediate content recognition task for different generational cohorts who participated in active learning format and different generational cohorts who participated in a passive lecture format. The purpose of this question was to assess content recognition immediately following the weeklong teaching demonstrations for participants receiving both the active learning and passive lecture. As described in Chapter Four, a two-sample t-test was utilized with a confidence level of 95% or $\alpha = .05$ to determine significance for this question (Bluman, 2015). Since the p value for Research Question One was 0.428 and the confidence level was $\alpha = .05$, the results were not considered statistically significant. Therefore, the null hypothesis was not rejected.

Research question two. The second research question guiding this study was: *What difference exists, if any, in performance on a delayed content recognition task for different generational cohorts in a first-year college-level American history survey course who participated in an active learning format versus different generational cohorts in a passive lecture format?* The H_0 accompanying this research question stated there was no measurable significant difference in performance on a delayed content recognition task for different generational cohorts who participated in active learning format and different generational cohorts who participated in passive lecture format. The purpose of this question was to assess content recognition after a seven-week period following the weeklong teaching demonstrations for participants receiving both the active learning and passive lecture. As described in Chapter Four, a two-sample t-test was utilized with a confidence level of 95% or $\alpha = .05$ to determine significance for this question (Bluman, 2015). Since the p value for Research Question Two was 0.994 and

the confidence level was $\alpha = .05$, the results were not considered statistically significant. Therefore, the null hypothesis was not rejected.

Research question three. The third research question guiding this study was: *What difference exists, if any, in scores obtained by passive learners when comparing immediate recognition scores and delayed recognition scores?* The H_0 accompanying this research question stated there was no measurable significant difference in scores obtained from passive learners when comparing immediate recognition scores and delayed recognition scores. The purpose of this question was to determine content retention by students participating in the passive lecture format. Scores on the immediate content recognition task were compared to scores on the delayed content recognition task seven-weeks later. As described in Chapter Four, a two-sample paired *t*-test was utilized with a confidence level of 95% or $\alpha = .05$ to determine significance for this question (Bluman, 2015). Since the *p* value for Research Question Three was 0.112 and the confidence level was $\alpha = .05$, the results were not statistically significant, and the null hypothesis was not rejected.

Research question four. The fourth research question guiding this study was: *What difference exists, if any, in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores?* The H_0 accompanying this research question stated there was no measurable significant difference in scores obtained by active learners when comparing immediate recognition scores and delayed recognition scores. The purpose of this question was to determine content retention by students participating in the active learning format. Scores on the immediate content recognition task were compared to scores on the delayed content recognition task seven-weeks later.

As described in Chapter Four, a two-sample paired *t*-test was utilized with a confidence level of 95% or $\alpha = .05$ to determine significance for this question (Bluman, 2015). Since the *p* value for Research Question Three was 0.004 and the confidence level was $\alpha = .05$, the null hypothesis was rejected. The alternative hypothesis for this questions was supported.

Research question five. The fifth research question guiding this study was: *What factors related to active learning do different generational cohorts in a college-level survey American history course most often report as being the most effective?* In order to more precisely determine what factors related to active learning were most effective, a student engagement survey of eleven questions was deployed (Perrotta & Bohan, 2013). The survey included one question for student participants to include their generational cohort, as defined in this study. The remaining ten questions were designed to garner feedback regarding the effectiveness of factors related to active learning. The questions were presented with students reporting their answers on a Likert-type scale with six responses ranging from *Strongly Agree* to *Strongly Disagree*. As presented in Chapter Four, the responses to the student engagement survey were favorable for both participating generational cohorts. On Likert-type scale, 85% of respondents born between 1965 and 1980 answered agreeably. Student respondents born between 1981 and 1998 were similarly in their responses with a total of 88.4%.

Conclusions

This study was designed around the leading research pertaining to multigenerational student diversity, as well as the most effective active learning strategies (Bandura, 1986; Igel & Urquhart, 2012; Killian & Bastas, 2015; McCrindle, 2014;

Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015; Taylor, 2014). The research led to the development, implementation, and assessment of a weeklong active learning format for the two-year community college classroom environment. The active learning format was rooted in Bandura's (1986) social cognitive learning theory, which argued for the classroom being a social learning environment. Leading active learning strategies such as cooperative, team-based, and problem-based learning were combined with digital technology and a multiple-source approach to create a format that was inclusive of the generational diversity present in the classroom (Bandura, 1986; Igel & Urquhart, 2012; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015). This study further added to the existing body of literature by providing for the complete generational spectrum of learners within the classroom, ranging the youngest digital natives to the oldest life-long learners (Igel & Urquhart, 2012; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014).

For the first research question, the collective body of research in Chapter Two surrounded the premise that successful learning occurs when implementing various active learning strategies (Bandura, 1986; Igel & Urquhart, 2012; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015). In this study, the results of Research Question One were not statistically significant. These findings were inconsistent with much of the research found in Chapter Two. For example, John et al. (2016) recognized that a broad range of effective teaching pedagogies balances the needs of the generational diverse classroom. In terms of digital technology in the learning environment, Koehler et al. (2013) argued, "content,

pedagogy, and technology" are essential components for good teaching (p. 14). Moreover, Killian and Bastas (2015) stated cooperative and team-based learning provides a much greater connection for students engaged in the learning process.

