Millennial Instructional Preferences in Post-Secondary Business Programs

A Dissertation

SUBMITTED TO THE FACULTY OF

UNIVERSITY OF MINNESOTA

BY

Cynthia Elaine West

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

DOCTOR OF EDUCATION

Dr. Joyce Strand, Ph.D. Adviser

April 2017

© Cynthia Elaine West 2017

Acknowledgements

I would like to first and foremost thank my husband Chuck and our three children, Erik, Kelsey, Christian, and my daughter-in-law, Ana, for providing their love and support as I worked through this dissertation process. I am very fortunate and praise their influence.

I would also like to thank my adviser, Dr. Joyce Strand, and my dissertation committee; Dr. Carola Pförtner, Dr. Lynn Brice, Dr. Frank Guldbrandsen, and Dr. Gerry Nierengarten for their guidance. I would also like to thank Dr. Insoon Han for her statistical guidance. Your words of encouragement made this dissertation manageable and were greatly appreciated.

I thank Dr. Joyce Strand for helping me to refine my research ideas, reading my drafts, providing feedback, and constant support. I am equally indebted to Dr. Carola Pförtner for her insight, keeping me focused, and for her wisdom which served as my inspiration. I thank Dr. Frank Gulbrandsen for his feedback on the scope of this study and asking the hard questions. I thank my APA consultant, Brad Baranowski, M.S. Ed., LPC, for his editing and constructive input.

To my EdD colleagues, faculty and friends, thank you for your support advice and friendship. You encouraged me to see this endeavor through.

The fourth cohort in the Education Doctorate Program at the University of Minnesota at Duluth inspired teamwork, participative learning, and encouraged critical thinking and reflection. I am appreciative for this opportunity to pursue my life-long learning goal.

Dedication

This dissertation is dedicated to my loving husband Chuck.

His brilliance has always and continues to inspire me.

Abstract

The purpose of this mixed method study was to examine the instructional preferences of millennial learners and how their instructional preferences affect their choice in post-secondary business programs. The instructional preferences of millennial learners are an important question for post-secondary business programs enrolling learners from diverse generational backgrounds. The generations represented in the post-secondary classroom are the baby boomer generation, generation X and the millennial generation. However, millennials are the largest student population currently entering post-secondary programs.

The study included participants from three post-secondary business programs in the upper mid-west. The statistical tests used included descriptive analysis and frequencies; a two-tailed independent sample t-test; and Pearson correlation coefficients. This study also used phenomenological methodology to form descriptive themes from one-on-one interviews. The interview data was analyzed using the Hycner's phenomenological research.

The role of work experience appeared to impact a focused program choice and instructional preferences. The study provided evidence for the value and need for knowledge-based and interactive learning to meet the millennials' educational goals. A theme identified in the phenomenological analysis of the interviews was the millennial generation cohort was not tightly defined. Millennial learners in post-secondary business degree programs, regardless of age, based instructional preferences primarily on varying amounts of work experience.

Table of Contents

Acknowledgements ……. i

Dedication…… ii

Abstract……...……iii

List of Tables……ix

List of Figures……. xi

Chapter 1 – Introduction……. 1

Background of the Study……1

Statement of the Problem.……2

Purpose of the Study……3

Research Question.…… 3

Significance of Study……...3

Definition of Terms…….…….4

Assumptions…….……6

Theoretical Conceptual Framework…….……7

Summary……10

Chapter 2 – Literature Review……...12

Introduction……12

Historical Perspective of Adult Learners……...12

Adult Learning Theory and Humanism...…… 21

Generational Affiliations of Adult Learners.....…...……24

Constructivist Learning Theory…….27

Transformative Learning……...……...31

Experiential Learning Theory……32

Differences in Perspectives for Millennial Learners in Problem-Based Learning... ...….36

Educational Program Change and Transformation for Millennial Learners.……41

Challenges of Post-Secondary Institutions Adapting Programs to Millennial Learners...47

Summary……49

Chapter 3 – Methodology……52

Research Design…….52

Measures……53

Coherency, Transparency and Creditability…….....55

Participants……55

Procedure…….....56

Data Collection Plan…….....58

Delimitations…….…….59

Data Analysis.…….....59

Summary…….....61

Chapter 4 – Findings……...……62

Statistical Tests…….……62

Survey Instrument…….……62

Survey Participant Demographics…….……63

Participant Demographic Results……...65

Participant Age……...65

Participant Gender.....65

Participant Employment……65

Participant Ethnicity……...……66

First Generation College Participants……66

Quantitative Measures……...68

Likert Rating Instructional Preferences…….……69

Instructor Provides Structure ……...73

Instructor Shares Relevant Experiences.....…….....73

Visual Aids Used for New Concepts ….……...73

Supplemental Handouts with Lecture……74

Participate in Class Discussion...……...74

Problem Solving Real Business Problems…….75

Hybrid Classroom Learning……...76

Academic Relationship with Instructor…….76

Case Studies Applicable to Career Goals.……76

Listening to the Instructor Lecture.……76

Participant Ranking of Instructional Methods.....……77

Correlation Analysis.……79

Summary of Quantitative Research.…….…….81

Qualitative Measures.....82

Data Coding.…….…….84

Participant Narratives…….……...95

Participant 1.…….…….96

Participant 2 ….…….……97

Participant 3.....…….……98

Participant 4.....98

Participant 5.....100

Participant 6.....101

Theoretical Foundation as it Relates to Cluster Themes of Research.....102

Summary of Qualitative Research.....105

Summary.....106

Chapter 5 – Discussion.....107

Summary of Methods.....109

Role of Prior Experience.....110

Role of Generational Differences.....112

Role of Instructional Preferences.....113

Correlation Findings.....118

Interview Findings.....120

Theoretical Context.....122

Delimitations of the Study.....124

Limitations of the Study.....124

Implications for Post-Secondary Business Instruction.....125

Suggestions for Future Research.....125

Summary.....126

Conclusion.....129

References.....131

Appendices.....143

Appendix A. Instructional Preference Electronic Survey.....144

Appendix B. Interview Consent Form and Interview Questions…….150

Appendix C. Instructional Preference Survey Flyer……153

Appendix D. Interview Units of Meaning Relevant to Research Question…….154

Participant One…….155

Participant Two……156

Participant Three…….....157

Participant Four……158

Participant Five……159

Participant Six…….…….....160

Appendix E. Reprint Permission for Figure 1 Experiential Learning Cycle……...161

List of Tables

Table 1. Experiential Learning Categories and Their Descriptions……9

Table 2. Generational Chart…….....25

Table 3. Types of Experiential Learning…….....36

Table 4. Projected Numbers for Enrollment in All Post-Secondary Degree-Granting Institutions, by Age Group.....…….....44

Table 5. Recommended Teaching Strategies for Adult Learners…….……46

Table 6. Individual Participant Characteristics…….……64

Table 7. Survey Participants Characteristics…….67

Table 8. Importance of Instructional Preferences in a Post-Secondary Program as a Millennial Learner.....……71

Table 9. Instructional Preferences of the 20-year-old and Younger Group Different from the 21-34-year-old Group…….....73

Table 10. Instructional Preferences of the 21 to 34 Age Group Different from the 20-year-old and Younger Age Group…….74

Table 11. Similar Instructional Preferences of the 20-year-old and Younger Group and the 21-34-year-old Group…….....75

Table 12. Instructional Ranking of Fourteen Instructional Methods by Age Group…….……77

Table 13. Participants Ranked Effective Teaching Method/Ranking was One through Five for the Most Preferred Instructional Methods.…….79

Table 14. Correlations (r) Between Millennial Learner Instructional Preferences ≥ .70……80

Table 15. Correlations (r) Between Millennial Learner Instructional Preferences ≥ .60……80

Table 16. Correlations (r) Between Millennial Learner Instructional Preferences Considering Web Based and Hybrid.……81

Table 17. Interview Participant Demographics Data ……83

Table 18. Coded Frequency Chart/Number of Times Mentioned in Interview…….86

Table 19. Domain Cluster of Impact of Generational Difference……..88

Table 20. Domain Cluster of Participants Educational Goals and Impact on Choice of Program……89

Table 21. Domain Cluster of Participant Feedback on Instructional Preferences…….91

Table 22. Domain Cluster of Personal and Professional Participant Experiences……93

List of Figures

Figure 1. Experiential Learning Cycle...……..……...33

Figure 2. Theoretical Foundations for Adult Learners…….....42

Figure 3. Primary Reason for Choosing Business Program Word Cloud…….……69

Figure 4. Demonstration of Themes…….…….95

Figure 5. Instructional Preferences based on Participants Work Experience…….…….116

Chapter 1 - Introduction

Higher education has experienced a growth of millennial learners due to the changing economic and business environments. Millennials are considered the most educated generation in history (Fry, 2014). Responsive colleges and universities are able to capitalize on the prior experience of their millennial learners as a catalyst for new learning models and programs. Millennial learners embrace life-long learning with their experience, their critical thinking, and desire to apply what is being taught to their real-world careers and life goals (Merriam & Biereme, 2014). The preferred instructional methods for millennial learners is an important question for post-secondary business programs enrolling millennial learners from diverse generational backgrounds. Preferred instructional methods are important because post-secondary millennials learners are guided to critically examine, challenge, and transform beliefs and perspectives to professional practice (Mezirow & Taylor, 2009).

Background of the Study

The American workplace is more complex, particularly with globalization, international competition, and rapidly changing technology (Majid & Dahan, 2008). The current work environment is motivating individuals to continually update their work-related knowledge and skills. American workers must be prepared for high-value jobs to sustain the nation's leadership status in the current information-based economy.

American workplace trends are for greater understanding of rapidly changing technologies, higher industry expectations for employees, and greater flexibility in the workforce. Today's workforce is experiencing the need to become lifelong learners to continually up-grade skills throughout their careers (National Commission of Teaching

America's Future, 2010). The United States Census Bureau predicted in the next twenty years, 80% of all new jobs will require some postsecondary or graduate education (Bureau, 2010).

Institutions of higher education should match the characteristics, interests and educational needs of their millennial learners (Merriam & Biereme, 2014). Millennial learners bring more complex and varied backgrounds, life experiences, previous knowledge, and skills to the educational setting. Research has shown additional levels of experience increase the ability of millennial learners to make connections between theoretical concepts and the potential application to the everyday life. Adult learning theory supports an effective curriculum for millennial learners and builds upon their life experiences and interests (Merriam & Biereme, 2014). Merriam and Biereme suggest institutions of higher learning must be willing to modify their existing programs and services to meet millennial learner needs. Currently, an estimated 21 million men and women are taking some form of adult education (Merriam & Biereme, 2014). This study examined the current preferences and experiences of millennial learners toward post-secondary business programs. Developing new programs geared to millennial learners, institutions of higher learning could potentially create a positive impact on the ability to attract, serve and satisfy the educational needs of millennial learners (Benchoff, Cashwell, & Rowell, 2015).

Statement of the Problem

This study examined the millennial learner's generational characteristics, instructional preferences of post-secondary business programs, and the effect of the millennial learner's choice of post-secondary business programs. By identifying these

characteristics and preferences, post-secondary educational institutions are in a better position to create an environment of institutional practices driven by learning with a sensitivity to generational differences.

Purpose of the Study

The purpose of this mixed method study was to examine the instructional preferences of millennial learners and how their preferences may effect their choice in post-secondary business programs. The focus of this study was to examine the statistically significant differences between younger millennials and older millennials.to show the difference in instructional preferences of the millennial learner.

Research Question

The research question which guided this investigation was:

What are the differences in the generational instructional preferences of millennial learners in post-secondary business programs?

Significance of Study

This study provided an opportunity for post-secondary business programs to prepare millennial learners for professional practices supporting and promoting transformative millennial learning experiences. Research suggested constructivist adult learning experiences may allow millennial learners to be prepared to critically reflect on prior knowledge, assumptions, and practices to develop thoughtful, justified, and flexible competencies (Brookfield, 2013).

This study was guided by Barrows' definition of an instructional learner-centered approach which encourages adult learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined

problem. In contrast, a traditional learning approach is instructor-driven and lecture-based within a compartmentalized curriculum (Barrows, 2002).

Definition of Terms

For purposes of this study the following definitions of terms were used.

Adult Learner - any learner who has completed the traditional 12 years of schooling. An adult learner could be characterized as being an independent and self-learner. A learner with experience to draw on, who will pursue goal-oriented learning, and will be attempting to learn something for career application or to problem-solve (Merriam & Biereme, 2014).

Andragogy - the art and science of helping adults learn (Knowles, Holton, & Swanson, 2015).

Baby Boomer -The baby boomer generation is defined as being born between the years of 1945-1964. This is the generational group who wanted more learning after they graduated from college and who fueled the lifelong learning movement. For the past 25 years, they have been swelling the ranks of non-traditional students in degree programs (Coates, 2007).

Constructivist Theory - A theory of knowledge based on the argument humans generate knowledge and meaning from an interaction between their experiences and their ideas (Ormrod, 2012).

Experiential Learning - Learning is centered on supporting students in applying their knowledge and conceptual understanding to real-world problems or situations where the instructor or mentor directs and facilitates learning. The classroom or workplace can

serve as a setting for experiential learning through hands-on activities, case and problem-based studies, or simulations (Kolb, Boyatzis, & Mainemelis, 2001).

Generation Xers - Generation Xers are defined as being born between the years of 1965-1980. This generation has not been served well by the traditional classroom. This generation has dealt with a world they perceive as unpredictable, unreliable, and unsafe. However, this generation is the most highly educated generation in history (Coates, 2007).

Knowledge-Based Learning - centers on knowledge the student already has and the knowledge they are going to achieve in the classroom by expert instructors (Ormrod, 2012).

Learner-Centered Instruction - Students construct their own knowledge and understanding through whole-class discussions, small-group discussions, collaborative learning, and group problem-solving (Ormrod, 2012).

Millennial - The millennial generation is defined as being born between the years 1981-2000. Which at the time of the study, defines this millennial generation as 18 to 34 years of age. Due to this diverse maturation level, their preferences range in the areas of entertainment, technology, experiential learning and a focus on teamwork. They develop critical thinking through experimentation and active participation and their learning is nonlinear with shifts between Internet sites and various devices (Black, 2010).

Non-traditional Student - The National Center for Education Statistics defines nontraditional students having delayed enrollment into postsecondary education; attends college part-time; works full time; has dependents other than a spouse; or is a single parent (Bureau, 2010).

Problem-Based Learning - Problem based learning is driven by real-world problems in which students identify and pursue their own learning needs and objectives. Students define the problem, explore related issues, and develop a working problem resolution in an actual industry setting (Srinivasan, Wilkes, & Stevenson, 2007).

Traditional Learning - Traditional teaching is characterized by the instructor being the controller of the learning environment. The role of the instructor is lecturer and decision maker in regards to curriculum content and outcomes (Merriam & Biereme, 2014).

Transformative Learning Theory - Transformative learning is the expansion of basic worldviews and capacities of the individual student. The student makes their own interpretations and broadens their understanding and knowledge. An important part of transformative learning is for students to change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans bringing about new ways of defining their worlds (Mezirow & Taylor, 2009).

Assumptions

This study assumed all individuals involved were millennial learners. As millennial learners, participants were assumed to be active learners involved in their own learning and who took responsibility for their own success. The millennial learner participants have experience and knowledge to draw from and apply to new experiences. They are motivated to succeed because new knowledge can benefit them directly and can be applied to their social or professional roles (Knowles et al, 2015).

This study assumed the participating millennial learners understood the degree opportunities offered in post-secondary business programs. The participating millennial

learners shared their preferences of classroom instructional methods and how this affected their choice of a post-secondary business program.

One generational group of adult students were considered in this study. The generational group who participated in the study was the millennial cohort. Millennial learners are assumed to prefer entertainment, technology, experiential learning, and teamwork. The millennial learner develops critical thinking through experimentation and active participation (Commerce, 2014). The millennial generation is labeled the new adult learner and future workforce, displaying high expectations for life choices (Stratton & Julien, 2014).