For the second research question, the literature found in Chapter Two reinforced the idea that successful learning, especially when considering long-term retention of material, occurs most effectively when students participate in active learning (Bandura, 1986; Haynie, 1994; Igel & Urquhart, 2012; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015). Within this study, the results of Research Question Two were not statistically significant. Again, these findings were inconsistent with much of the research found in Chapter Two. According to Morgan (2013), to remain relevant, instructors should determine techniques and strategies to enhance student engagement in the classroom. Engagement with material facilitates understanding and retention of material (Mohammadzadeh, 2012).

For the third research question, studies presented in Chapter Two were used to confirm the idea that passive lecture was less effective with regard to retention of material when compared to active learning (Kates et al., 2015; Webster, 2015). In this study, the results of Research Question Three were not statistically significant; there was little difference between student performances on the immediate content recognition task when compared to the delayed task. These findings were inconsistent with much of the research found in Chapter Two. For example, Kates et al. (2015) stated there is almost no interaction in the form of questions or discussion between the instructor and students. The exponential growth of technology and the potential of digital devices in the classroom are seemingly affecting each succeeding generation's expectation of the learning process

(Pinder-Grover & Groscurth, 2009). Furthermore, Sánchez and Kaplan (2015) posited students in the multigenerational learning environment anticipate being taught in a manner that facilitates individual learning and understanding. All of which suggests a lack of overall student performance in the passive lecture environment.

For the fourth research question, the literature in Chapter Two indicated an active learning format would result in greater retention of information by students engaged in that learning environment (Haynie, 1994; Mohammadzadeh, 2012). In this study, the results of Research Question Four were statistically significant. Instead of greater retention, the results demonstrate the opposite, with retention of material having diminished over the seven-week period. These findings were inconsistent with much of the research found in Chapter Two. For instance, problem-based learning pushes students beyond simple memorization of facts, and instead, encourages students to seek out additional learning beyond the classroom (Levitt et al., 2013; Trekles, 2012). Furthermore, problem-based learning leads to the development of long-term critical thinking (Blackburn, 2015). The use of digital technology allows student to continue to access material outside of the structured brick and mortar environment (Levine & Dean, 2012). These strategies were all implemented to encourage students to continue the learning process with the aim of enhancing retention (Mohammadzadeh, 2012).

For the fifth and final research question, the findings were derived from 10 of the 11 questions on the student engagement survey. Student responses to the survey 12 were predominantly favorable. However, there were some key findings that were supported by the literature in Chapter Two. Survey Question Four: *I think a digital device (tablet, lap-top, or smartphone) helped with this project*, garnered the highest response rate with 21

out of 33 participants selecting strongly agree as a response on the Likert-type scale. There were no disagreeable respondents to this question. The findings certainly aligned with the literature. According to Barber et al. (2015), digital devices provide students with a window outside of the classroom. The World Wide Web is host to a plethora of primary and secondary sources including journals, full monographs, speeches, images, videos, and other assorted documents that can transcend the learning environment (Blattner & Lomicka, 2012; Levine & Dean, 2012; Perrotta & Bohan, 2013; Tai, 2013).

Survey Question Eleven: *I think multiple-choice quiz questions are an accurate method for evaluating learning*, also yielded a high response rate from student participants. Student responses aligned with literature from Chapter Two. Multiple-choice questions provide a more reliable score and may be more objective than open-ended written questions, which may invite instructor-bias (Brookhart, 2015; DiBattista et al., 2014). Multiple-choice questions afford opportunity for those students who may possess strong thinking skills, but may not have as developed reading and written skills (Brookhart, 2015).

Survey Questions Five, Seven, Eight, Nine, and Ten each received a high disagreeable response rate when compared to other five questions within the engagement survey. The commonalities between these questions are tied to components of group or team learning (Çolak, 2015; Killian & Bastas, 2015). Some of the student responses to the aforementioned five survey questions aligned, while some responses did not align with literature from Chapter Two. It was demonstrated in the literature that social, cooperative, and team-based learning lead to engagement within the classroom (Bandura, 1986; Çolak, 2015; Killian & Bastas, 2015; Leisey et al., 2014; Mohammadjani &

Tokaboni, 2015). However, according to Igel and Urquhart (2012), while younger generations are considered to be very social, their social environment often includes a digital degree of separation. So while survey respondents disagree with social learning, Igel and Urquhart (2012) encouraged instructors to promote group and team aspects in the classroom. There are several specific findings revealed by Survey Questions Five, Seven, Eight, Nine, and Ten.

Survey Question Five: *I think working in small teams on activities with multiple different documents (i.e. textbook, video, speeches, printed sources, maps, etc.) contributes to my engagement in a history class*, was not organized to ask about teams. However, the question also asked for a response regarding multiple source documents in the classroom, which included digital technology sources. As shown in the second survey question, agreeable responses to digital technology in the classroom were attained.

Survey Question Seven: *I think discussing history topics in small teams contributes to my engagement in a history class*, was a pure team-based learning question. Student respondents disagreed with this question more than any other found within the survey. While literature does demonstrate older students prefer group or team learning, research by Yahr and Schimmel (2013) indicated Generation X has a tendency to be more independent and self-reliant.

Survey Question Eight: *I think collaborating with peers contributes to my engagement in a history class*, asked specifically about the role of collaboration with peers in the team-based learning environment. Students, while working in a cooperative learning format, interacted with their peers 51% of the time. Comparatively, students interacted with the instructor only 21% of the time (Leisey et al., 2014). The previous

percentages are revealing in the importance of a strong team cooperative dynamic during the learning process (Kent et al., 2015; Killian & Bastas, 2015; Leisey et al., 2014; Mohammadjani & Tonkaboni, 2015).

The ninth survey question was: *I think asking and answering questions in a group setting contributes to my engagement in a history class.* According to literature, students participating in a cooperative learning environment were observed to have higher levels of creativity and greater social interactions (Ebrahim, 2012; Mohammadjani & Tonkaboni, 2015). The responses by participants only reinforced the argument of Igel and Urquhart (2012) that younger generation students should be encouraged to interact in the social learning environment. Questioning skills ultimately reinforces critical thinking, which research has shown to be deficient in younger generations (Blackburn, 2015; Çolak, 2015; Ransdell et al., 2011).

Survey Question Ten: *I think having individual jobs within the team allowed the team to complete its overall task*, also makes reference to the team dynamic. However, this question aligned with literature in Chapter Two suggesting the importance of providing individual roles for members of the team (Igel & Urquhart, 2012). In this way, students who prefer to learn independently are still assessed on their individual contribution, as well as their contribution to the team (Igel & Urquhart, 2012).

Implications for Practice

The findings and conclusions of this study may be used to guide researchers, educators, and administrators in designing and implementing an active learning format that is inclusive of the generational diversity in the community college classroom (Igel & Urquhart, 2012; Morgan, 2013; Taylor, 2014). Each succeeding generation arrives in the

classroom with expectations for their learning, all the while instruction for centuries has largely been unchanged (Morgan, 2013; Sánchez & Kaplan, 2015). For decades, it has been a cultural norm and a societal expectation to attend college following high school, yet in the last few years, some have begun to question the relevance higher education (Boles, 2012; Stephens, 2013). Community colleges have a specific history of relevance and innovation, the very concept of a two-year institution was innovative and incredibly relevant 115 years ago (Thelin, 2011).

This study is relevant, innovative, and timely, especially when one considers the current climate of higher education. In recent years, the economic downturn and job layoffs led unemployed workers back to the college classroom for a mid-career retooling (Taylor, 2014; Thelin, 2011). Combine these middle-aged students with retirement-aged lifelong learners, as well as traditional-aged digital natives, and you have an exceedingly diverse student population in the classroom (COC News Release, 2015; Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014). The youngest of these generations comes to classroom with the expectation that technology will be embraced (Igel & Urquhart, 2012; Levine & Dean, 2012).

As this study demonstrated, however, digital technology is not exclusive to the youngest generation in the classroom (Czerniewicz & Brown, 2012). Older adults have adapted well and are confident with the use of technology in the classroom (Czerniewicz & Brown, 2012; Gallardo-Echenique et al., 2015; Yau & Cheng, 2012). Student participants in this study reinforced the prevailing research with their responses on the student engagement survey regarding the role digital technology in the classroom. For specific response rates to questions on the student engagement survey, see Table 6. It

should be noted, any future active learning demonstrations should absolutely embrace the role of technology in the learning environment (Levine & Dean, 2012).

Table 6

Percentages of Incorrect Answers on the Content Recognition Tasks

Question	Lecture A		Lecture B		Active A		Active B	
	Imme.	Delay.	Imme.	Delay.	Imme.	Delay.	Imme.	Delay.
One	12%	35%	5%	21%	27%	27%	11%	33%
Two	23%	29%	21%	37%	0%	13%	28%	33%
Three	35%	70%	47%	53%	33%	73%	55%	61%
Four	12%	23%	10%	26%	0%	7%	17%	11%
Five	12%	12%	10%	16%	0%	7%	0%	17%
Six	41%	29%	16%	5%	13%	27%	39%	33%
Seven	35%	35%	10%	26%	13%	13%	22%	33%
Eight	23%	41%	21%	31%	40%	73%	17%	50%
Nine	65%	53%	53%	53%	33%	47%	28%	39%
Ten	41%	12%	21%	26%	13%	40%	33%	22%
Eleven	47%	59%	26%	47%	40%	60%	22%	33%
Twelve	18%	41%	10%	26%	0%	7%	0%	17%

Note. $N = 69$. Percentages represent number of incorrect answers per question by participants; coding represents section A or B within either the lecture or active learning groups, as well as whether the results from either the Imme.=immediate or Delay.=delayed content recognition task.

Social learning theory was at the core of this project, yet participant responses on the student engagement survey provided a less-than-favorable response to role of social, cooperative, and team-based learning (Bandura, 1986). With such responses, one would be led to question the effectiveness of these strategies. However, literature has indicated that younger generations are not predisposed to this type of learning before entering college (Igel & Urquhart, 2012). Educators should continue to incorporate cooperative and team-based approaches in the classroom as a remedy for this deficiency. Ebrahim (2012) stated that cooperative learning most closely resembles daily life and workplace

experiences. If it is the role of higher education to prepare students for the workplace, then cooperative learning should remain at the core of any active learning strategy (Ebrahim, 2012; Mohammadjani & Tonkaboni, 2015). Though it should restated, an effective team-based or cooperative learning strategy should also include opportunities for students to achieve individual successes (Igel & Urquhart, 2012).