Theoretical Conceptual Framework

To improve learning in post-secondary education, the primary focus should be on engaging millennial learners in a process in which education is conceived as a continuing reconstruction of experience (Dewey, 2008). However, learning is not confined to the classroom and is part of a larger system of experiences and should be defined holistically. The holistic nature of the learning process implies it operates at all levels of human society from the individual, to the group, to organizations and to society. This broad definition includes real-world managerial processes such as; problem-based learning, strategy formulation, creativity, problem solving, decision making, and leadership (Kolb et al., 2001).

Andragogy was introduced by Knowles in 1968 as an adult learning theory and is supportive of problem-based learning. Andragogy characterizes the adult learner as directing their own teaching (Russ-Eft, 2004). Andragogy supports the belief adult learners are interested in life-long learning. According to Knowles, adult learners are

defined by their independence, experience, readiness to learn, and incentive and motivation to learn. Knowles' learning theory model includes six assumptions about adults; (1) the need to know; (2) the learners' self-concept; (3) the role of the learners' experiences; (4) readiness to learn; (5) orientation to learning; and (6) motivation (Knowles, et al., 2015).

Social constructivist and transformative learning theories supported the millennial learning phenomenon in this study (Merriam & Biereme, 2014). Based on these theories, an effective learning environment may be structured to promote deep processing of course material based on questioning, critical reflection on beliefs, and generational perspectives (Mezirow & Taylor, 2009). Generational characteristics should be considered and defined by what influenced each generation during their developmental years. Historical events, cultural norms, and political environment all shape each generation's common values, beliefs, and characteristics (Coates, 2007). Higher education programs should be cognizant of the learning preferences of each generation.

Experiential learning can also serve as a useful tool to design and implement education programs in higher education for millennial learners because experiential learning is driven by real-world problems in which students identify and pursue their own learning objectives. Experiential learning programs involve personal experiences such as; internships, field projects, apprenticeships, case study and problem-based learning (Kolb et al., 2001). Experiential learning traditionally applies to four areas of adult education; field based experiences, prior learning assessment, experiential classroom-based learning, and experiential problem-based learning (Kolb et al., 2001). Four areas of experiential learning experiences are expanded in Table 1.

Table 1

Experiential Learning Categories and Their Descriptions

Category	Description
Field-Based Experiences:	Working with practitioners in field of study and on the job training. Included in this category are learning activities like internships, practicum assignments, apprenticeships or residency.
Prior Learning Assessment:	Certificates given for knowledge attained from life experiences. These are generally in the form of standardized tests such as CLEP (College Level Exam Program), or portfolio assessments given by some colleges and universities.
Experiential Classroom-Based:	In a formal classroom setting this includes teaching methods involving the students in participative activities and reflection. This includes techniques as case studies, simulations, or any activity using real life experiences as its basis of instruction.
Experiential Problem-Based:	Working directly with practitioners in field of study, inter-disciplinary curriculum, solving real world problems, and self-directed.

The goal of educating millennial learners is to prepare them for effective participation in a challenging work environment. Appropriate methods to achieve this goal have evolved from the apprenticeship model, to a traditional teacher-directed approach, to a student-centered constructivist approach. Research over the past decade has shown the student-centered approach has increased student motivation for learning, increased applicability to real-world situations and promoted life-long learning (Kolb, et al., 2001).

Problem-based learning has been suggested as one method that utilizes student centered approach and has been shown to improve critical thinking and reasoning skills

(Srinivasan, et al., 2007). Problem-based learning utilizes small groups in a classroom and real-world settings. The group focuses on the process of discovery by students to stimulate problem solving, independent learning, and teamwork. Instructors play a minimal role and do not guide the discussion. In this format, students are presented a problem, often using a real-world case as a starting point for discussion. Students have time to define the problem, explore related issues, and develop a working problem resolution in an actual industry setting (Srinivasan, et al., 2007).

Summary

This study examined millennial learners' preferences of post-secondary business programs which may move beyond expert-driven, direct instruction to more problem-based instruction. Adult learner theories suggest educational programs providing critical reflection, utilize prior knowledge, assumptions, and experience better prepare millennial learners for professional practices. This study addressed how adult learner theories support millennial learner instructional preferences. It is important to consider the changes the millennial learner will demand in a post-secondary business program. The millennial learner is anticipated to demand adjustments in teaching philosophies and teaching techniques.

The following literature review examined the millennial learners' preferences in instructional methods and their perceptions of problem-based learning and traditional knowledge-based learning. The historical perspective of adult learning was discussed in the literature review and followed an evolutionary timeline. The literature review examined if problem-based learning and traditional knowledge-based learning fostered the skills needed for today's millennial learners' professional careers. The research

question examined in the study was what are the differences in the instructional preferences of millennial learners in post-secondary business programs. The research question examined the instructional methodology as to which methods are perceived more effective than traditional instruction and promote long-term retention of knowledge and skills. The research focus concentrated on the optimal instructional strategies for millennial learners.

Chapter 2 – Literature Review

Introduction

The primary motivation to enter post-secondary programs for today's millennial learners is their employment, their professional development and self-actualization (Merriam & Biereme, 2014). According to Merriam and Biereme, millennial learners bring to the learning setting prior experience and previous learning and seek the ability to leverage this knowledge with the changing personal and workplace environment. Therefore, the millennial learners' perceptions of a post-secondary business programs' course objectives and instructional preferences may affect their choice of a post-secondary program. To improve learning in higher education, a primary focus should be on engaging millennial learners in a process in which education is a continuing reconstruction of experience (Dewey, 2008). Instead of the traditional classroom as the foundation of education, the objective is to integrate learning which happens outside the classroom into the larger holistic education system. The historical development of the field of andragogy supports the central role of experiential learning for millennial learners. The perspective of millennial learners is also determined by their generational affiliations when viewed from a sociocultural perspective. The generational cultural differences of millennial learners may impact their preference of programs that utilize experiential learning. An examination of constructivist learning theory and transformative learning theory supports experience as the key to meaningful millennial learning.

Historical Perspective of Adult Learners

Societies have developed and survived over centuries by teaching skills and ideas to each other. Learning occurred in groups of people who learned directly from past

generations, experimentation, or by working in the fields and hunting. Since Babylonian times, people have been transferring skills from one generation to another in some form of apprenticeship. Four thousand years ago, the Babylonian Code of Hammurabi gave artisans the directive to teach their crafts to youth. The records of Egypt, Greece, and Rome from earliest times reveal skills were still being taught by masters to the youth (History of Apprenticeship, 2015). This was the early foundation of experiential learning.

Historically guild apprenticeships developed to work with trade craftsmen, village elders, immigration sponsors, indentured servants and land owners retaining slave labor as apprentices in exchange for food and housing. Conditions were hard for the apprentice who worked for no salary, directed to obey his master and treated unequally. Real-world knowledge was learned and passed on through actual experience. The wealthy population could afford formal schooling, but this formal learning was not real-world based (History of Apprenticeship, 2015).

In the 1500's guilds were the schools of English, Italian and Western European crafts and commerce. Guilds became the educational system of the period. Apprenticeships taught manual skills where guild members united to make and sell products and services (History of Apprenticeship, 2015). The rise of the guild may be explained as an integral part of society's growth and economic development and an educational platform. Guild members demonstrated the pride in a skill which allowed a craftsman to achieve levels of mastery through feedback, criticism and growth. The guild and trade apprenticeships immigrated with American settlers and learning continued with real world training (Jacoby, 2015).

During the American colonial period, apprenticeships were the primary form of adult education. In an apprenticeship, a person would learn an art or trade by working for a skilled master for a certain number of years (Jacoby, 2015). During the 1800's, adult educational programs were evolving into the Lyceum as a forum to debate and hold discussions, primarily among men. Horace Mann is called the father of the common school and is known for promoting universal public education (Fakin, 2000). In 1837, Mann promoted the common school movement which provided every child a basic education funded by local taxes. Mann felt that education should be provided in schools taught by trained teachers and this moved education from apprenticeships to classroom (Beckett, 2013).

In the late 1800's the question of the purpose of the American high school was divided between two main philosophies. Traditional educators saw high school as a college preparatory institution. This divided students into academic versus terminal students, often based on economic, social, and ethnic backgrounds. Others believed the high school should serve more as a people's school, offering a range of practical courses. The National Education Association addressed this issue by appointing a Committee of Ten in 1892 to establish a standard curriculum (Hertzberg, 1988). This committee was made up of educators and was chaired by Charles Eliot, the president of Harvard University. The Committee of Ten recommended eight years of elementary education and four years of secondary education. It defined four different curricula as appropriate for high school. The first two curricula followed a classical trend: classical and Latin-scientific. The second two curricula were more contemporary: modern language and English. The significance of the Committee of Ten was its contribution towards

liberalizing the high school by offering alternatives to the Latin and Greek classic curricula and the belief that the same subjects would be equally beneficial to both academic and terminal students. The goal of high school was to prepare all students to do well in life, contributing to their own well-being and society's good, and to prepare some students for college (Ornstein & Levine, 1993).

The Cardinal Principles of Secondary Education were issued in 1918 by the Commission on the Reorganization of Secondary Education (Raubinger, Rowe & West, 1969). The focus of this commission was to form objectives for secondary education. The commission was also instrumental in starting a standard of forming goals before reforming schools. Changes were needed because of increased enrollment in secondary schools. A new focus that would consider individual differences, goals, attitudes, and abilities was adopted. The concept of democracy was decided on as the guide of education in America. Work on the Cardinal Principles was started in 1915 and finished in 1918. The seven Cardinal Principles of Secondary Education (Raubinger et al.,1969) are listed below.

1. Health. The goal of education is to develop an awareness and concern for one's own health and healthy living.
2. Command of Fundamental Processes. Fundamental Processes are writing, reading, oral and written expression, and math.
3. Home Membership. This principle is the development of those qualities that make the individual a worthy member of a family. This principle should be taught through literature, music, and social studies.

4. Vocation. The objective of this principle is that the student gets to know a variety of careers so the student can choose the most suitable career. The student should then develop an understanding of the relationship between the vocation and the community. Those who are successful in a vocation should be the ones to teach the students in the school or workplace.
5. Civic Education. The goal of civic education is to develop an awareness and concern for one's own community. Diversity and cooperation should be the most important. Democratic organization of the school and classroom as well as group problem solving are the methods that should be taught.
6. Use of Leisure. The idea behind this principle is that education should give the student the skills to enrich body, mind, spirit and personality.
7. Ethical Character. This principle involves teaching the student the personal responsibility and initiative.

The 1900s saw a boom in adult education with the federal government providing funding for adult training in farming, home economics and vocations (Jacoby, 2015). When the United States entered World War I, the United States congress established a new system of veterans' benefits, which established a program for vocational rehabilitation for the disabled (United States Department of Veterans Affairs, 2006). The following list includes the laws put into effect during World War I and shows how the

concept of providing vocational educational opportunities has evolved (Colorado State University, 2009).

1. In 1916, The National Defense Act provided an opportunity for soldiers to receive instruction to facilitate their return to civilian life. For the first time the country recognized an obligation to persons injured in service to their country.
2. In 1917, The Smith-Hughes Act established the Federal and State Program in vocational education and created a Federal Board of Vocational Education with the authority and responsibility for vocational rehabilitation of disabled veterans.
3. In 1918, The Smith-Sears Veterans Rehabilitation Act expanded the role of the Federal Board of Vocational Education to provide services for vocational rehabilitation of veterans disabled during World War I.
4. In 1920, The Smith-Fess Act was also referred to as the Civilian Rehabilitation Act. The Smith-Fess Act began the rehabilitation program for all Americans with disabilities patterned after the Soldiers Rehabilitation Act. The Act provided funds to states for vocational services and education.

The United States congress approved the Servicemen's Readjustment Act known as the GI Bill of Rights (United States Department of Veterans Affairs, 2006). The bill transformed the concept of veteran's benefits and was signed into law by President Roosevelt on June 22, 1944. Included in the GI Bill of Rights was a benefit providing up

to four years of education or training. After World War II, the government provided returning soldiers with funding under the GI Bill of Rights to attend college and universities. The GI Bill of Rights aided the transition of 16 million veterans returning from World War II. In 1947, veterans accounted for 49% of college admissions (United States Department of Veterans Affairs, 2013). Military education benefits continue today, encouraging veterans to pursue higher education at college and universities.

During most of the twentieth century, the term progressive education was used to describe ideas and practices to make schools more effective institutions of a democratic society. Progressive educators shared the conviction that democracy meant active participation by all citizens in social, political and economic decisions that will affect their lives. The education of engaged citizens involves respect for diversity, meaning everyone should be recognized for his or her own abilities, interests, ideas, needs, and cultural identity. Education should encompass the development of critical and socially engaged intelligence, which enables individuals to understand and participate effectively in the affairs of their community (Ormrod, 2012). Dewey (2008) saw the decline of local community life and small scale enterprise, young people were losing valuable opportunities to learn the arts of democratic participation, and Dewey concluded that education would need to make up for this loss. Led by Dewey, progressive educators opposed a growing national movement seeking to separate academic education for the few and narrow vocational training for the masses. During the 1920s, when education turned increasingly to scientific techniques such as intelligence testing and cost-benefit management, progressive educators insisted on the importance of the emotional, artistic, and creative aspects of human development (Westbrook, 1991). The main idea was to

provide appropriate education to students relevant to the work they would be pursuing after completing schooling. The progressive theory was education drawn from past experiences and addressed the future (Coates, 2007)

Educational theorists have known for centuries adults learn as part of their daily lives. However, it was the early twentieth century when adult learning was studied systematically (Merriam & Biereme, 2014). *Adult Learning* by Thorndike in 1928 was the first publication to report on scientific studies with adult learners rather than animals or children. According to Merriam and Biereme, Thorndike was also one of the first pioneers of active learning. Thorndike did not support classroom lecture methods because the student was required to listen, understand a question not framed by the student, and answers not developed by the student (Merriam & Biereme, 2014).

In 1926, Lindeman proposed adults learn best when they are actively involved in what, how, and when they learn (Merriam & Biereme, 2014). Lindeman in his publication titled, *The Meaning of Adult Education in the United States*, wrote about the dual role of adult education to change individuals and change society. Lindeman identified the learner's experience as the highest value in adult education (Merriam & Biereme, 2014).

Lindeman's concepts were reinforced by Tough's work, *The Adult Learning Projects,* published in 1971, which emphasized self-directed learning. Tough found self-directed learners dedicate themselves to a learning project in which they plan, implement, and evaluate on their own (Merriam & Biereme, 2014). Since the 1970s, several authors and training experts have expanded upon the original concepts presented as adult learning theory.

The era of apprenticeship or experiential learning appears to be a relic of history. The American educational system moved to train more people at once with a streamlined curriculum. This trend compromised the intense learning which happens in the field and traded experiential learning for a standardized education. With an increasing demand on accountability in education in the 1970s, standardized testing became a major part of the public education (Nagy, 2000). These exams were intended to ensure a common standard and provide a sense of fairness. The No Child Left Behind Act was introduced in 2001 to create academic proficiency in all groups of students (Education, 2014). The emphasis continues to be on students receiving a certain score. The issue is classroom curriculum has become too focused on getting through the test and less on real learning (Rentner & Kober, 2014). Challenges of standardized testing is maintaining testing results in a narrowing of the curriculum and may reduce opportunities for deeper learning.

Apprenticeships continue today in various vocational areas and in educational internships providing university students real-world experience in their fields. Apprenticeships and internships are effective because an expert guides the apprentice or intern through hands-on problem solving in which knowledge and skills are taught and practiced (History of Apprenticeship, 2015). Apprenticeships in the United States focus primarily on construction and manufacturing occupations. The trade unions continue to support apprenticeship training. This type of training is relevant today as a way of dealing with the current mismatch between available workers and openings for skilled occupations in manufacturing and other industries. No longer just the acquisition of vocational skills, but experiential approaches are considered fundamental to all meaningful learning (Lewis & Williams, 1994).

Based on the historic and evolving relationship between quality of classroom outcomes and real world learning, knowledge depends on real life processes. Experiential learning or internships are the natural apprenticeship models for developing expertise. Current education systems should explore the principles inherent in the apprenticeship model for vocational education and post-secondary programs for adult learners (Kolb et al., 2001).