While Research Questions One, Two, and Three resulted in no statistical significance in the terms of the study, Research Question Four resulted in some interesting findings. Research Question Four compared scores on the immediate content recognition task to scores on the delayed content recognition task for participants in the active learning format. Scores decreased significantly on the delayed task, which did not align with research in Chapter Two. These results were indicative that students struggled to retain the information.

When delving deeper into the item analysis of the multiple choice assessment, the results were not statistically significant on the immediate content recognition task when comparing scores of active learners to passive learners. However, just looking at the raw data, students in the passive lecture scored an average of 9 out of 12 on the immediate content quiz, while active learners scored an average of 9.6 out of 12 on the same quiz. Looking at the raw data from Research Question Two, passive learners scored an average of 8 out of 12 on the delayed content quiz, while active learners scored 8.1 out of 12 on the same quiz. Technically, active learners performed better on both tasks. What made Research Question Four so statistically significant was the differential between immediate and delayed recognition content quiz scores for the active learning cohort. The

implication researchers should determine is how better to reinforce retention of learning in the active format (Mohammadzadeh, 2012).

As the community college struggles with retention and low rates of completion, this study provides relevant research for fostering engagement in the classroom (Morgan, 2013). According to Foss et al. (2015), excellent teaching and learning is an important factor in producing high graduation rates. Topper and Powers (2013) stated that the purpose of community colleges in the 21st century has shifted from educational access to equitable outcomes for students. This study has implications on learners, educators, administrators, legislators, and taxpayers (Morgan, 2013; Topper & Powers, 2013).

Recommendations for Future Research

Further research is certainly encouraged in the area of active learning and its implications on multigenerational learning. Similar to many other studies, the recommendation for a larger group of participants, especially a population that is more generationally diverse, may prove advantageous for future research. The course sections selected for this study met between 10 a.m. and 4 p.m. Monday through Thursday, which is a rather traditional hour for full-time students. As such, it was assumed that a larger number of Millennials would be present in the classroom. Further studies should include course sections that meet outside of typical business hours, such as early morning, evening, or weekend courses. This may provide a broader snapshot of the generationally diverse student body.

This study consisted of a weeklong teaching demonstration, which allowed the researcher to gain a snapshot into the effectiveness of the active learning in a multigenerational two-year community college classroom. Researchers should consider

lengthening the study to cover an entire semester's worth of material. While this may seem rather invasive, it would provide an opportunity for student participants in the active learning format to familiarize themselves with the expectations of the social environment and active learning strategies. A semester-long format would also provide an ongoing opportunity for the researcher to reinforce learning to ensure students are retaining material.

Additionally, to determine a level within Bloom's taxonomy of learning, participants may be tasked with an evaluation mechanism that requires application of learning, rather than simply recalling material on a multiple-choice quiz (Brookhart, 2015; DiBattista & Kurzawa, 2011; Tarman & Kuran, 2015). Bloom's Taxonomy, which was conceived in 1956, is a classification of metacognitive thinking skills (Tarman & Kuran, 2015). While this study was limited to a week, a researcher engaged in a longer study would have greater opportunity to deploy an evaluation process that required application of learning, thus rating higher on Bloom's classification scale (Tarman & Kuran, 2015). This would provide further validity and reliability to the evaluation of learning by participants (Creswell, 2014).

This study was conducted in a 100-level or first-year survey history course (Gioffre, 2012). However, the active learning strategies utilized in this project were not specific to any one discipline, but considered the multigenerational learner within the classroom environment. Thus, these learning strategies are adaptable to many different disciplines. Comparing active learning within a history or English course versus sociology or philosophy, or even one of those disciplines against themselves, may potentially yield much different results.

Researchers may benefit from conducting a study of this nature simultaneously at multiple different institutions of higher education. While students are certainly individuals, there may be commonalities amongst the student body at one institution that do not necessarily manifest at another institution. Finally, researchers should also consider a qualitative design or develop a mixed methods approach (Creswell, 2014). Each of these recommendations for further study are proposed with the aim of broadening the scope of participation and refining the approach taken by the researchers to provide the most inclusive active learning format for the generationally diverse college classroom.

Summary

The purpose of this study was to develop and assess an active learning format for the generationally diverse community college classroom. Active learning is the alternative to the passive lecture paradigm performed in classrooms for centuries (Perrotta & Bohan, 2013; Pinder-Grover & Groscurth, 2009; Tai, 2013). Additionally, active learning facilitates learning for a broader spectrum of students (Bandura, 1986; Igel & Urquhart, 2012; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Sánchez & Kaplan, 2015). The open-enrollment nature of the community college has certainly broadened the spectrum, especially in the area of a multigenerational learners (Levine & Dean, 2012; McCrindle, 2014; Taylor, 2014). It is imperative that educators look for strategies to engage a generationally diverse student body (Morgan, 2013).

Literature has shown that creating an inclusive student-centered learning environment has a positive impact on retention and student persistence to completion

(Morgan, 2013). Retention and completion are at the forefront of most conversations, as statistics reveal that nationwide only 14% of students enrolled at a community college complete within three years and only 21% within six years (Topper & Powers, 2013). As such, this study, which is rooted in retention, completion, and inclusivity of generational diversity, comes at a vital moment (Elbert & Cumiskey, 2014; Foss et al., 2015; Morgan, 2013; Taylor, 2014).

This study was grounded in two theoretical frameworks. First, Bandura's (1986) social cognitive learning theory provides the premise that the classroom is a social environment. Within the social environment exists an interplay between the learner, the environment, and the learner's behavior, which Bandura (1986) refers to as the triadic reciprocality model of causality (Bandura, 1997; Schunk, 2012). Second, Schön's (1973) organizational learning theory paired with the reflective practice model is the basis for how educators and administrators adapt and improve the learning environment. For Schön's (1983) reflective practice model, the educator gradually learns to move from spontaneous decision making to a more reflective and purposeful decision making process (Argyris & Schön, 1978; Morgan, 2013). Both theories work in tandem to provide a holistic approach to understanding the changing dynamic of the classroom (Argyris & Schön, 1978; Bandura, 1986; Schön, 1973; Schunk, 2012).

In addition to both theoretical frameworks, this study was informed by literature pertaining to the six different generations that may simultaneously be present in the community college classroom (McCrindle, 2014; Taylor, 2014). While the youngest generations still consist of the largest cohort of students in higher education, institutions must recognize the presence of generational learners if they are provide environment

inclusive to all students (Morgan, 2013). Additionally, literature in Chapter Two pertained to effective active learning strategies for the multigenerational learner (Levine & Dean, 2012; Sánchez & Kaplan, 2015). Social, cooperative, and team-based learning were at the center of this study (Bandura, 1986; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015). However, other strategies such as problem-based learning, multi-source approach, and use of digital devices were amalgamated into the weeklong active learning demonstration (Barber et al., 2015; Levine & Dean, 2012; Perrotta & Bohan, 2013; Tai, 2013).

The weeklong teaching demonstration was conducted a regional comprehensive community college in the United States Midwest during the spring semester of 2016 (Cohen et al., 2014; College Catalog, 2015). Two groups of four sections of a survey American history course were randomly selected to participate in the study. Both groups were taught identical material. However, one group received the material in the format of a passive lecture, while the other group received the material in an active learning format. The active learning format was designed by the researcher to include several highly effective learning strategies (Bandura, 1986; Çolak, 2015; Igel & Urquhart, 2012; Kent et al., 2015; Killian & Bastas, 2015; Mohammadjani & Tonkaboni, 2015; Perrotta & Bohan, 2013; Tai, 2013).

Following the weeklong teaching demonstration, participants from both groups completed a 12-question multiple-choice quiz designed to assess immediate content recognition of material (Haynie, 1994; Mohammadzadeh, 2012). Also, students participating in the active learning format completed a student engagement survey indicating what aspects of the active format were the most effective. Seven weeks later,

students participating in both groups completed an identical version of the quiz, so that the researcher could determine delayed content recognition of the material (Brookhart, 2015; Mohammadzadeh, 2012).

This quantitative study was guided by five research questions. Data collected from the immediate and delayed content recognition tasks were analyzed to determine the results for the first four research questions. The data from the student engagement survey were analyzed for the fifth research question. For Research Questions One and Two, a two-sample *t*-test was used (Bluman, 2015). The null hypotheses for first two research questions was not rejected. A two-sample paired *t*-test was used for Research Question Three (Bluman, 2015). The null hypothesis for the third research question was not rejected. The fourth research question also used a two-sample paired *t*-test (Bluman, 2015). For Research Question Four, the null hypothesis was rejected. For Research Question Five, responses on the Likert-type scale were calculated once values had been assigned to the responses. Additionally, the mean and standard deviation were determined for each survey question (Bluman, 2015).

The findings of this study did not necessarily align with research; however, the implications of this research were pertinent and timely. First, the findings reinforced the need for further studies, especially studies that include a larger population, or studies that take place over the course of entire semester or academic year. One significant finding was derived from the analysis of Research Question Four. Literature indicated that active learning led to better retention of material (Mohammadzadeh, 2012; Morgan, 2013; Perrotta & Bohan, 2013). However, the opposite conclusion was reached within this study. The delayed content recognition scores of students participating in the active

learning format decreased when compared to the scores on the immediate content recognition task (Mohammadzadeh, 2012). Further research should be conducted to determine how material is more effectively retained for active learners. This study also contributed to the growing body of literature by making the argument and defining six different generations that may coexist in the community college classroom concurrently (Igel & Urquhart, 2012; McCrindle, 2014; Sánchez & Kaplan, 2015; Taylor, 2014; Werth & Werth, 2011).

In conclusion, while the results in this study did not align with the overall literature, further studies should be conducted using a larger and more diverse population and sample, as well as a semester-long study in lieu of a weeklong demonstration. The role of technology and the growing multigenerational diversity in the community college classroom only emphasize the importance of determining an inclusive and effective active learning strategy useful to as many educational disciplines as possible. For community colleges to remain relevant, they must encourage practices that lead to retention and completion.

Appendix A

LINDENWOOD

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

Applying Active Learning Strategy to the Teaching of History within a
Multigenerational Community College Classroom

Principal Investigator Zachary J. Zweigle
Telephone: ***-***-****   E-mail: ********@***.***

Participant _____Contact info_____

1. You are invited to participate in a research study conducted by Zachary J. Zweigle under the guidance of Rhonda Bishop. The purpose of this research is examine effective teaching strategies for history in the community college classroom to students of various different generations.