Adult Learning Theory and Humanism

The current direction in adult learning appears to be experiential learning and questions the concept of traditional classroom-based learning. This change in perspective could create a movement away from instructors as expert sources of knowledge and learners as passive receivers. Current social and constructivist learning models stress the importance of meaning formation from life experiences. Therefore, models of good practice in adult learning incorporates adult learners' previous experiences to enhance their current and future learning (Lewis & Williams, 1994).

The philosophy of humanism became more central to adult learning theory in the 1960s. Maslow's paper titled *A Theory of Human Motivation* (1943) and Rogers in his book *Freedom to Learn* (1969) both individually established a perspective on humanism and learning (McLeod, 2015). Humanism assumes that humans have the potential for growth and development and people are free to make choices and determine their behavior. The humanist theory suggests adult learners obtain knowledge, meaning, and ultimately expertise through making their own choices with self-directed learning (Merriam & Biereme, 2014). The educator's role in humanistic learning is to encourage and enable the learner by providing access to appropriate resources without interference

(McLeod, 2015). Humanism serves as a foundation for adult learning or andragogy assuming adults are intrinsically motivated (McLeod, 2015).

Knowles developed the paradigm of andragogy and is attributed with the concept of helping adults learn (Knowles et al., 2015). The practice of andragogy, unlike pedagogy, puts the focus on the adult and not on the teacher. Andragogy tends to emphasize the process of teaching outside the content being taught in the classroom (Knowles et al, 2015). Andragogy originated in nineteenth-century Germany where the educational programs of the workers' movement sought to differentiate themselves from children and schooling (Merriam & Biereme, 2014). In the second half of the twentieth century, andragogy became associated to the professionalization of adult education in both Europe and America.

Knowles suggested adult learners are ready to learn in situations directly related to individual needs and social roles. As adults mature, learning becomes problem centered because adults seek new information and perspectives applied to various life situations (Knowles et al., 2015). Knowles' assumption about adult learners' motivation to succeed at learning is internally driven. Knowles stated adult learners need a reason why they should learn and the desire to participate in their own learning.

Supporting Knowles' assumptions, Billington (2000) emphasized an environment where students take responsibility for their own learning processes and outcomes, active involvement in the learning process, and constructive feedback on performance. Zemke and Zemke studied adult learners and agreed with Knowles on factors common to most adult learners. Zemke and Zemke's findings were most adults are motivated to learn because of a changing workplace, adults tend to learn by integrating new information into

what is already known, adult learners appreciate the ability to direct their own learning and to be autonomous, and self-directed learners usually enjoy face-to-face and collaborative learning activities (Zemke & Zemke, 1981).

An example of andragogy and self-directed learning working together is problem-based learning (Holyoke & Larson, 2009). Problem-based learning could be considered an apprenticeship for real-life problem solving where students find a situation with undefined problems, incomplete information, and unasked questions (Gallagher, Stepien, Sher & Workman, 1995). This is a concept also proposed by Merriam and Biereme (2014) who argued andragogy and self-directed learning work together to create two foundational pillars of adult learning. Andragogy continues to be the major model to understanding and planning instruction for adult learners pursuing professional programs engaging in defining real-world problems and developing solutions as part of the curriculum.

Andragogy assumes that adult learners tend to be goal-oriented in their learning objectives, self-directed and internally motivated to succeed. Additional assumptions are adult learners take responsibility for their learning and incorporate past experiences to help in their learning process (Knowles et al., 2015). Each of these assumptions has implications for effective program design and type of instruction for adult learners. In the andragogy model, adult learners are encouraged to develop their own critical thinking skills, utilize current knowledge and transform previous ideas and opinions and develop their own reflective processes of critical evaluation (Mezirow, 2000).

Lifelong learning is strongly associated with continuing positive learning experiences for adult learners and frames the structure of adult education programs. Life-

long learning encourages learning in the workplace, participation in post-secondary education, and promotes a culture of learning (White, 2012). Current education policy is linked to global economics, developing a workforce to meet the needs of employers, technology and changing demographics (White, 2012). Lifelong learning has been viewed as a necessary component to economic growth, adults lacking basic skills, and a diverse generational population. Colleges, universities and other educational providers are recognizing the growing need to serve adult learners and to address the generational differences in adult learners' instructional preferences.

Generational Affiliations of Adult Learners

Two perspectives must be considered to establish effective educational programs which contribute to the learning styles, values, and preferences of each generation of adult learners. The first generational consideration is exposure to society within a certain period of history. The second generational consideration is personal experiences throughout the course of the adult learners' life. Age ranges defining generational groups are based on period generalities and societal events (Gregoryk & Eighmy, 2009).

A generation is defined as a cohort of people born within a period. Most definitions are based on a generational interval of approximately 20 years in length. Twenty years represents the average length of time between the beginning of the next generation (Howe & Strauss, 2007). Table 2 defines the generation categories based on birth years (Robinson, 2015).

Table 2

Generational Chart

Generation Name	Birth Year Range	Youngest Age Today	Oldest Age Today
Silent Generation	1923 – 1944	73	94
Baby Boomer	1945 – 1964	53	72
Generation X	1965 – 1980	37	52
Millennials	1981 – 2000	17	36
Generation Z	2001 – 2017	0	16

Howe and Strauss describe the peer personality of a generation as a caricature of its prototypical member (Howe & Strauss, 2007). A generation has collective attitudes about family life, sex roles, institutions, politics, religion, lifestyle, and the future. The more educators know about this peer personality, the better educators will be at developing and delivering effective educational programs.

Generalized differences can be described among the three generational cohorts comprising most continuing higher education students today. However, there are generational similarities among adult learners enrolled in both undergraduate and graduate levels. According to Conklin, all generational cohorts are expecting their programs to prepare them for the professional work world (Conklin, 2012). Learning environments serving today's generations of adult learners should treat the adult learner as an independent person with the autonomy to pursue learning in the most meaningful way (Coates, 2007).

According to Coates, the baby boomer generation typically responds well to the traditional classroom if there is opportunity for interaction, networking, and teamwork. This describes an active learning style being embraced by baby boomers (Coates, 2007). Boomers have relied on educational attainment to support their professional identity. A prediction studies have made is boomers will be employed past traditional retirement age due to monetary needs and medical advances (Howe & Strauss, 2007).

Per Coates, generation X are described as independent and pragmatic learners (Coates, 2007). Therefore, it is important to allow generation X a choice in determining how to learn material and a choice of assessment strategies. Because of their pragmatism, this group will not tolerate anything irrelevant or curriculum serving no purpose in meeting educational goals. This generation wants practical outcomes that will achieve their goals (Coates, 2007).

The generation X members appear to want to build a flexible career, providing career resiliency their parents did not have (Lancaster & Stillman, 2002). Generation X appreciates the opportunity for professional development and some employers may use learning opportunities as a retention strategy for generation X employees. Generation X members have demonstrated they are cautious consumers and more likely to prefer more flexible and shorter educational formats rather than investing in a degree program (Lancaster & Sullivan, 2002).

Millennials are described as team-oriented, confident, and optimistic (Howe & Strauss, 2007). Millennials grew up with computers and the rapid adoption of the internet, cell phone, and other mobile devices. They are a highly networked, connected generation and tend to be completely immersed in technology (Van Dyk, 2008).

Millennials are currently graduating from college and are entering graduate school or the workforce in larger numbers than the previous generations. They tend to be very career oriented and expect rapid advancement and perks (Howe & Strauss, 2007). Millennials are likely to expect a high degree of customization and personalization in their educational opportunities (Sandeen, 2008). Millennials expect total access to instructors and student services staff. They also appreciate programs providing real world access and learning by doing, like case studies and internship opportunities (Sandeen, 2008).

Studies have identified topics likely to appeal to millennials which include new technology, basic job skills, career information and options, personal finance and investing, and design. Programs or facilities creating a multitasking environment will probably be a success with millennial (Sandeen, 2008). Millennial students enrolling in postsecondary education appear to show a deep desire to integrate experience and education and tailor their education. Studies of the millennial generation currently enrolling in postsecondary education demonstrate a preference toward customized, blended learning experiences allowing integration of life and learning (Soares, 2013).

Constructivist Learning Theory

Constructivism is an important learning theory in answering the question of how adult learners acquire knowledge (Ormrod, 2012). The historic foundation of constructivism is credited to Dewey in 1938 and Vygotsky in 1978. Constructivism proposed adult learners could learn actively and construct new knowledge based on their prior knowledge (Spigner-Littles, 1999).

Dewey was an American philosopher and psychologist whose ideas have been influential in education and he was an advocate of adult experience-based learning.

Dewey was a major voice of progressive education and stressed the job of education is to develop a human's full potential (Haggbloom et al., 2002). Dewey emphasized the relationship between an individual's unique experience and education. Dewey stressed a connection with the events of life and an understanding of the interpretation of the events for knowledge to occur. A learning experience is a planned event with meaning and with experiential learning the meaning is reaffirmed by the learners (Dewey, 2008).

Vygotsky captured the process of human development as it relates to conditions of life, which are always in motion (Moll, 2014). The Vygotskian concept of social situations of development captured the changing contexts of learning and the significance this holds for adult learners. Education makes adult learners not only what they are, but who they will become. The relationship between daily life and education build off each other. Educational concepts grow into the everyday domain of personal experience, resulting in newly acquired meaning.

The adult orientation to learning utilizes experiences as a resource for learning and becoming more self-directed (Mohammed, 2009). Mohammed taught the constructivism approach utilizing critical thinking to make connections between previous and new knowledge. Constructivism is defined as co-constructing knowledge with students, acting as a conceptual change agent (Mohammed, 2009). The constructivism approach allows an instructor to be a facilitator to help the adult learner to set and achieve goals and guide them in choosing the subjects and resources. Literature suggests adults learn on their own initiative, they learn more deeply and permanently than what they learn by being traditional classroom methods (Huang, 2002).

Constructivism provides a learning environment for adult learners to be actively involved in a supportive learning environment. Three themes of constructivism and adult learning contribute to this discussion. If learning is constructed, the attitudes, beliefs and knowledge an adult learner brings into a new situation plays a significant role. This existing learning becomes the foundation for whatever learning follows (Howe & Strauss, 2000). The ability to construct learning from one situation to another and solve problems is critical for competence (Howe & Strauss, 2000). Consequently, the application of constructivist approaches may need to be considered more intentionally to better educate the adult student.

The first constructivism theme considers the role of adult learners' prior learning and the impact of prior experiences. Learning is accomplished when new information is connected to and built upon a student's prior knowledge and real-life experiences (Spigner-Littles, 1999). This research when applied to adult learners was effectively accomplished by capitalizing on their collective prior knowledge and life experiences. The instructor becomes a facilitator for adult learners to share their views and perspectives and to actively contribute to the subject. The development of self-direction in adult learners should be drawn from adult learners' prior experience (Michelson, 2012). Curriculum goals sustain the adult learner's involvement over time to achieve their goals. This is called zone of distal development or the work toward long-term objectives that may require years of study involving challenges and constraints (Moll, 2014).

The second constructivism theme considers how adult learners are motivated by social, emotional and occupational requirements. Adult learners tend to be emotionally

attached to their beliefs, values, and knowledge developed over a period of years. According to the social constructivism theory, knowledge is socially situated and constructed through the individual reflection of one's own thoughts and experience as well as others ideas (Ruey, 2010). Therefore, adult learners define themselves in terms of their social life and relate this to acquired knowledge. An active-based learner model is suggested to provide an opportunity to meet individual goals and interests using team work for learner identified issues (Cornelius, Gordon, & Ackland, 2011). Adult learning is not conducted as an isolated effort, but as a collective project (Brookfield, 2005).

Constructivism learning theory emphasizes the impact of constructing knowledge based on adult learners' active reflective thinking. The conventional understanding of experiential learning comes from the constructivist perspective, in which reflection plays a key role and learning is both within and under the control of the learner (Sandlin, Wright, & Clark, 2011). Adult learners construct meaning made up of beliefs and values. These meanings are how personal experience is reflected and interpreted.

The third constructivism theme is adult learners look for authentic learning experiences relevant to their lives. The reason is adults experience a rich life and real employment experience so learning should be authentic. Adult learners are expected to actively participate in knowledge sharing and the learning construction process. An adult learning model focusing on adaptability will aid adult learners to develop the types of innovative thinking and critical reflection necessary for learning transformation (Dzubinski, Hentz, Davis & Nicolaides, 2012).

Transformative Learning

Adult education programs should foster transformative learning because it focuses on learner change in perspective, worldview and sense of self (Merriam & Biereme, 2014). Higher education is a natural environment for transformative learning because higher education offers an opportunity to think. Transformative learning creates an environment where learners become increasingly adept at learning from each other and at helping each other learn in problem solving groups. The educator becomes the facilitator and mediator rather than as an authority on subject matter (Mezirow, 2000). These learning environments incorporating problem based learning may challenge students to move beyond their comfort zone of what they know of themselves and others (Merriam & Biereme, 2014).

Mezirow (2000) stated the goal of education is to allow learners to realize their potential to become more liberated and socially responsible learners and to make more informed choices by becoming more critically reflective (Merriam & Biereme, 2014). Skills such as interdisciplinary thinking, problem solving, team working, and holistic thinking are encompassed by problem-based learning. Mezirow further outlined the transformative assumptions as including personal meanings attributed to experience and validated through human interaction and communication (Mezirow, 2000). Central to adult learning is the process of reflection on prior learning to determine whether present knowledge is justified under present circumstances. Prior learning supports Mezirow's (2000) theory that meaning is found inside the learner rather than in written texts and meaning becomes significant to the adult learner through critical discourse with peers (Kitchenham, 2008).

Brookfield, states transformative learning can only be achieved through critical reflection (Knowles et al., 2015). Critical reflection becomes an important process for educators to facilitate learning transformation for adult learners. Brookfield emphasizes adult learners are rooted in cultural contexts shaping who they are and how they learn. The intent of critical reflection is to establish critical thinking as a dominant perspective in the field of adult education. Critical theory should be seen by adult educators as relevant and helpful in teaching adults (Brookfield, 2005).

Experiential Learning Theory

Experiential learning theory defines learning as the process whereby knowledge is created through the transformation of experience (Smith, 2010). Per the Association for Experiential Education (2017), experiential learning is a process whereby the learner constructs knowledge, skill and value from direct experience (Kolb & Kolb, 2006). Additionally, experiential learning used with a constructivist approach is an opportunity to use problem-based learning strategy. As Vygotsky suggested in the constructivist theory of learning, each learner's experience is valid, learners construct knowledge and meaning based on past and present experience, and learners use previous knowledge to construct new knowledge that is personally relevant (Moll, 2014).

The four-stage learning cycle, depicted in Figure 1, shows concrete experiences as the basis for observations and reflections. These reflections are assimilated into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences.

Figure 1

Experiential Learning Cycle

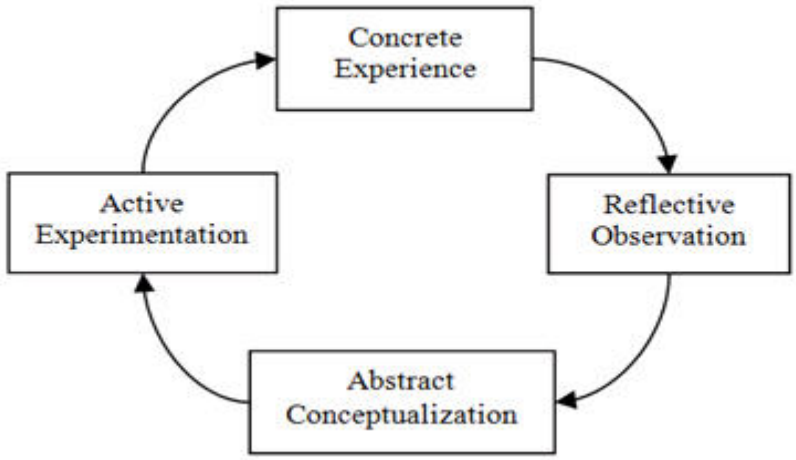


Figure 1. Effective learning is seen when a person progresses through a cycle of four stages: of (1) having a concrete experience followed by (2) observation of and reflection on that experience which leads to (3) the formation of abstract concepts (analysis) and generalizations (conclusions) which are then (4) used to test hypothesis in future situations, resulting in new experience (Kolb & Kolb, A review of multidisciplinary application of experiential learning theory in higher education, 2006).
Note. Reprinted by permission (Appendix E)

Based on Kolb and Kolb's (2006) work there has been a growing interest around experiential learning leading to greater attention by educators in higher education. Kolb and Kolb's (2006) interest lay in exploring the processes associated with making sense of concrete experiences. Concrete experience corresponds to direct practical experience as opposed to comprehensive knowledge which is theoretical and represented by abstract conceptualization. Experiential learning theory defines learning at a deeper and more comprehensive level than traditional expert-driven learning models. Experiential learning also provides methods for the study of adult learner differences (Kolb & Kolb, 2006).