2. a) Your participation will involve a weeklong teaching demonstration during the lesson covering World War II. At the conclusion of the weeklong demonstration, you will be asked to voluntarily take a short quiz pertaining to the material taught during the demonstration (the quiz will not count toward or against your score in the class). Students participating in the demonstration will also be asked to voluntarily complete a brief survey. At the conclusion of the semester, there will be an additional set of questions on the final exam. Again, students will be asked to voluntarily complete those questions (results will not count toward or against your score in the class).

b) The amount of time involved in your participation will be 150 minutes during the normally scheduled class period to take part in the demonstration and complete both the quiz and survey. Additionally, it should take about 5-10 minutes to complete the questions during the end-of-term final exam.

Approximately [60-75 subjects] will be involved in this research.

3. There are no anticipated risks associated with this research.

4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about effective teaching strategies for history in the community college classroom to students of various different generations.

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study and the information collected will remain in the possession of the investigator in a safe location.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Zachary J. Zweigle at ***-***-**** or the Supervising Faculty, Rhonda Bishop at ***-***-****. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Marilyn Abbott, Provost, at mabbott@lindenwood.edu or 636-949-4912.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

_____   _____
Participant's Signature   Date   Participant's Printed Name

_____   _____
Signature of Principal Investigator   Date   Investigator Printed Name

Appendix B

WORLD WAR II: LESSON PLAN FOR A COMMUNITY COLLEGE SURVEY
HISTORY COURSE

Lesson Aim
The purpose of the lesson is to facilitate engagement with a variety of materials,
classroom colleagues, and the instructor. Students from a multigenerational background
will participate in the lesson, which has been designed around various learning strategies.
These strategies include: cooperative/social learning, team-based learning, problem-based
learning, and a multiple source approach.

Objectives
The objective for this lesson aligns with the general course objective designed by the
Social Science Department: Trace the events leading up to World War II and the U.S.
Response. Specifically the objective for the lesson is:

- Students will trace the events that led to an Allied victory during World War II.

Materials
Student teams will need:

- The course textbook: Faragher, J., Buhle, M., Czitrom, D., & Armitage, S. (2016).
  Out of Many: A History of the American People Volume 2 (8th ed.). Boston MA:
  Pearson Education, Inc.
- Researcher-designed handouts specific to each team: Asia and Pacific Theatre;
  European Theatre; Africa, Mediterranean, and Middle East Theatre; and U.S.
  Home Front and the Atlantic Theatre.
- Mobile or digital devices, such as smartphones, tablets, or laptops with Wifi or
  cellular access.

Overview
The historical content era selected for this study is World War II. Depending on how this
historical era is taught, it can be very convoluted. For the United States, the war was
fought in three distinct theatres: Asia and the Pacific, Mediterranean, Africa, and the
Middle East, and Europe. These theatres are further divided between several very crucial
strategic fronts and campaigns. Additional, for the purpose of American history, one
should also cover the war effort from a domestic perspective, which not only considers
the role of factories and civilian workers, but also shipping of supplies across the Atlantic
Ocean and the battles that ensued between Allied ships and Nazi Germany U-Boat
Submarines. With so many events, campaigns, and battles raging simultaneously in these
different theatres and fronts, it makes it difficult for the instructor to establish one
succinct chronological timeline. The active learning strategy is designed to allow students
to make sense of the overall strategy for winning the war.

Activity Step by Step

Day One:

- The active learning format will begin with instructions on how each student will complete their portion of the assignment (10-15 minutes).
- Student participants will then be divided into four teams representing the following important arenas of the war: the home front and the Atlantic; Asia and the Pacific Theatre; Mediterranean, Africa, and the Middle Eastern Theatre; and the European Theatre consisting of the Eastern and Western Fronts (2-5 minutes).
- Two students in each team will be selected for leadership roles. One student will serve as Commanding General of their theatre. It will be the General's job to organize the other students and ensure that the instructions are carried out. Another student will serve as Liaison Officer, and it will be their job to communicate with other teams to determine if there is any critical information needed so that their team can complete the instructions. Remaining team members will serve as researchers and provide information to the General and Liaison Officer. There should be no sense of competition between teams; rather, students should work together as both teams and a class to complete the aim on the assignment.
- Once instructions have been assigned, the active learning experiment will take place in two parts. Part one, students in each team will use their resources, including information provided by the researcher, the textbook, and available digital devices connected to the internet to complete the assigned task. Each team will be assigned the task of determining a chronological timeline respective of their arena of the war. Then each team will, as accurately as possible, use the information and their timeline to determine the strategy for winning the war with respect to their arena of the war (45-50 minutes).

Day Two:

- The researcher will give the teams time to collect their information and prepare their roundtable discussion (15-20 minutes).
- The researcher will ask the teams to come together as a class and layout the over strategy for winning World War II. To ensure that the teams work together cohesively, one student participant will asked to volunteer for the role of Supreme Allied Commander. Once the class has determined the strategy, they will present their findings to the researcher (30-35 minutes).
- Students will be asked to voluntarily take a quiz and survey pertaining to the material presented during the weeklong activity (15-20 minutes).

Roles

- Researcher will facilitate the learning, and be available to the teams to answer questions and assist.
- One student from each team will serve as a team leader.
- One student from each team will serve as a team liaison.
- One student in the class will serve as overall class leader on day two.
- Remaining students will serve their teams as researchers.

Appendix C

WORLD WAR II QUIZ QUESTIONS

Please select the year range in which you were born.

1900-1927   1928-1945   1946-1964   1965-1980   1981-1998   1999-2016
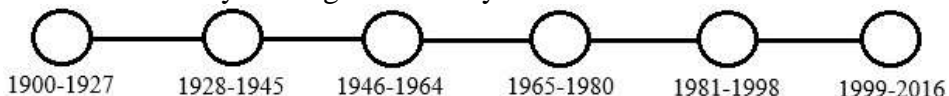
Directions: read the questions carefully and select the correct answer for each question.

1. Which of the following was NOT one of the Allied nations during World War II?
      A.) China
      B.) Soviet Union/Russia
      C.) United Kingdom/Britain
      D.) Finland

2. All of the following are accurate statements about the Japanese attack on Pearl Harbor, EXCEPT?
      A.) The attack led the United States to enter World War II
      B.) The Japanese sunk three United States Navy aircraft carriers
      C.) The Japanese attacked Pearl Harbor with aircraft
      D.) Most historians recognize the Japanese attack as a surprise to U.S. forces

3. All of the following were major U.S. Allied victories in the Pacific Theater, EXCEPT?
      A.) Battle of the Coral Sea
      B.) Battle of Midway
      C.) Battle of Wake Island
      D.) Battle of Guadalcanal

4. The overall U.S. Allied strategy in the Pacific Theater involved all of the following, EXCEPT?
      A.) A direct attack on Japan without first securing control of the islands throughout the Pacific
      B.) Island-hopping campaign moving Allied forces closer to the mainland of Japan
      C.) General MacArthur's land operations secured Guinea, Dutch East Indies, and Philippines
      D.) Admiral Nimitz led the U.S. navy to halt Japanese advances at sea

5. All of the following contributed to United States industrial superiority on the home front during World War II, EXCEPT?
      A.) Natural resources (steel, oil, textiles, etc.)
      B.) Wartime rationing and victory gardens
      C.) Lack of government influence
      D.) Workforce made up of women and African Americans

6. Which of the following statements is NOT accurate regarding the Battle of the Atlantic?

      A.) Allies broke the enemy's coded messages using the Enigma cipher machine

      B.) By 1945, the Allies were able to break the Japanese hold in the mid-Atlantic

      C.) U-Boat submarine warfare was used against Allied merchant vessels

      D.) Atlantic shipping lanes were vital for getting supplies from the U.S. to Europe

7. Which of the following is NOT a true statement regarding Allied victory in the North Africa/Mediterranean/Middle East Theater?

      A.) British fought Italian forces to recapture Ethiopia, Eritrea, and Somalia

      B.) At the onset of the war, Allied forces had superior combat experience over the Nazi Germans

      C.) Campaigns in Iraq, Syria-Lebanon, and Iran allowed Allies to secure the Middle East

      D.) Allies had strategic coordination of air and land forces to eventually secure North Africa

8. Which of the following was NOT a major campaign in North African/Mediterranean/Middle East Theater?

      A.) Iberian Campaign: fought in Gibraltar and Spain

      B.) Western Desert Campaign: fought in Egypt and Libya

      C.) Operation Torch: fought in Morocco and Algeria

      D.) Tunisia Campaign: fought in Tunisia

9. All of the following led to an Allied victory in the European Theater, EXCEPT?

      A.) Allied strategic bombing of Nazi Germany

      B.) Soviet Union/Russia kept Nazi Germany occupied on the Eastern Front

      C.) Allied superiority in supplies, weapons, and equipment

      D.) Allied forces were fighting a defensive war against Nazi Germany

10. Which of the following sequence of events is CORRECT?

      A.) Allied invasion of France, Allied invasion of Italy, Allied invasion of North Africa

      B.) Allied invasion of North Africa, Allied invasion of Italy, Allied invasion of France

      C.) Allied invasion of Italy, Allied invasion of France, Allied invasion of North Africa

      D.) Allied invasion of France, Allied invasion of North Africa, Allied invasion of Italy

11. Which of the following was NOT a major Allied victory in Europe prior to surrender of Nazi Germany?

      A.) Normandy Landings on D-Day in France

      B.) Battle of the Bulge in Belgium and France

      C.) Battle of Zurich in Switzerland

      D.) Battle of Stalingrad in the Soviet Union

12. All of the following statements are accurate regarding the dropping of the atomic weapons on Japan, EXCEPT?

A.) Led to an unconditional surrender of Japan

B.) Bombing was alternative to a United States conducting a ground invasion of Japan

C.) Two atomic weapons were dropped: one on Hiroshima and one Nagasaki

D.) Had Japan not surrendered, the U.S. had additional atomic weapons and was prepared to continue using them

Appendix D

STUDENT ENGAGEMENT SURVEY

Directions: For each of the following questions, please fill in the answer that best applies to you.

1. Please select the year range in which you were born.

◯	◯	◯	◯	◯	◯
1900-1927	1928-1945	1946-1964	1965-1980	1981-1998	1999-2016

2. I think the instructions for completing the assignment were clearly laid out.

◯	◯	◯	◯	◯	◯
Strongly Agree	Somewhat Agree	Agree	Disagree	Somewhat Disagree	Strongly Disagree

3. I think having a specified problem to solve helped the team organize the information.

◯	◯	◯	◯	◯	◯
Strongly Agree	Somewhat Agree	Agree	Disagree	Somewhat Disagree	Strongly Disagree

4. I think a digital device (tablet, lap-top, or smartphone) helped with this project.

◯	◯	◯	◯	◯	◯
Strongly Agree	Somewhat Agree	Agree	Disagree	Somewhat Disagree	Strongly Disagree

5. I think working in small teams on activities with multiple different documents (i.e. textbook, videos, speeches, printed sources, maps, etc.) contributes to my engagement in a history class.