Experiential learning theory draws on the work of prominent 20th century scholars who gave experience a central role in their theories of human learning and

development (Kolb & Kolb, 2007). Dewey's (2008) learning theory incorporated critical reflection tested in experiential activity. Freire (2000) insisted on educational activity based on the experience of participants. Rogers (1969) believed significant learning included personal involvement and was so effective, attitudes and behavior could change in the learner. Learning needed to be evaluated by the learner and take on meaning as part of the total experience. Dewey, Freire, and Rogers supported experiential learning as a view of learning based on action, reflection, experience and concept (Kolb & Kolb, 2007).

The process of learning from experience is present in human activity everywhere and throughout history. The holistic nature of the learning process means it operates at all levels of human society from the individual, to the group, to organizations, and to society. Research based on experiential learning theory has been conducted around the world supporting the cross-cultural applicability of the model. Research of experiential learning in management has used experiential learning to describe the management process of learning by managers, teams and organizations for problem solving and decision making, entrepreneurial opportunity seeking, and strategy formulation (Conklin, 2012). Experiential learning has the potential to influence the design and conduct of educational programs in management training and development and formal management education in a problem-based learning environment (Kolb & Kolb, 2007).

Based on current studies, experiential learning has moved from outside the circle of education to the center of today's education practices. Experiential approaches are becoming fundamental to meaningful learning. Teaching and learning has shifted from formal education, where faculty presents information to more experience-based

approaches. Experiential learning played a major role in learning from early civilizations and played a lessor role as formal schooling was established. Dewey (2008) offered a justification for learning-by-doing in his adult learning theory.

Higher education, in the last few decades, has experienced a growth of adult learners. Adult learners bring to the learning setting a wealth of prior experience and draw upon their background and previous learning in the classroom. Responsive instructors can capitalize on the prior experience of their students as a catalyst for new learning. In today's rapidly changing environment there is an increased demand for flexibility and the capacity to leverage previous knowledge and experience in new and different ways. Experiential learning appears to put adult learners as a central focus to share their own thoughts about an issue through investigation, problem solving, experience, observation, and action. Critical reflection supports experiential learning because curriculum is connected to real experiences and the skill and knowledge shared is based on experiential or prior learning.

Table 3 summarizes five areas of adult experiential learning supporting the adult learner's connection to real experiences. All the experiential techniques described share several characteristics. Each category is intended to encourage investigation and open-mindedness and to learn important skills and behaviors. Each category views learning from varied perspectives. However, the practical applications and critical reflection to real life situations are considered the responsibility of the learner.

Table 3

Types of Experiential Learning

Category	Description
Apprenticeship Babylonian Era to Present	Working directly with an expert in a specific vocational area. Earliest form of experiential learning: guild apprenticeships working with trade craftsmen, apprenticeships with village elders, immigration apprenticeship sponsors, indentured servants, and landowners keeping slave labor as apprentices in exchange for food and housing. Apprenticeships today in various vocational areas and internships provide students experience in their field.
Traditional Classroom 1500 Medieval to Present	Knowledge-based classroom and instructor driven. Case study is based in classroom and instructor. 1800, American adult educational programs were evolving into the Lyceum. 1900's saw a boom in adult education with the federal government providing funding for adult training in farming, home economics and vocations.
Internship, Residency or Practicum Industrial Revolution Cooperative Learning to Present	Specific professional setting (example medical or nursing). Internships provide an expert to guides the intern through hands on problem solving.
Problem-Based Learning Programs 1985 University of Delaware to present	Curriculum is inter-disciplinary, promotes critical thinking. Solving real-world problems and self-directed. Problem-based learning is apprenticeship for real-life problem solving.

Differences in Perspectives for Millennial Learners in Problem-Based Learning

In 1969, the Undergraduate Medical Curriculum at McMaster University in Canada looked for a solution to aid students in becoming effective problem solvers (Rangachari, 2015). The solution introduced by McMaster University allowed medical

students to use unstructured problems to guide their search for new information and to reflect on their learning. The process encouraged key skills, such as information gathering, collaboration, and self-assessment. This process was determined by the university to be critical for professional development and was termed problem-based learning. Problem-based learning has since spread to postgraduate professional schools, including business, pharmacy, dentistry and nursing (Amador, Miles & Peters, 2006).

Barrow's (2002) work in problem-based learning continues to influence the academic literature in medical education and encourages other academic areas to examine problem based learning. An issue in the educational field is scholars have not been working together and sharing across disciplines their work with problem-based learning (Walker, 2015). The result is a limited set of studies to show how problem-based learning is used in different academic contexts. The literature findings demonstrate the problem-based research community has an opportunity to connect isolated research groups and share research findings with other scholars (Xian & Madhavan, 2015).

Research conducted by Gould, Sadera and McNary (2015) has shown problem-based learning and traditional instruction were equally effective in increasing content knowledge in health professional students. Change in content knowledge obtained with both learning strategies was not associated with student self-directed learning or motivation. Research suggested both intrinsic and extrinsic motivation and learner control can lead to successful learning outcomes in both types of learning environments. Academic success was achieved even in the absence of self-directed learning suggesting that the learning environment can be designed to effectively support all students.

However, other studies conclude problem-based learning has positive impacts on students' ability to apply their skills and the retention of learning. Dochy, Segers, Van den Bossche and Gijbels (2003) report that students in problem based learning classrooms gained slightly less knowledge but retained their knowledge longer. Similarly, Norman and Schmidt (1992) conclude that problem based learning may not improve the initial acquisition of knowledge by the students while the deeper processing of information in problem-based learning classes leads to better retention of knowledge over a longer period. In business education, the implementation of problem-based learning has not been as common. Stinson and Milter (1996) proposed problem-based learning to enhance problem solving skills in business students, fewer empirical studies on the impact of problem-based learning in business education exist. Meanwhile the studies of Smith and Ravitz (2008) report mixed evidence on problem-based learning effectiveness in comparison to traditional lecture and discussion based classes.

Several studies have reported student and faculty concerns about problem-based learning implemented in specific coursework and curriculum in pre-professional and professional schools (Alleyne et al. 2002). Nardi and Kremer (2003) were interested in determining how well students perceived their learning using problem-based learning and how test scores reflected learning. A key factor leading up to this study was the expectations by many professional schools, including medicine, nursing, and physical and occupational therapy, in which students have experience in problem based learning. The purpose of Nardi and Kremer's (2003) study was to learn about the perceptions and test performances of college students enrolled in liberal education classes in which both problem-based learning and traditional teaching methods are used. Preparing students to

transition from teacher-centered to student-centered learning is important if students are going to succeed in problem-based learning academic programs. Further research is necessary to learn about different ways in which problem-based learning can be introduced and implemented into both undergraduate and graduate programs.

Based on insights developed in the literature, universities may consider providing a supportive learning community for millennial learners. Millennial learners demand a flexible model of learning which allows them to make choices and contextualize their learning as an individual and as a member of a learning community. This model is being driven by online learning which draws on ideas of constructivism, collaborative learning and reflective practice (Cornelius et al., 2011). However, a transformation in American higher education is not totally driven by technology. Educational change will possibly require a holistic approach by redesigning instruction delivery to a hybrid approach which includes a blended learning experience (Soares, 2013). Problem-based learning contributes to this blended learning experience by advancing the skills of millennial learners for professional practice and goes beyond direct, expert-driven, instruction (Holyoke & Larson, 2009).

Applied to higher education, millennial learner competencies should go beyond content knowledge, to challenge the student to direct their own learning, solve problems of real world significance, and to move beyond controlled classroom instruction. Professors are challenged to be facilitators of knowledge and motivators of problem-based learning. Higher level thinking is expected to apply to real-world problems and life-skill expertise. Studies have also shown that problem-based learning can be a motivating factor for students who might not be as textbook successful as they are

capable. At the post-secondary level, students experience responsibility for academics that guide them into lifelong learning and are validated through their decisions and actions (Walker, 2015).

Research examining the effectiveness of problem-based learning argues problem based learning can contribute to developing the effectiveness of educational programs, as it integrates theory and practice naturally (Takahashi & Saito, 2013). Problem-based learning programs focus on providing millennial learners with new insights and helps millennial learners develop higher order thinking skills and self-directed learning habits. Learning information in a real-world context enables millennial learners to move beyond rote learning and acquire the competence to use knowledge in new situations. The ability to construct learning from one situation to another and solve problems is critical for competence (Joham & Clarke, 2012).

According to Conklin (2012), millennial learner preparation for success in the world can be achieved through cleaner connections between higher education and the worlds they enter on graduation. Business is routinely considered a place where the pace of change is rising at an ever-increasing rate. If business learners are not exposed to change before they graduate, they will enter it behind the curve (Conklin, 2012). Teaching millennial learners to leverage and integrate business and management experiences in the learning process will enable millennial learners to contribute to future employers.

Studies have shown millennial learners are life-centered and problem-centered in their orientation to education (Howe & Strauss, 2007). Millennial learners want to learn what will help them perform tasks or deal with problems they confront in application to

real-life. The andragogy model states that adult learners are problem-solvers when the topic is of immediate value (Knowles et al., 2015). Millennial learners embrace the education process when they can develop goals, be in control of their own learning, and are actively involved in their courses (Conklin, 2012). As an millennial learner's self-concept becomes more oriented toward being an independent person, the millennial learner is more self-directed in his or her learning (Knowles et al., 2015). Educational institutions should create environments where millennial learners develop their self-directed learning skills (Brookfield, 2005).

Educational Program Change and Transformation for Millennial Learners

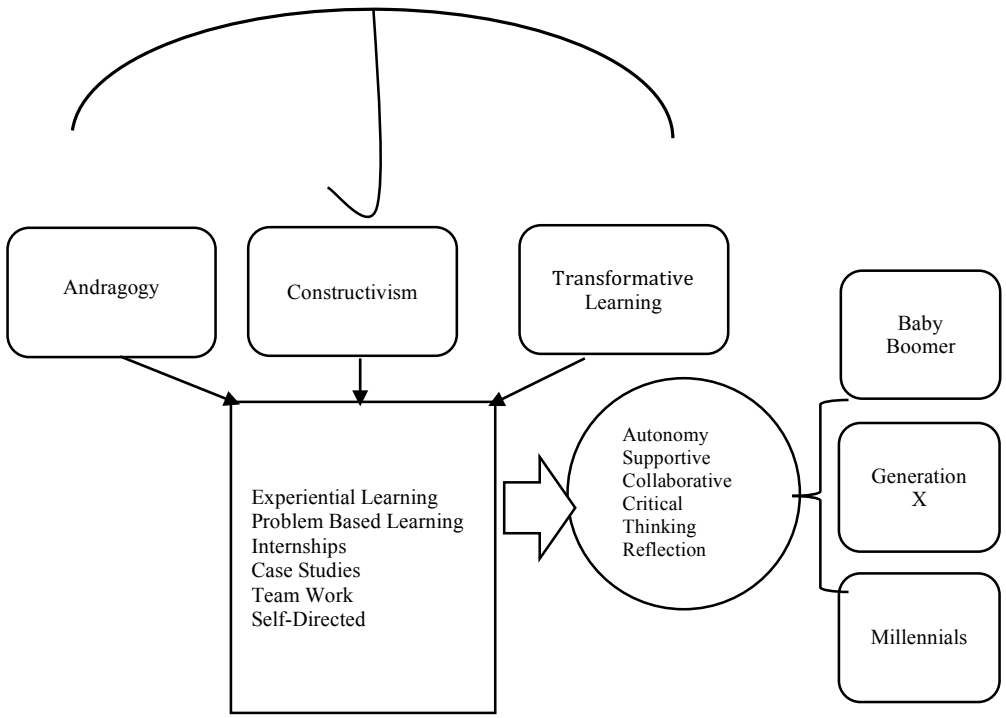
Educators in higher education may be required to respond to differences in motivation and learning processes of millennial learners. Differing generational characteristics and traits of millennial learners may cause traditional teaching methods to become ineffective in higher education (Knowlton & Hagopian, 2013). To provide effective classroom instruction and appropriate learning assessment, it is important to understand the motivations, learning styles, and strategies of millennial learners (Justice & Dornan, 2001). Millennial learners expect to have a voice and control over their college experience. The understanding of the reasons and motivations of millennial learners attending post-secondary level programs will aid in planning effective programs (Villar, Triado, Pinazo, Montserrat & Sole, 2010).

Andragogy, constructivism, and transformative learning served as theoretical foundations to help understand the millennial learner and their instructional preference in a classroom environment and what contributes to adult learning. As millennial learners request a greater emphasis on student experience and involvement in their education,

these theories become an umbrella under which instructional methods are identified. New avenues are offered to educators which are more sustainable and relevant learning environments can be created (Conklin, 2012). The following diagram emphasizes the significance of interactive instruction among the varying generations of adult students. The interactive methods in the classroom create more meaning, value, and learning. This is important due to the uncertainty in the current and future business environments (Collins & Hansen, 2011).

Figure 2

Theoretical Foundations for Adult Learners



Millennial learners are likely to prefer experiential learning, problem solving, internships, case studies, collaboration, and self-directed learning where they can create

content and become active participants in the learning process. Research has suggested millennial learners have a preference to work independently with self-directed projects (Conklin, 2012). Millennial learners expect professors to be accessible and approachable and to connect lessons to real life. There is also an expectation of multi-age millennial learners to be involved in a positive learning environment combining teamwork with technology (Gregoryk & Eighmy, 2009). A study conducted by Northwestern Mutual life and the Harris organization found that millennial students prefer learning environments that are highly active and interactive (Northwestern Mutual, 2016).

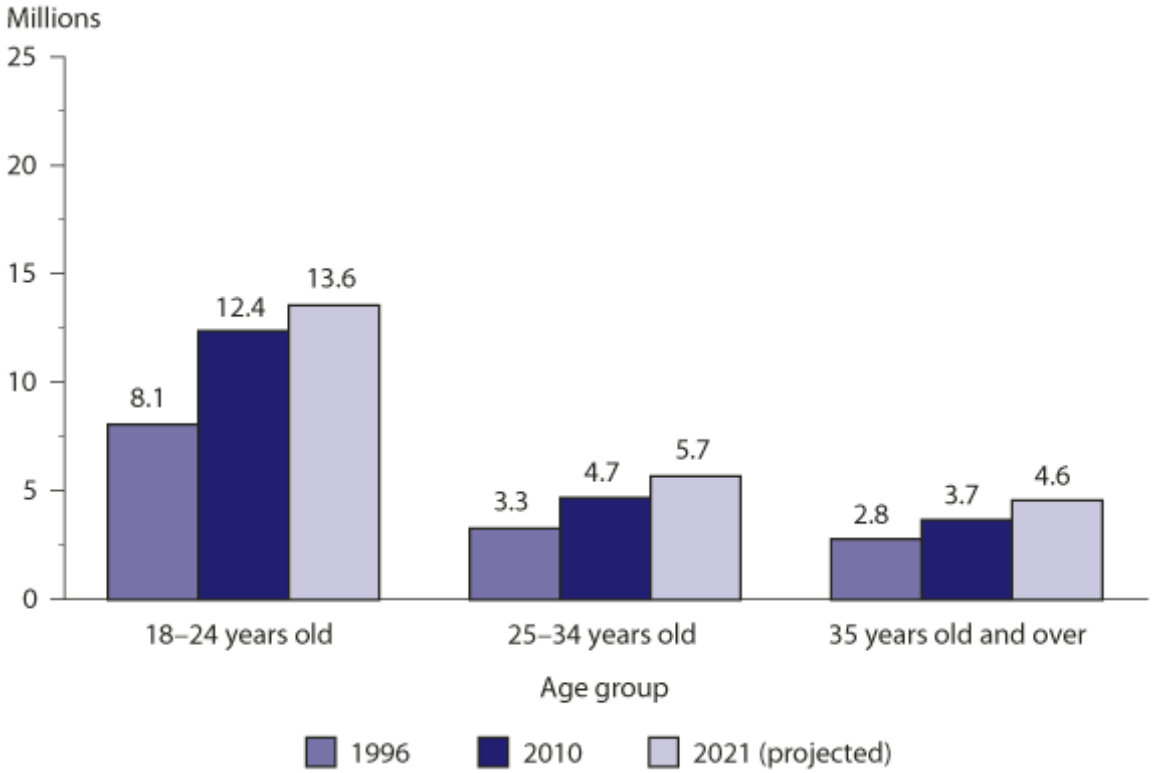
Generational learning styles continue to have an influence on learning institutions to communicate and educate in new ways. Currently, millennial learners bring a generational personality of optimism, structure, team orientation, and a confidence (Commerce, 2014). Instructors may be challenged on how to manage the amount of involvement and feedback millennial learners demand. In response, some educational institutions are adapting programs to a less formal learning environment combining structured learning with group based practical learning. Research suggests it is not necessary to abandon traditional instructional strategies but adapting to meet the millennial learner's perception of effective teaching (Coates, 2007). Millennial learners represent diverse backgrounds and needs which should be addressed in designing key aspects of their educational experience.