◯	◯	◯	◯	◯	◯
Strongly Agree	Somewhat Agree	Agree	Disagree	Somewhat Disagree	Strongly Disagree

6. I think instructor support during team activities contributes to my engagement in a history class.

◯	◯	◯	◯	◯	◯
Strongly Agree	Somewhat Agree	Agree	Disagree	Somewhat Disagree	Strongly Disagree

7. I think discussing history topics in small teams contributes to my engagement in a history class.

◯	◯	◯	◯	◯	◯
Strongly Agree	Somewhat Agree	Agree	Disagree	Somewhat Disagree	Strongly Disagree

8. I think collaborating with peers contributes to my engagement in a history class.

| Strongly Agree | Somewhat Agree | Agree | Disagree | Somewhat Disagree | Strongly Disagree |

9. I think asking and answering questions in a group setting contributes to my engagement in a history class.

| Strongly Agree | Somewhat Agree | Agree | Disagree | Somewhat Disagree | Strongly Disagree |

10. I think having individual jobs within the team allowed the team to complete its overall task.

| Strongly Agree | Somewhat Agree | Agree | Disagree | Somewhat Disagree | Strongly Disagree |

11. I think multiple-choice quiz questions are an accurate method for evaluating learning.

| Strongly Agree | Somewhat Agree | Agree | Disagree | Somewhat Disagree | Strongly Disagree |

Appendix E

SURVEY PERMISSION EMAIL

ZWEIGLE, ZACHARY J.

Subject: FW: 'I Hate History'

Hi Zachary,

Thank you very much! You are welcome to use my survey and adapt it to your needs. Is your focus history courses? I'm glad to assist any way I can. Please let me know how your study goes!

~Katherine

Katherine A. Perrotta, M.A., B.S.

███████████████

"History is not was. It is." - William Faulkner

----- Original Message -----
From: "ZACHARY J. ZWEIGLE" ███████████
To: ███████████████
Sent: Wednesday, September 23, 2015 3:03:41 PM
Subject: 'I Hate History'

Greetings Katherine,

I very much enjoyed your article titled "I Hate History" in the Journal on Excellence in College Teaching . I am working on a dissertation that will complete my Doctorate in Education. The project is focused on the multi-generational learners in the community college classroom, specifically looking at learning strategies that engage those students. The Student Engagement Survey you utilized for your study would be incredibly helpful as I build my own study. Would you be willing to grant permission for the use of part (or all) of your survey for my dissertation, of course proper citations and acknowledgments will be rendered. Likely the survey will be adapted, as my project will consider different elements and strategies. However as you know, having a starting point is far better than beginning from scratch.

Once again, I want to compliment you, the article was a great read. I look forward to hearing back from you very soon.

-ZZ

Zachary J. Zweigle, M.A.
Department Chair – Social Sciences

████████████████████

"Man[kind] must rise above the Earth – to the top of the atmosphere and beyond – for only thus will he fully understand the world in which he lives." – Socrates

Appendix F

LINDENWOOD

LINDENWOOD UNIVERSITY ST.CHARLES, MISSOURI

DATE: February 26, 2016

TO: Zachary Zweigle
FROM: Lindenwood University Institutional Review Board

STUDY TITLE: [824281-1] Community Colleges and the Multi-generational Classroom
IRB REFERENCE #:
SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: February 26, 2016
EXPIRATION DATE: February 27, 2017
REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this research project. Lindenwood University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This project has been determined to be a   project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the completion/amendment form for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of February 26, 2017.

Please note that all research records must be retained for a minimum of three years.

Generated on IRBNet

If you have any questions, please contact Megan Woods at (636) 485-9005 or mwoods1@lindenwood.edu. Please include your study title and reference number in all correspondence with this office.

If you have any questions, please send them to mwoods1@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

Appendix G

IRB Approval

SIMPSON, MATTHEW E.
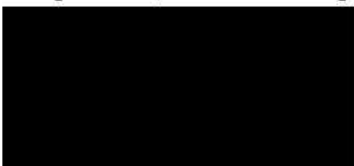Sent: Thursday, March 03, 2016 1:51 PM
To: ZWEIGLE, ZACHARY J.
Attachments: submission24822.pdf (6 KB)

Your application for "Applying Active Learning Strategy to the Teaching of History within a Multugenerational Community College Classroom" has been approved.

Please let me know of any questions,

Matt Simpson
College Director, Research & Strategic Planning

████████████████████████

IRB Application

Project Personnel - Lead Investigator Name	Zachary Zweigle
Principal Investigator E-Mail Address	██████████
Division (if ██ employee)	Academics - General Education
Department (if ██ employee)	Social Science
Project Title	Applying Active Learning Strategy to the Teaching of History within a Multugenerational Community College Classroom
Funding Agency or Research Sponsor (if applicable)	Doctoral Dissertation Project through Lindenwood University
Proposed Begin Date for Project	14/03/2016
Proposed End Date for Project	31/07/2016
Human Participants Training Certificate (must be in PDF form)	████████████████████
Project Description	███████████████

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