The multi-age classroom is today's reality. The collective influence of societal forces including social, economic, demographic, technological, and scientific results in educational changes across generations in the classroom (Coates, 2007). Most of the research on learning styles has focused on cognitive, behavioral or psychological styles.

The age diversity in today's classrooms demands that educators give attention to the generational issues that affect how students learn and how effectively they learn (Zemke & Zemke, 1981). The following table, prepared by the United States Department of Education, National Center for Education Statistics (2012) documents the increase in the number of adult students across generations and supports Zemke and Zemke's (1981) position on educators being aware of the generational issues that affect adult learning.

Table 4

Projected Numbers for Enrollment in All Post-Secondary Degree-Granting Institutions, by Age Group



Data by age are based on the distribution by age from the Census Bureau. SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Fall Enrollment Survey (IPEDS-EF:96); IPEDS Spring 2011, Enrollment component; Enrollment in Degree-Granting Institutions Model, 1980–2010; and U.S. Department of Commerce, Census Bureau, Current Population Reports, Social and Economic Characteristics of Students, various years. (This figure was prepared February 2012.)

Table 4 indicates enrollment in post-secondary degree-granting institutions of students who are 18 to 24-year-old increased 52% between 1996 and 2010; and is projected to increase by 10% by 2021. Enrollment in post-secondary degree-granting institutions of students who are 25 to 34 years old increased 45% between 1996 and 2010 and projected to increase 20% between 2010 and 2021. Enrollment in post-secondary degree-granting institutions of students who are 35 years old and over increased 32% between 1996 and 2010 and is projected to increase 25% between 2010 and 2021 (United States Department of Education, National Center for Education Statistics, 2012). This indicates enrollment growth in all age groups in post-secondary programs, however at a slower rate compared to the growth between 1996 and 2010.

A more generational focused andragogy model is relevant for millennial learners. Faculty should incorporate millennial leaner's prior experience into the curriculum. Research supports that millennial learners bring a unique experience to the classroom because they can provide diverse perspectives and facilitate more discussion (Conklin, 2012). According to Conklin (2012), experiential learning can bridge the gap between current personal experiences of the millennial leaner with the experiences they can expect in the real world. The experiential learning process for millennial learners can enhance confidence levels, help with problem-solving skills, and provides accountability for their own learning. Figure 5 outlines typecast instructional implications and strategies for engaging the adult learner (Westerman, 2007).

Table 5

Recommended Teaching Strategies for Adult Learners

Instructional Strategies for Baby Boomer Learners

- Contact with faculty
- Lecture
- Detailed handouts
- Learn best when their wealth of personal experience is recognized
- Note-taking can be tied to the subject matter
- Write a personal story related to content
- Want to learn in a caring environment
- Enjoy positive reinforcement for their efforts

Instructional Strategies for Generation X Learners

- Offer direct / immediate communication (emails and phones)
- Get to the point and provide clear instructions
- Avoid micromanaging them
- Make assignments real-world
- Provide opportunity for individual work
- Incorporate technology when possible
- Use games and case studies

Instructional Strategies for Millennial Learners

- Learner Centered
- Collaborative and Interactive learning
- Clear goals and Outcome based
- Incorporate Technology
- Connection to real-world problems that are relevant
- Individuality and flexibility, customize assignments
- Frequent feedback

Challenges of Post-Secondary Programs Adapting to Millennial Learners

Many existing colleges and universities have reexamined and revised their missions to respond to changing millennial learner demographics and enrollment patterns. This is in response to the difference between millennial learner and faculty expectations and the differences between what universities prioritize and what millennial learners and employers want (Smith, MacGregor, Matthews & Gabelnick, 2004). Partnerships between higher education and business must examine what is of value, at what cost, for what benefit, and the extent to which it is sustainable (Smith et al., 2004). Despite the perceived benefits of collaboration, many partnerships fail to obtain desired results, cannot be sustained, or cease to benefit the university and business.

Higher education institutions are facing challenges in their admissions approaches and financial aid policies. There is increasing pressure to raise tuition revenues and yet continue diversity among millennial learners who choose to enroll. Crady and Summer (2007) predict some institutions will become smaller, some will close, new millennial learner markets will develop and millennial learners will select more affordable colleges. Universities will continue to transform in terms of their governance, funding reductions, and relationship with the wider society as education moves from instructor-centered to a learner-centered model. Universities, irrespective of their research rankings, must align their resources with millennial learner and community expectations to remain financially viable and academically robust (Dubois, 1999).

The types of teaching methods used by faculty in the classroom setting are an emerging challenge within changing post-secondary programs. Per Howe and Strauss

(2007), how a millennial learner is taught will in turn affect how that individual will learn. Traditional lecture, which follows the pedagogical model of teacher-centered education, was found in the literature review to be the most utilized teaching method by faculty in university classrooms today. According to Hansman and Sissel, (2001) approximately 80% of college instruction occurs utilizing lecture. As a result, all three generational cohorts have been exposed to this teaching method. However, the disadvantage of lecture is its passive format does not allow for active interaction between professor and adult learner. To combat this problem, faculty needs to incorporate the use of active learning methods such as; questioning, discussion, case studies, writing activities and concept mapping into the lecture format (Hansman & Sissel, 2001).

The traditional strengths of the research university are being questioned in current studies. The question raised is how traditional research universities enhance the educational experience of millennial learners and meets generational learning preferences. According to Howe and Strauss, technology may be key in answering this question. Technology offers online interaction with an instructor, online class discussions, collaborative work among students in a similar discipline and distance learning classes. Learning can be both technology-based and face-to-face, often utilized with trade apprentices, corporate internships, and mentorships by nationally and internationally recognized experts. A challenge for research universities is to continue to enhance and extend these types of learning opportunities, create new ones, and ensure learning opportunities are available to all millennial learners; whether full or part-time or on campus or off campus (Howe and Strauss, 2007).

Studies have recommended experience and exposure to the real-world holds great relevance for college level millennial learners' futures and relevance of higher education. The challenge is future educational solutions need to be viable in ways that consider systemic elements of business, industry, and government. Adult learning theories support the idea of education that mirrors the real-world and increases the relevance in the classroom and across generations.

Summary

This literature review examines millennial learning preferences and generational differences in instructional methodologies. Theorists suggest that millennial learning goes beyond direct, expert-driven, instruction (Merriam & Biereme, 2014). The literature review considers millennial learner instructional preferences which provide effective learning environments to transfer to professional practice. Theories of adult learning, constructivism, transformative learning, and are proposed as teaching tools for developing critical management skills and preparation for professional careers (Merriam & Biereme, 2014).

Knowles' andragogy supports design and implementation of curricula tailored to the education of the millennial learner. The andragogic model of adult learning is the basis for much of millennial learning and provides a structure for examining and understanding the nature and complexity of millennial learning and development (Merriam & Biereme, 2014). Understanding millennial learners' instructional preferences is critical in recommending meaningful, effective and sound andragogic guidelines for millennial learning experiences and developing millennial learner-centered environments. According to Knowles et al., (2015) the prior experience of millennial learners becomes

the basis for learning and the primary motivational factors for millennial learners involved in subjects relevant to their life and problem-centered rather than content-centered. Experiential learning approaches appear to be effective in developing skills employers seek, such as communication skills, the ability to work in teams, and workplace literacy.

The social constructivism theory is credited to Dewey, who proposed adult learners could learn actively and construct new knowledge based on their prior knowledge (Spigner-Littles, 1999). Mezirow viewed transformational learning as involving fundamental transformation of the adult learner by challenging adult learner's previous ways of thinking and to reflect critically on previously held assumptions. The transformation of millennial learning may challenge colleges and universities to think beyond the traditional ways of delivering educational programs. Millennial learners pursuing postsecondary business programs are looking to apply academic and technical knowledge to solve real-world problems and work effectively with other people (Soares, 2013).

A future interactive learning idea is apprentice-based learning via computers, particularly with the use of virtual reality. As hardware and software become increasingly sophisticated, real-world problems applications could be developed for virtual settings. Another potential innovation could be interdisciplinary teams functioning as small learning groups. A team made up of a nursing student, a medical student, a social work student, and a pharmacy student, for example, could operate as a multi-disciplinary problem-based learning group. Higher education institutions considering millennial learning preferences, may acknowledge learning involves more than lecturing or

presenting information. This study examined the instructional preferences for the millennial learner in post-secondary business programs. Millennial learners are able to access education globally via online learning platforms. Universities are being challenged to prove their value to their local communities, curriculum and research imperatives need to demonstrate quality, and course delivery must be cost-effective and sustainable.

Chapter 3 - Methodology

A mixed method research design was used in this study which incorporated quantitative and qualitative approaches. The study investigated the generational experiences and preferences of millennial learners in three post-secondary business programs. The purpose of the study was to show the difference in instructional preferences within the millennial generation in post-secondary business programs. This chapter describes the research design used to explore the research question. In addition, this chapter describes the study measures, participants of the study, the study procedure, data collection procedures, and data analysis plan.

Research Design

The methodology of this study incorporated both qualitative and quantitative methods in order to offer various forms of data to address the research question. A survey instrument and one-on-one interview questions were utilized based on research literature studies of how specific generational needs of millennial learners' impact learning preferences. The survey instrument included participation from millennial learners enrolled in three post-secondary business programs.

The research study assessed if mean differences existed between independent millennial generational groups. SPSS software aided data analysis. The analysis process involved reviewing the dependent variables which included the instructional methodologies. Descriptive statistical analyses were necessary to produce the means and standard deviations of the variables. A two-tailed independent sample t-test helped determine the variability of instructional preferences within the sample population.

Hycner's phenomenological research design was used in the one-on-one interviews to investigate the lived generational experiences of millennial learners in post-secondary business programs. This design was used to gain an understanding of social and human problems and to study individuals' experiences with a particular phenomenon (Hycner, 1999). The qualitative research component was a voluntary interview with a millennial learner. The interview investigated the perceptions of the participants' educational experiences and the preferred instructional methods.

Qualitative research, in a mixed-methods research study, is often included when quantitative results alone are not adequate to explain the outcomes. The qualitative data also provided an opportunity to include the participants' voices, which enriched and helped explain the quantitative results (Creswell, 2014). This study used an explanatory strategy (Creswell, 2014), where the quantitative data was collected first and then expanded on with a set of qualitative data. A major advantage of this mixed methods approach was it demonstrated predictability of one variable on another and answered questions about why relationships exist (Teddlie & Tashakkori, 2009). A potential disadvantage was the time commitment because of the need to collect both qualitative and quantitative types of data (Creswell, 2014).

Measures

The study solicited answers to the research question through a survey instrument and one-on-one interviews which extracted meaning from statements and opinions from millennial learners' preferred instructional preferences.

The survey was adapted from the Ruffalo Noel Levitz Adult Learning Inventory Survey (Ruffalo Noel Levitz, 2017) and Stephen Brookfield's Critical Incident

Questionnaire (Brookfield, 2013) which sought millennial learner reflection and feedback. The Ruffalo Noel Levitz Adult Learning Inventory survey was assessed for test-retest consistency, the scale scores for these two survey administrations generated a reliability coefficient of 0.8. The overall coefficient alpha for importance was 0.79 and 0.83 for satisfaction (Ruffalo Noel Levitz, 2017). Brookfield's Critical Incident Questionnaire has not been studied regarding its validity or reliability (Brookfield, 2013).

The adaption of these surveys was based on the review of literature to include specific instructional preferences and a section for participants to choose their top five instructional preferences in the classroom. According to Knowles et al. (2015), adult learners are active learners who are involved in their own learning, have past experience and knowledge from which to draw from, and are motivated to succeed because new knowledge can be applied to their social or professional roles. Additional demographics including age, type of business program, gender, ethnicity, and year in program were added to the survey (Appendix A). The survey was administered electronically through a Qualtrics link.

The second component of the research was a voluntary interview which was solicited in the survey. The interview provided lived experiences of millennial learners and was coded for common generational and instructional themes. Participants shared their perceptions and their feelings of their chosen program and dialogue was encouraged with participants to share their experiences and their interpretations of those experiences. The interview investigated the perceptions of the participants' educational experiences and preferred instructional methods. Flexible, semi-structured interview questions were used to gather perceptions of six participants. Interview questions were broad, general

and open-ended to invite participants to share rich descriptions of their lived experiences (Appendix B). The questions were posed to each participant in an informal conversational style.

Coherency, Transparency and Creditability

The flexible nature of qualitative research design with the emphasis on interactive approaches (Maxwell, 2005) can contribute to problems of coherence in representing the research questions, methodology, procedures, findings, and discussion in the dissertation. A cohesive relationship between the survey findings and the phenomenon analyzed in the interview lead to different interpretations and conclusions of the phenomena.

Transparency in this research aimed to make the data collection, coding, and analysis clearly visible to all readers of this study. The end goal of this research was to make the research results as open, understandable, and clearly replicable as possible.

The purpose of the qualitative research was to describe the phenomena from the participant's point of view and to establish creditability from the perspective of the participant. The researcher analyzed the data through reflection to determine relevance and meaning to developing themes depicted in the experience. Credibility was also established through purposeful sampling to obtain rich experiences from participants who are adult learners.

Participants

Participants were a purposeful sample of millennial learners currently enrolled in one of three post-secondary business programs and currently attending a business course. Meeting the definition of millennial learners, the age range of millennial learners enrolled

in these programs were from eighteen to thirty-four years old. The study anticipated the gender would be evenly distributed between male and female participants.

The identification of this population was convenient and attainable, but also relative to the work of the researcher. The selection of the identified participants assisted in the discovery of millennial learners' preference in instructional methods and determined generational differences in these preferences. The three post-secondary business programs involved in this study were currently offering business programs in the upper mid-west.

The researcher respected the rights, needs, values, and desires of the participants. Phenomenological research solicits sensitive and deep answers to questions extracting meaning from statements and opinions. Participants were advised in writing of the voluntary nature of their participation and advised they could withdraw from the study at any time without penalty. They were also advised they could decline to answer any question. The research objectives were clearly stated in writing and articulated to the participants. A written consent form was obtained from each interview participant (Appendix B).

Procedure

The researcher submitted and received approval from the University of Minnesota Institutional Review Board for the protection of human subjects involved in this study.

The survey instrument was administered electronically to millennial learners through a Qualtrics link. The participants were made aware by completing the survey they were giving their consent. The survey included items specific to the millennial learner instructional experience and revealed what was important to millennial learners

and how satisfied the millennial learner was. The survey contained demographic data questions, type of instructional methods, individual characteristics of age, gender, educational background, and external factors and internal factors which had relevance for the millennial learners. Direct interviews were voluntary and solicited as part of the survey.

Recruitment was conducted by obtaining support from business instructors to solicit students in their class. There were three business classes recruited, one business class at each post-secondary program. Classroom presentation dates were established and a flyer was distributed by the researcher to the students with the survey link information. The classroom flyer described the study purpose, criteria for participation and contact information for questions (Appendix C). Participants in the electronic survey volunteered for an interview with the researcher and provided their email for the researcher to contact the participant.

The researcher collected the survey data after the survey response timeframe was over. This timeframe was approximately three weeks after the survey was initiated. The researcher then followed up with those individuals who volunteered to participate in the interview. The researcher collected all survey and interview data before the semester ended. The instrument included scores for preference on a seven-point Likert scale from 1; not important to 7; extremely important.

Qualitative data was collected following the conclusion of the electronic survey with research participants who volunteered for an interview. The interview was one hour in length conducted by the researcher and participant discussing their lived experiences as a millennial learner. The interviews were digitally recorded and transcribed. The

researcher looked for the participant's level of intensity of preferred educational experiences and articulation of these experiences through vivid personal accounts. The researcher found the interview was valuable for gaining greater access into the participant's educational experience as it was lived and influenced by a variety of characters, representations, sequences, intentional relationships or connections, and meanings.

Data Collection Plan.

Quantitative data was used to measure millennial learner preferences of instructional methods. The data was collected from a survey which ranked instructional preference statements. There were two open-ended survey questions where participants were asked to specify answers in written form. The survey asked the participant to specify the primary and the secondary reason for choosing their business program.

The researcher followed up with only those individuals who completed the survey and indicated an interest in a direct interview. The phenomenological interview results were analyzed where clusters of themes were formed by grouping units of meaning together from each interview. The identified units of meaning are also referred to as relevant units of meaning and lead to overall themes of the interview data (Hycner, 1999). A composite summary of the interview data was developed, which reflected the context of the emerged themes.

Research findings were written to give readers enough details of the experiences and meanings of the participants. Participants' privacy was protected because interview data was encrypted and stored on a computer meeting university security requirements. Qualtrics data from surveys was coded and a separate list of codes will be kept on the

researcher's encrypted computer. After collection of data from interviews, the interviews were coded to match a participant number and the names of subjects removed after coding. Data collected in this research was not considered harmful to the participant. The participant's right to confidentiality was respected and the participant's consent to participant was obtained and recorded.

Delimitations

The researcher collected data in three post-secondary business classrooms. The findings from this study cannot be generalized to other students and teachers in other formal education contexts. The reader determines the applicability of findings to their own context. The study was not designed with the goal of finding definitive answers to the research question.

A second delimitation was the study timeframe. A longitudinal study design could have provided more in-depth data regarding instructional preferences over time.

A third delimitation was the survey design was developed by the researcher and a qualified expert in the area. The survey was not based on a currently established survey because of the lack of millennial learner generational preference surveys.

Data Analysis

Descriptive statistics were used to illustrate the population for this study. To address the research question, three primary data analyses were used: mean and standard deviation, Pearson correlation coefficients, and a two-tailed independent sample t-test. Descriptive statistics assisted with describing a population with few indicators (Fraenkel, Wallen, & Hyun, 2015). In educational research, descriptive statistics summarize a large amount of data into discrete content. This was essential to the management and

interpretation of data collected about the sample population (Fraenkel et al., 2015). In this research, descriptive statistics assisted with identifying, describing, and quantifying the population of millennial learners.

A Pearson correlation coefficient assessed the relationship between millennial learner instructional preferences and how millennial learners rated their preferences on a seven-point Likert scale. Correlation coefficients were computed among the 23 instructional preferences. There were two assumptions underlying the significant test associated with a Pearson correlation coefficient between two variables. First, the variables are normally distributed resulting in a linear relationship. Second, the results represent a random sample from the participant population and the scores on variables for one instructional preference are independent of the scores for other instructional preferences.

A two-tailed independent sample t-test was used to determine whether a difference between the means of two independent groups was significant (Fraenkel et al., 2015). In the case of this research, the means of each self-reported preference variable were examined for significant generational differences.

Survey data was coded into numeric variables for ease of data entry. Descriptive statistics consisting of means, standard deviations, and frequency percentages were tabulated on demographic characteristics for all responding participants. Open-ended questions included on the survey asked participants to describe program choice in more detail. An open coding process was used to categorize these comments into themes and represented in a word cloud.

All data was analyzed using the Statistical Package for the Social Sciences (SPSS), a software program to analyze multiple variables and the analysis software of the Qualtrics survey program.

Summary

Chapter three defined the methodology used in this study. The chapter described the research design using a mixed-methods research design. Research data included the description of the sample population, how participants were recruited, and the measures used to address the research question. Data collection procedures and data analysis techniques were described. The Institutional Review Board approved the survey instrument and interview protocol described in this chapter.

The mixed method approach collected data appropriate for this study. The statistical analysis allowed objective assessment of significant generational differences in instructional preferences. The generational differences considered in this study were the millennial generation in post-secondary business programs. The study determined if there was a correlation between age and type of instructional preference. The study examined how generational differences can explain classroom engagement and program choice. Chapter 4 includes a description of the data assessed from the participant surveys and the interview data.

Chapter 4 – Findings

Chapter Four is a discussion of the statistical test analysis and qualitative themes developed from the research data. The study examined millennial learner's generational characteristics, instructional preferences of post-secondary business programs, and choice of post-secondary business programs. The mixed methodology used in this study provided a mechanism to examine adult learning theory, transformative, and constructivist learning to millennial generational differences in instructional preferences.

The findings were analyzed and organized around the following research question: What are the differences in the instructional preferences of millennial learners in post-secondary business programs?

Statistical Tests

The statistical program SPSS, Version 23.0 and Qualtrics software 2016 were used to analyze the data in this research study. The specific statistical tests used included the following: descriptive analysis and frequencies; a two-tailed independent sample t-test; and Pearson correlation coefficients. This study also used phenomenological methodology to form descriptive themes. The interview data was analyzed using the Hycner's phenomenological research methodology.

Survey Instrument

The Learning Preference Survey (Appendix A) was made available to 120 post-secondary business students. The response rate was 31.67% as 38 of the 120 students completed the survey. In the online survey research by Watt et al. (2002), the overall response rate for online surveys was 32.6% (Watt, Simpson, McKillop & Nunn, 2002). The 31.67% response rate of this survey was acceptable compared to benchmark research

of online survey response rates (Watt et al., 2002). Typical online survey response rates are 20-30% for students who have participated in Ruffalo Noel Levitz Satisfaction Priorities Surveys (Ruffalo Noel Levitz, 2017). This study did not have the opportunity to send participants reminder emails due to the anonymity of student contact information.

The survey was administered to students enrolled in three post-secondary business programs in the upper mid-west. The schools were selected based on geographic proximity. There was a higher response from participants who had reported they were enrolled in a two-year associate degree (50.00%), than the respondents who reported being enrolled in the graduate degree program (36.84%) and the participants enrolled in the bachelor degree program (10.53%). One participant checked the other category (2.63%) perhaps due to being undecided on a degree program.

The survey asked participants to volunteer for a one-on-one interview with the researcher. Of the 38 survey respondents, six participated in a one-on-one interview. The interview focused on the perceptions of the participants' educational experiences, work experiences, and preferred instructional methods.

Survey Participant Demographics

The following individual participant data was collected from the survey; gender, age, ethnicity, business program, employment, and whether participants were first generation college students.

Table 6

Individual Participant Characteristics

Participant	Gender	Age	Ethnicity	Business Program	Employment	First Generation	Interview
1	Male	21-34	White	Graduate	Not-Employed	No	
2	Female	21.34	White	Graduate	Full-Time	No	
3	Male	21-34	White	Graduate	Full-Time	No	
4	Female	21-34	White	Graduate	Not-Employed	Yes	X
5	Female	21-34	White	Graduate	Part-Time	No	
6	Male	21-34	Asian	Graduate	Part-Time	Yes	
7	Female	21-34	Asian	Graduate	Not-Employed	No	
8	Male	21-34	White	Graduate	Part-Time	No	
9	Male	21-34	No Response	Graduate	Part-Time	No	
10	Male	21-34	African-Am	Graduate	Full-Time	No	
11	Male	21-34	Asian	Graduate	Part-Time	No	X
12	Male	21-34	White	Graduate	Full-Time	No	
13	Male	21-34	White	Graduate	Not-Employed	No	
14	Male	21-34	Asian	Graduate	Not-Employed	No	
15	Female	20 & Under	White	Bachelor	Part-Time	No	X
16	Male	21-34	White	Bachelor	Full-Time	No	X
17	Female	21-34	White	Bachelor	Full-Time	Yes	X
18	Male	21-34	White	Bachelor	Part-Time	No	
19	Female	35-50	African-Am	Associate	Not-Employed	No	
20	Male	21-34	White	Associate	Part-Time	No	
21	Male	20 & Under	White	Associate	Part-Time	Yes	
22	Female	20 & Under	White	Associate	Part-Time	No	
23	Female	20 & Under	White	Associate	Not-Employed	Yes	
24	Male	20 & Under	White	Associate	Part-Time	Yes	
25	Male	21-34	White	Associate	Part-Time	Yes	
26	Female	21-34	White	Associate	Not-Employed	Yes	X
27	Male	21-34	White	Associate	Not-Employed	Yes	
28	Female	21-34	White	Associate	Full-Time	No Response	
29	Male	21-34	White	Associate	Full-Time	Yes	
30	Female	20 & Under	White	Associate	Part-Time	No	
31	Male	21-34	White	Associate	Not-Employed	No	
32	Female	21-34	White	Associate	Part-Time	No	
33	Female	21-34	White	Associate	Part-Time	No	
34	Male	21-34	White	Associate	Part-Time	No	
35	Male	20 & Under	White	Associate	Part-Time	No	
36	Male	21-34	White	Associate	Full-Time	No	
37	Female	21-34	White	Associate	Full-Time	Yes	
38	Male	20 & Under	Hispanic	Other	Part-Time	No	

Note. The survey was adapted from the Noel Levitz Adult Student Priorities Survey (Noel Levitz, 2015) and Stephen Brookfield's Critical Incident Questionnaire (Brookfield, Powerful techniques for teaching adults, 2013) where adult learner reflection and feedback were sought. The X indicates the participants who volunteered for a one on one interview.

Participant Demographic Results

Participant Age. The percentage of the survey participants by age were; 78.94% (n=30) in the 21-34 range, 18.42% (n=7) in the 20 and under range, and 2.63% (n=1) in the 35 to 37 range. Millennials, by definition, are those born between 1981 and 2000. Participants in this study fit the age range. However, the participants represent neurodevelopmental differences across that age span (Johnson, Blum, & Giedd, 2010). An age group spanning this age range will not be developmentally homogenous, regarding brain maturation and life experiences. However, millennial learners are a significant diverse group entering post-secondary business programs and need to be accommodated regardless of their maturity.

Participant Gender. The survey asked participants to indicate their gender as either female. or male. The survey participants indicated 60.53% (n=23) were male and 39.47% (n=15) were female. The assumption made in this study was participants' gender would be evenly represented. The overall results indicated gender based instructional preferences were negligible. Future survey design should include additional gender categories which were not considered in this study.

Participant Employment. The survey asked participants their current employment status; full-time, part-time or not employed. The survey participants; 47.37% (n=18) were employed part-time, 26.32% (n=10) were employed full-time, and 26.32% (n=10) were not employed. The survey examined how the participants spent their time and if employment varied by age group. Employment status could be a factor in participants' instructional preferences due to internships, experiential learning, and group projects.

Participant Ethnicity. The ethnicity make-up of the participants was 78.95% (n=30) Caucasian, 10.53% (n=4) Asian or Pacific Islander, 5.26% (n=2) African-American, 2.63% (n=1) Hispanic, and 2.63% (n=1) preferred not to respond. The ethnicity category enabled the examination of instructional preferences based on ethnicity, but the sample size and diversity did not support further evaluation of this variable. Business major choice across different ethnic groups enrolled in post-secondary programs may help in understanding economic disparities between groups. The choice of a college major has some effect on economic outcomes for students. There was no data available on the profile on the business student in a post-secondary business program.

First Generation College Participants. First generation college participants may have different needs, expectations, and school experiences which impact instructional preferences. The survey participants consisted of; 68.42% (n=26) not first generation college students, 28.95% (n=11) first generation college students, and 2.63% (n=1) preferred not to respond. This question examined these populations for unanticipated instructional preferences. Instructional preferences which could be examined in future research would open communication with professor, mentorship in the classroom, study groups, or student peer network.

Table 7 summarizes the demographics results of the survey participants.

Table 7

Survey Participants Characteristics

Variable		**n**	**%**
Gender			
	Male	23	60.53
	Female	15	39.47
Age			
	20 and Under	8	21.05
	21 to 34	29	76.32
	35 to 50	1	2.63
	51 and Over	0	0
Ethnicity			
	African-American	2	5.26
	American Indian or Alaskan Native	0	0
	Asian or Pacific Islander	4	10.53
	Caucasian/White	30	78.95
	Hispanic	1	2.63
	Other	0	0
	Prefer not to respond	1	2.63
Current Business Program			
	Other	1	2.63
	Graduate Degree	14	36.84
	Bachelor's Degree	4	10.52
	Associate Degree	19	50.00
Employment			
	Full-time	10	26.32
	Part-time	18	47.37
	Not Employed	10	26.32
First Generation College			
	Yes	11	28.95
	No	26	68.42
	Prefer not to respond	1	2.63

Note. N=38 participants responded.

[a] Values rounded to the nearest hundredth.

Quantitative Measures

The *Learning Preference Survey* was introduced to a business class in three post-secondary business programs. The students voluntarily took the electronic survey through a Qualtrics online link. The survey began with two open ended questions which asked the participants to specify in writing the primary and secondary reason for choosing their business program. The top four primary responses were; career advancement, improve career, advancement at my current job, and assist in achieving career goal. The secondary responses for choosing their business program were; affordability, leadership, career advancement, future business opportunities, job security, greater range of options after graduation and a good starting salary. The majority of participant input to these questions centered on choosing a program that would enhance their career, provide career opportunities, provide success in their field, and recognition as a competent employee. Figure 3 is a word cloud depicting the most commonly used words in the participants' responses. The size and boldness of the words stipulate the most commonly used words in the responses.

Figure 3

Primary Reason for Choosing Business Program Word Cloud

Likert Rating Instructional Preferences

The *Learning Preference Survey* asked participants to rank their preferences for instructional methods on a seven-point Likert scale. The survey was adapted from the Ruffalo Noel Levitz Adult Learner Survey (Ruffalo Noel Levitz, 2017) and Stephen Brookfield's Critical Incident Questionnaire (Brookfield, 2013). Descriptive statistics were utilized to analyze responses to each survey question. Independent sample t-tests were utilized to analyze differences in the relationship between the younger age millennial learners' instructional preferences and the older age millennial learners' instructional preferences.

The *Learning Preference Survey* included 23 instructional methods which the participants ranked their preferences of instructional methods using the Likert seven-point scale. These instructional methods included; *(1) listening to instructor lecture, (2) classroom discussion, (3)work in peer groups, (4) case studies applicable to career goals, (5) assignments relevant to career goals, (6) visual aids used for new concepts, (7) work individually, (8) participate in class discussion, (9) web-based course, (10) instructor share relevant experiences, (11) collaboration with peers, (12) hybrid classroom learning, (13) assignments requiring technology, (14) supplemental hand-outs with lecture, (15) self-directed learning, (16) instructor provides structure, (17) academic relationship with instructor, (18) all course work counts toward grade, (20) material consistent with program objectives, (21) participate in group assignments, (21) reflection and critical thinking, (22) assignments use problem solving skills, and (23) problem solving real business problems.*

Instructional Preferences were rated on a Likert seven-point scale, ranging from; (1) not important at all, (2) not very important, (3) somewhat unimportant, (4) neutral, (5) somewhat important, (6) very important, and (7) extremely important.

Descriptive statistics are outlined in Table 8.

Table 8

Importance of Instructional Preferences in a Post-Secondary Program as a Millennial Learner

Program Features	Total (n=38) M	20 & Under (n=7) M	21 to 34 (n=30) M	t-value	p-value
1. Listening to Instructor Lecture	5.10	5.00	5.17	0.84	0.97
2. Classroom Discussion of Reading Assignment	4.95	5.14	4.93	0.63	0.97
3. Work in Peer Groups	5.23	5.00	5.30	0.66	0.64
4. Case Studies Applicable to Career Goals	5.49	5.57	5.47	0.86	0.99
5. Assignments Relevant to Career Goals	5.74	5.57	5.77	0.70	1.00
6. Visual Aids used for New Concepts	6.05	6.43	5.93	0.10	1.00
7. Work Individually	5.03	4.86	5.03	0.85	0.45
8. Participate in Class Discussion	5.41	5.00	5.53	0.24	0.90
9. Web-Based Course	3.64	4.57	3.57	0.26	0.46
10. Instructor Shares Relevant Experiences	5.54	6.29	5.43	0.03	0.99
11. Collaboration with Peers	5.54	5.71	5.50	0.61	0.99
12. Hybrid Classroom Learning	4.24	4.29	4.30	0.99	0.00
13. Assignments Requiring Technology	4.92	5.29	4.80	0.47	0.99
14. Supplemental Hand-Outs with Lecture	4.86	5.83	4.67	0.01	0.88
15. Self-Directed Learning	5.00	4.57	5.07	0.53	0.93
16. Instructor Provides Structure	5.61	6.14	5.47	0.13	1.00
17. Academic Relationship with Instructor	5.29	5.29	5.27	0.97	1.00
18. All Course Work Counts Toward Grade	4.50	5.00	4.30	0.33	0.86
19. Material Consistent with Program Objectives	5.82	6.00	5.77	0.61	1.00
20. Participate in Group Assignments	5.18	5.57	5.10	0.39	1.00
21. Reflection & Critical Thinking	5.68	5.86	5.60	0.58	0.95
22. Assignments use Problem Solving Skills	5.95	5.71	5.97	0.63	0.98
23. Problem Solving Real Business Problems	6.18	5.71	6.27	0.30	0.98

Note: On a 7-point sale, 1 being Not Important at all, 2. Not very important, 3. Somewhat unimportant, 4. Neutral, 5 Somewhat important, 6. Very Important, and 7. Extremely Important
[a]P-value < 0.05

Instructional preferences of the two age groups of millennial learners in business degree programs were tested for an association with the 23 dependent instructional preference variables. This analysis was designed to determine if the dependent variables of instructional methodologies impacted the different age group preferences. Consideration was also given to the relationships of dependent variables to each other.

The independent sample t-test findings and p-values are indicated in Table 8. The t-test analysis indicated there was evidence of significant differences in preferences between the two age groups' means. The most significant differences in t-values for instructional preferences between the two age groups are; *(1) instructor provides structure, (2) instructor shares relevant experiences, (3) visual aids for new concepts, (4) supplemental handouts with lecture, (5) participate in class discussion, and (6) problem solving real business problems.* The p-values for the instructional preferences are greater than 0.05 which indicated generational differences in instructional preferences are not supported.

The millennial cohort for the purposes of this study was 18 to 34 years. The majority of survey respondents were in the millennial age group (n=37). Two age groups were analyzed; therefore, an ANOVA was not used. The means were compared for the 20 and under group and the 21 to 34 age group. A series of t-tests were computed to determine the difference in instructional preferences between the 20 and under millennial group and the 21-34 millennial group. The results of the analysis indicated that there were differences between the two millennial groups. Table 9 describes the results of the t-test analysis for the instructional preference differences listed for the 20 and younger age group versus the 21-34 group.

Table 9

Instructional Preferences of the 20-year-old and Younger Group Different from the 21-34-year-old Group

Instructional Method	Mean 20 & Under	Mean 21 to 34	t-Value
Visual Aids used for New Concepts	6.43	5.93	0.10
Instructor Shares Relevant Experiences	6.29	5.43	0.03
Supplemental Handouts with Lecture	5.83	4.67	0.13
Instructor Provides Structure	6.14	5.47	0.01
Web Based Course	4.57	3.57	0.26
All Coursework counts toward Grade	5.00	4.30	0.33
Participate in Group Assignments	5.57	5.10	0.39

Note. Values rounded to the nearest hundredth.

The most significant differences in instructional preference means between the two age groups were; *instructor provides structure, instructor shares relevant experiences, visual aids for new concepts, and supplemental handouts with lecture.*

Instructor Provides Structure. There was a significant difference in the preference of *instructor provides structure* for the 20 and under age group (M=6.14, SD=0.83) compared to the 21 to 34 age group (M=5.47, SD=1.36); t (18)=0.01, p=1.00. These results suggest the 20 and under age group preference for *instructor provides structure* was significantly different than the 21 to 34 age group.

Instructor Shares Relevant Experiences. There was a significant difference in the preference of *instructor shares relevant experiences* for the 20 and under age group (M=6.29, SD=0.70) compared to the 21 to 34 age group (M=5.43, SD=1.02); t(18)=0.03, p=0.99. These results suggest the 20 and under age group preference for *instructor shares relevant experiences* was significantly different than 21 to 34 age group.

Visual Aids Used for New Concepts. There was a significant difference in the preference of *visual aids used for new concepts* for the 20 and under age group (M=6.43,

SD=0.49) compared to the 21 to 34 age group (M=5.93, SD=1.06); t(18)=0.10, p=1.00. These results suggest the 20 and under age group preference for *visual aids used for new concepts* was significantly different than the 21 to 34 age group.

Supplemental Handouts with Lecture. There was a significant difference in the preference of *supplemental handouts with lecture* for the 20 and under age group (M=5.83, SD=0.69) compared to 21 to 34 age group (M=4.67, SD=1.07); t(18)=0.13, p=0.88. These results suggest the 20 and under age group preference for *supplemental handouts with lecture* was significantly different than the 21 to 34 age group.

The following are the instructional preferences of the 21 to 34 age group which are statistically different from the 20 and under age group. Table 10 depicts the preferences of the 21 to 34 age group which are significantly different than the 20 and younger age group.

Table 10

Instructional Preferences of the 21 to 34 Age Group Different from the 20-year-old and Younger Age Group

Instructional Method	Mean 20 & Under	Mean 21 to 34	t-Value
Participate in Class Discussion	5.00	5.53	0.24
Problem Solving Real Business Problems	5.71	6.27	0.30

Note. Rounded to the nearest hundredth

Participate in Class Discussion. There was a significant difference in the preference of *participate in class discussion* for the 21 to 34 age group (M=5.53, SD=1.06) compared to the 20 and under age group (M=5.00, SD=0.93); t(18)=0.24,

p=0.90. These results suggest the 21 to 34 age group preference for *participate in class discussion* was significantly different than the 20 and under age group.

Problem Solving Real Business Problems. There was a significant difference in the preference of *problem solving real business problems* for the 21 to 34 age group (M=6.27, SD=0.81) compared to the 20 and under age group (M=5.71, SD=1.16); t(18)=0.30, p=0.98. These results suggest the 21 to 34 age group preference for *problem solving real business problems* was significantly different than the 20 and under age group.

Table 11 depicts the similar instructional preferences between the two age groups, therefore showing no significant difference in age group preferences.

Table 11

Similar Instructional Preferences of the 20-year-old and Younger Group and the 21-34-year-old Group

Instructional Method	Mean 20 & Under	Mean 21 to 34	t-Value
Listening to Instructor Lecture	5.00	5.17	0.84
Classroom Discussion of Assign	5.14	4.93	0.63
Work in Peer Groups	5.00	5.30	0.66
Case Studies Applicable to Career Goals	5.57	5.47	0.86
Assignments Relevant to Career Goals	5.57	5.77	0.70
Work Individually	4.86	5.03	0.85
Collaboration with Peers	5.71	5.50	0.61
Hybrid Classroom Learning	4.29	4.30	0.99
Assignments Requiring Technology	5.29	4.80	0.47
Self-Directed Learning	4.57	5.07	0.53
Academic Relationship with Instructor	5.29	5.27	0.97
Material Consistent with Program Objective	6.00	5.77	0.61
Reflection & Critical Thinking	5.86	5.60	0.58
Assignments use Problem Solving Skills	5.71	5.97	0.63

Note. Rounded to the nearest hundredth

The four most significant similarities in instructional preferences between the two age groups were; *hybrid classroom learning, academic relationship with instructor, case studies applicable to career goals, and listening to instructor lecture*.

Hybrid Classroom Learning. There was no significant difference in the preference of *hybrid classroom learning* between the 21 to 34 age group (M=4.30, SD=1.73) compared to 20 and under age group (M=4.29, SD=1.83); t(18)=0.99, p=0.00. These results suggest the 21 to 34 age group preference for *hybrid classroom learning* was not significantly different than the 20 and under age group.

Academic Relationship with Instructor. There was no significant difference in the preference of *academic relationship with instructor* between the 21 to 34 age group (M=5.27, SD=1.26) compared to 20 and under age group (M=5.29, SD=1.03); t(18)=0.97, p=1.00. These results suggest the 21 to 34 age group preference for *academic relationship with instructor* was not significantly different than the 20 and under age group.

Case Studies Applicable to Career Goals. There was no significant difference in the preference of *case studies applicable to career goals* between the 21 to 34 age group (M=5.47, SD=1.28) compared to 20 and under age group (M=5.57, SD=1.29); t(18)=0.86, p=0.99. These results suggest the 21 to 34 age group preference for *case studies applicable to career goals* was not significantly different than the 20 and under age group.

Listening to the Instructor Lecture. There was no significant difference in the preference of *listening to the instructor lecture* between the 21 to 34 age group (M=5.17, SD=1.37) compared to the 20 and under age group (M=5.00, SD=1.85); t(18)=0.84,

p=0.97. These results suggest the 21 to 34 age group preference for *listening to the instructor lecture* was not significantly different than the 20 and under age group.

Participant Ranking of Instructional Methods

The *Learning Preference Survey* asked participants to rank preferred instructional methods from a list of 14 instructional methods. The ranking was one through five for the most preferred instructional methods. Participants were given the following instructional methods to choose from; *(1) lecture, (2) case studies, (3) relevant business stories, (4) technology based assignments, (5) handouts, (6) audio aids, (7) visual aids, (8) group activities, (9) instructional games, (10) business simulations, (11) group discussions, (12) team assignments, (13) business problem solving, and (14) internship.*

Table 12

Instructional Ranking of Fourteen Instructional Methods by Age Group

Instructional Ranking by 20 and under age group		Instructional Ranking by 21-34 age group	
Mean Value $\geq$ 3.00	M	Mean Value $\geq$ 3.00	M
1. Internship	3.33	1. Case Studies	3.67
2. Lecture	3.00	2. Handouts	3.60
		3. Team Assignments	3.57
		4. Instructional Games	3.50
		5. Group Activities	3.29
		6. Technology Based Assignments	3.17
		7. Relevant Business Stories	3.00
		8. Lecture	3.00

Note. Rounded to the nearest hundredth.
[a] Ranking scale was one through five

The two instructional preferences of the under 20 age group were *lecture* and *internship* with mean values $\geq$ 3.00. *Internship* was the highest preference (M=3.33,

SD=1.70) and *lecture* was the second preferred instructional preference (M=3.00, SD=1.63) of the under 20 age group (n=7).

The eight instructional preferences of the 21 to 34 age group chosen most frequently by participants with mean values $\geq$ 3.00 were; *case studies, handouts, team assignments, instructional games, group activities, technology based assignments, relevant business stories, and lecture. Case studies* were the highest preference (M=3.67, SD=1.03), *handouts* were the second preference (M=3.60, SD=1.02), *team assignments* were the third preference (M=3.57, SD=1.29), *instructional games* were the fourth preference (M=3.50, SD=0.87), *group activities* were the fifth preference (M=3.29, SD=1.22), *technology based assignments* were the sixth preference (M=3.17, SD=0.90), *relevant business stories* were the seventh preference (M=3.00, SD=1.36), and *lecture* was the eighth preference (3.00, SD=1.75).

The most significant difference between the two age groups based on a mean difference of 1.50 or greater were; *case studies, technology based assignments, audio aids, instructional, games, and group activities*. The 21 to 34 age group significantly preferred *case studies* with a mean difference of 2.67 when compared to the 20 and under age group. Other significant learning preferences for the 21 to 34 age group were *technology based assignments* with a mean difference of 2.17, *audio aids* with a mean difference of 2.00, *group activities* with a mean difference of 1.62, *instructional games* with a mean difference of 1.50, and *team assignments* with a mean difference of 2.57. The 20 and under group showed no significant positive mean differentiation for any of the 14 teaching methods listed.

Table 13

Participants Ranked Effective Teaching Method/ Ranking was One through Five for the Most Preferred Instructional Methods.

	Total (N=37)		20 & Under (N=7)		21 to 34 (n=30)	
Preferred Teaching Methods	M	SD	M	SD	M	SD
1. Lecture	2.88	1.74	3.00	1.63	3.00	1.75
2. Case Studies	3.46	1.22	1.00	0.00	3.67	1.03
3. Relevant Business Stories	2.78	1.44	2.25	1.64	3.00	1.36
4. Technology Based Assignments	2.63	1.22	1.00	0.00	3.17	0.90
5. Handouts	3.29	1.28	2.50	1.50	3.60	1.02
6. Audio Aids	2.00	0.00	0.00	0.00	2.00	0.00
7. Visual Aids	2.44	1.46	2.50	1.50	2.43	1.45
8. Group Activities	3.00	1.33	1.67	0.94	3.29	1.22
9. Instructional Games	3.00	1.15	2.00	1.00	3.50	0.87
10. Business Simulations	2.79	1.15	1.50	0.50	2.94	1.14
11. Group Discussions	2.65	1.49	2.00	1.41	2.69	1.49
12. Team Assignments	3.00	1.56	1.00	0.00	3.57	1.29
13. Business Problem Solving	2.44	1.27	2.25	1.30	2.35	1.15
14. Internship	2.61	1.77	3.33	1.70	2.47	1.75

Note. Rounded to the nearest hundredth.

Correlation Analysis

A Pearson correlation coefficient was computed to measure the relationship between millennial learner instructional preferences based on the 7-point Likert scale. Correlation coefficients were computed among the 23 instructional preference ratings. Cohen's standard was used to evaluate the correlation coefficient. A correlation of 0.10 to 0.29 represented a weak association between the two variables, 0.30 to 0.49 represented a moderate association, and 0.50 or larger represented a strong association (Statistics Solutions, 2013).

Selected relationships of the correlation analysis are summarized in Table 14 and Table 15. Table 14 shows seven instructional preference coefficients correlations statistically significant at greater than or equal to .70. Table 15 shows six instructional preference coefficients correlations statistically significant at greater than or equal to .60.

The results suggest there was a very strong correlation with instructional methods analyzed below involving classroom interaction.

Table 14

Correlations (r) Between Millennial Learner Instructional Preferences ≥ .70

	Lecture	Peer Group	Class Discus	Instructor Exp	Collaboration	Structure	Group Assign
1.Lecture	-----	.957	.964	.910	.987	.900	.909
2.Work in Peer Group		-----	.912	.914	.958	.847	.921
3.Classroom Discussion			-----	.873	.992	.913	.907
4.Instructor Shared Relevant Experiences				-----	.899	.809	.947
5.Collaboration with Peers					-----	.931	.906
6.Instructor Provides Structure						-----	.724
7.Participant in Group Assignment							-----

Note. Correlation is significant at the 0.01 (2-tailed)

Table 15

Correlations (r) Between Millennial Learner Instructional Preferences ≥ .60

	Lecture	Case Study	Assign Relev	Assign Tech	Self Directed	Reflection	Problem Solving
1.Lecture	-----	.824	.821	.838	.829	.866	.883
2.Case Study		-----	.927	.595	.671	.981	.871
3.Assign Relevant to Career			-----	.531	.619	.953	.978
4.Assignment Requiring Technology				-----	.959	.660	.626
5.Self Directed Learning					-----	.743	.698
6.Reflection & Critical Thinking						----	.929
7.Problem Solving Real Business Problems							-----

Note. Correlation is significant at the 0.01 (2-tailed)

The relationship of web based learning and hybrid learning with the other selected instructional measures tended to be a moderate to weak associations as shown in Table 16.

Table 16

Correlations (r) Between Millennial Learner Instructional Preferences Considering Web Based and Hybrid

	Lecture	Discussion	Web Based	Hybrid	Collaboration	Problem Solving
1.Lecture	-----	.810	.168	.326	.987	.614
2.Classroom Discussion	-----		.003	.404	.787	.360
3.Web Based Course			-----	.606	.184	.574
4.Hybrid Classroom Learning				-----	.374	.006
5.Collaboration with Peers					-----	.619
6.Problem Solving Real Business Problem						-----

Note. Correlation is significant at the 0.01 (2-tailed)

The range of the correlation coefficients between *web based course* and *listening to instructor lecture* methods was weak (r=.168). *Hybrid classroom learning* had a moderate relationship (r=.326) between classroom lecture. The correlation coefficient between *hybrid classroom learning* and *problem solving real business problem* was weak (r=.006). A strong correlation exists between; *collaboration with peers* and *classroom discussion* (r=.787) and *listening to instructor lecture* and *collaboration with peers* (r=.987). This appears to support the millennial learner's preference for classroom instructional methods which include; *listening to instructor lecture, participate in class discussion, academic relationship with professor, participate in group assignments, classroom discussion, visual aids used for new concepts, collaboration with peers,* and *problem solving real business problems.*

Summary of Quantitative Research

In summary, the data analysis of the *Learning Preference Survey* found millennial learners from the 20 and under age group and students from the 21 to 34 age groups preferred similar instructional methods with only two significant differences. The instructional preferences of the 21 to 34 age group of adult learners were significantly

greater than the 20 and under age group in the following categories; *participation in class discussion and problem solving real business problems.*

The instructional preferences between the two age groups which showed no significant differences were; *listening to the instructor lecture, participate in classroom discussion, work in peer groups, case studies applicable to career goals, assignments relevant to career goals, work individually, collaboration with peers, hybrid classroom learning, assignments requiring technology, self-directed learning, academic relationship with instructor, materials consistent with program objectives, reflection and critical thinking, web based course, and assignments use problem solving skills.* The 20 and under group showed a slight preference for; *visual aids for new concepts, instructor sharing relevant experiences, supplemental handout with lectures and instructor provides class structure* based on Likert scale data.

Qualitative Measures

The phenomenological investigation of this study further explored the millennial learner's instructional preferences, what they are experiencing in classroom instruction, how they identify with their generational identity, and factors in their choice of a business program. Methods of phenomenological research guided the data collection and analysis were based on the Hycner's phenomenological methodology. The results are a culmination of the participants' voices and shared perspective into their lived experiences. The findings were collected through interviewing a total sample of six participants who volunteered as part of the electronic survey. Table 17 depicts the participant demographics and frequency data.

Table 17

Interview Participant Demographics Data

Participant Demographics	n
Age	
18	1
21	1
22	2
26	2
Sex	
Female	4
Male	2
Racial/Ethnic Category	
White	5
India/Asia	1
Academic Class Status	
Freshman	1
Associate 2nd year	1
Junior	1
Senior	1
1st year grad	1
2nd year grad	1

Six interviews were conducted with one student enrolled in an associate degree program, three students enrolled in a bachelor's degree program, and two students enrolled in a graduate degree program (Appendix C). The sample of 2 males and 4 females ranging in age from 18 to 26 proved to be a useful blend of both demographics and student experiences. The interviews averaged 26.3 minutes in length with a range of 13.9 minutes to 32.7 minutes. Data was recorded from interviews with a digital recorder. Interviews were transcribed, excluding non-meaningful utterances such as *uh* and *uhm*. Interviews were transcribed into Microsoft 2010 word files. A qualitative data matrix was

compiled using the spreadsheet processor, Microsoft 2010 excel. There was an excel spreadsheet prepared for each interview.

Data Coding

The qualitative analytical process was based on Hycner (1985) guidelines for phenomenological analysis of interview data. Data was collected through the interview protocol and provided a depiction of how participants understand instructional preferences. The Hycner analysis followed an eleven step qualitative data analysis process. The eleven steps are: (1) Transcription, (2) Bracketing, (3 Listen for the sense of the whole, (4) Delineation of units of meaning, (5) Identify units of meaning relevant to the research question, (6) Reliability check, (7) Eliminating redundancies, (8) Clusters of relevant meaning, (9) Themes from clusters of meaning, (10) Summary, and (11) Modifying themes and summary (Hycner, 1985).

The Hycner phenomenological analysis of the interview data began with the transcription of the interview. The literal statements from the participants were included and questions from the researcher. The next step was bracketing or phenomenological reduction. This step was approached with an openness to whatever meanings emerged, suspended judgment, and focused on the experience. Bracketing the researcher's meaning and interpretations aided in understanding the meaning of what the participant said, rather than what the researcher expected the participant to say. The researcher's presuppositions in this study were negative stereotypes of the millennial cohort, the role of lecture as an outdated instructional method, and clear differences existed in instructional preferences between generational cohorts. This presupposition allowed the researcher to be conscious of bias and how this would impact the meaning of what the participants shared.

Meanings described by the participants were considered irrespective of whether they were determined to be essential. The researcher listened for the sense of the whole interview to provide a context for the emergence of specific units of meaning and themes. The interview data was divided into three columns. The column labels were units of meaning, units relevant to research question, and a column eliminating meaning redundancies. Each row of data contained a verbal exchange between the interviewer and the interviewee, one row contained a question or statement made by the interviewer and a statement or question response made by the interviewee.

The next step identified the significant points relevant to the research question that developed within the data to further identify core topics. The following phase required coding focused on connecting directly to the data to confirm and revise emerging themes to meaningful units. The final stage required the development of emergent categories into thematic units. Creswell (2007) suggested researchers search for patterns by pulling the data apart and putting them back together in more meaningful ways. This process identified how participants experience and understand instructional preferences.

Each interview transcription contributed to a phenomenological reduction by delineating 187 statements of meaning from the participants' responses to the interview questions (Appendix D). The reduction was accomplished by noting patterns in how participants described experiences of their instructional preferences, program choice, and educational goals. The meanings were clustered to support the formation of themes. The researcher relied on the number of times a meaning was mentioned to indicate significance to the participants. The groupings were organized into thirteen coded clusters

based on number of times participants expressed the theme in the interview and are listed; *(1) work opportunities, (2) collaborative learning, (3) career flexibility, (4) role of experience, (5) generational identity, (6) practice in field, (7) program reputation, (8) problem based learning, (9) program meeting needs, (10) self-direct program, (11) lecture, (12) unclear program objectives, and (13) student status*. These coded clusters remained relevant to the research question. A reliability check was conducted to verify the findings with members of the dissertation committee.

Table 18

Coded Frequency Chart/ Number of Times Mentioned in Interview

	Interview Participants Identified by Number						
	1	**2**	**3**	**4**	**5**	**6**	
Coded Cluster							**Totals**
Work Opportunities	4	2	2	3	5	6	22
Collaborative Learning	2	3	2	4	4	5	20
Career Flexibility	4	2	2	2	5	4	19
Role of Experience	3	2	2	2	5	4	18
Generational Identity	2	2	2	4	4	4	18
Practice in Field	2	3	2	3	4	3	17
Program Reputation	1	2	2	2	3	3	13
Problem Based Learning	2	2	1	2	3	2	12
Program Meeting Needs	2	1	1	2	3	3	12
Self-Direct Program	2	1	1	1	3	3	11
Lecture	1	2	1	2	3	2	11
Unclear Program Objectives	1	2	1	2	1	1	8
Student Status	1	1	1	1	1	1	6

Note. Participant 1 – Bachelor Degree, Participant 2 – Associate Degree, Participant 3 – Bachelor Degree, Participant 4 – Bachelor Degree, Participant 5 – Graduate Degree, Participant 6 – Graduate Degree

The interview data was refined through subsequent domain coding. Domain coding clustered units of meaning into relevant units of measure. Based upon a thematic analysis, four themes were identified relating to how the participants experienced and understood their instructional preferences; *(1) impact of generational differences in*

current business program, (2) students' educational goals and the impact on choice of current business programs, (3) student feedback on instructional preferences, and (4) the role of personal and professional student experience.

The first theme encompassed the significance participants placed on identification with a generational category. Half (n=3) of the participants identified with the millennial generational cohort and half (n=3) of the participants did not identify with the millennial generational cohort. All participants, based on age, were categorized as millennials. The older millennial participants identified themselves as generation X or with no specific generational cohort. Based on participants' comments, classroom instruction preferences did not relate to generational differences. Participants' classroom experience was described as instructors continued to teach traditionally with lecture and white board without regard to generational differences. The behavioral items associated with the impact of generational difference theme are presented in Table 19.

Table 19

Domain Cluster of Impact of Generational Difference

Domain Cluster	Participants' Quotes
1. Millennials are a movement impacting more than education.	The millennial movement consists of political, social conscience, arts, diverse culture and focus on careers that they are more passionate about.
2. The tech-savvy millennials is a positive.	I welcome new technology in class because it will help me in the future.
3. Life and work experience minimizes generational differences.	I do not fit into the millennial category. I have four years of life experience and I do not fit in with 18 year-old students.
4. Students with work experience in diverse age settings connect with all generations.	I do not categorize myself in a specific generational category because of my work experience. I connect with all generations.

The second theme defined participants' educational goals and the meaningful impact on choice of current business programs. The participants were all full-time students. Three of the participants did not have work experience prior to starting their programs. Three of the participants had four to six years of work experience before beginning their program. The participants who had prior work experience appeared to be more focused on their program of choice and educational goals. The participants with little or no work experience were the younger age participants. The younger age participants looked for a program close to home with little focus on program structure and their educational goals. The behavioral items associated with the educational goals and impact on choice of program theme are presented in Table 20.

Table 20

Domain Cluster of Participants Educational Goals and Impact on Choice of Program

Domain Cluster	Participants' Quotes
1. Chose a business program that allowed flexibility for career opportunities after graduation.	I selected my business program to allow for more work opportunities and flexibility for a career when I graduate. My business program is allowing me to achieve my professional goals.
2. Chose the business program based on proximity to home and reputation of business program.	I chose my business program because I wanted to stay close to home and my program is desirable because the quality of classes and instructors.
3. Flexibility to focus major outside generic majors and allow applied learning.	Applied learning was a big draw for me when choosing this school which allows me to obtain specific career experiences.
4. The business program gave structure to actual work experience.	My academic goal is to be able to relate my actual work experience with the classroom world. I wanted a graduate program that would give me structure to my work experience.
5. A robust program involving the business community.	My professional goal is to work with businesses to improve their productivity. I believe an internship is very important and attending workshops as part of my program will help me achieve this goal.

The third theme identified the value of participants' feedback on instructional preferences. The instructional preferences of the participants interviewed which were similar included lecture with discussion and interaction with professor, collaboration with peers and group work, and a real-world way of learning with internships, and interaction

with businesses with hands-on experience. The instructional preferences of the participants which were dissimilar were studying individually supplemented with the internet, the desire to set the structure of class, and case studies that were not real-world based. The behavioral items associated with the feedback on instructional preference theme are presented in Table 21.

Table 21

Domain Cluster of Participant Feedback on Instructional Preferences

Domain Cluster	Participants' Quotes
1. Lecture with discussion and interaction with professor.	My ideal class would be where the professor interacts with the student, makes sure students understand, and does not just throw information at the students. I would prefer more discussion.
2. Collaboration with peers and group work.	In more practical classes vs. theory classes, I like more collaborative learning where there is collaboration with both instructors and peers.
3. Real world learning involving internships, interaction with businesses with hands-on learning.	The most applicable problem-based level of learning would be the internship. A case study is not beneficial because students are not making a direct difference in a company.
4. Individual study with the internet.	Because the lecture classes do not promote discussion, I study on my own using the internet. I feel that I am teaching myself so I could probably consider an online class.
5. Set the structure of class by the student.	I would like to have control over my degree program and course choices. I would like to tailor my degree program toward what I want to do when I graduate.
6. Move away from case studies.	The value in problem-based learning is moving away from case studies. I want a real-world way of learning.
7. Theoretical classes could be improved if a more practical approach was incorporated.	I would like to make my program more cross-functional with courses in other disciplines to compliment my emphasis. For example, supply chain management with applicable accounting methods.

The fourth theme was based on the role of personal and professional participant experience. Participants described the value of work experience in determining an effective relationship with a business program. The opinions expressed by participants who had work experience categorized students with little or no work experience as having little focus on their area of study or ability to contribute in class-related discussions. Another opinion expressed by the participants with work experience was the lack of recognition for prior work experience by the university. One participant expressed frustration because prior work experience was not recognized for credit. Participants stated there was little time to reflect about what was learned in both class and related work experience. A participant recommended classes should focus on real time business decisions and developing a workable matrix to evaluate real-world business experiences. Participants with work experience engaged in interactive discussions, case studies and internships. Half of the participants without prior work experience believed that the college program would provide career experience. The participants lacking work experience appeared to be more accepting of the post-secondary program and how the classes were taught. Participants with prior work experience gave program choice and instructional methods more consideration. The behavioral items associated with the feedback on the personal and professional theme are presented in Table 22.

Table 22

Domain Cluster of Personal and Professional Participant Experiences

Domain Cluster	Participants' Quotes
1. Many millennial students began school with no focus on area of study.	Now that I am a junior, I am more focused on what is relevant to my major. The general education classes did not give me any focus on my major, instructional preferences or what experiences I needed.
2. Instructors are not familiar with technology.	I feel that professors have trouble with classroom technology. In my experience discussion boards and sites are not coordinated with the students and there is too much dependence on the white board.
3. Students are not offered credit for work experience.	I have four years of work experience and have not been offered experiential credit. I also feel that credits taken at other schools are ignored and I repeat classes.
4. There is no time for reflection and critical thinking.	I do not feel I get time to think about what I am learning. The professors do not appear to care to go beyond the facts and to apply theory to real-world.
5. Professors teach to the class median not focusing on the students' depth of experience.	Group work and class participation could be more effective if the instructor took into consideration not all student skill sets are the same. It becomes demotivating at test time when students with strong prior skill sets do very well and tip the curve.
6. Focus on real time business decisions and develop business decision matrixes.	I want a real world way of learning,

The first theme, understanding generational differences in classroom instruction in current business programs, explained how the participants experienced their learning as being traditional instruction and did not relate to generational differences. The second

theme, participants' educational goals and the meaningful impact on choice of current business programs, described participants with prior work experience to be more focused on their program of choice and educational goals. The third theme, value of participant feedback on instructional preferences, described similar instructional preferences of participants, which included lecture with discussion and interaction with professor, collaboration with peers and group work, and real-world way of learning. The fourth theme, the role of personal and professional participant experience, described participants with work experience giving instructional methods more thought.

The four themes reflect the clustered units of meaning. There was overlap to the clusters because participants stated different behaviors in their instructional preferences and program choice. These differences were expected because it is impossible to separate human phenomena of instructional experience. Another researcher may determine slightly different clusters. The researcher did not determine one central theme from the four identified themes. Themes may be modified if second interviews were conducted as part of additional research.

Figure 4

Demonstration of Themes

Theme One:

Understanding generational differences in classroom instruction in current business programs

- Generational classroom preferences were not distinctively apparent
- Instructors were perceived as teaching in a traditional manner

Theme Two:

Participants' educational goals and the meaningful impact on choice of current business programs

- Prior work experience focused program choice
- Participants with little or no work experience chose programs close to home

Theme Three:

Value of participant feedback on instructional preferences

- Classes could be improved if incorporated a more practical approach
- Understand similar preferences vs dissimilar preferences of students

Theme Four:

Role of personal and professional participant experiences

- Prior work experience allowed for more interactive classes

Participant Narratives

Qualitative inquiry allowed the opportunity to engage with the participants who were currently enrolled in a post-secondary business program, investigate the phenomenon surrounding their instructional experience, and understand if generational differences affected their preference. The following descriptions are designed to give a voice to these participants' stories.

Participant 1. Participant 1 was a 22-year-old white male who is a senior in a bachelor's business degree program. He is a full-time student. His business program is allowing him to achieve his professional goals. He chose his business program because he felt the program offered diverse opportunities with employers when he graduates. He identified with the millennials, however felt the millennials are more of a movement encompassing political and social conscience, appreciation for the arts, and experiencing community culture. His opinion was, during and after college, millennials will live as simply as possible. Students loans have driven millennials in this direction. He characterized millennials as spending money on experiences, not things or products.

He felt instructional methods depend on the class. When a class was based on theory, he preferred lecture. He preferred a more collaborative learning style because it was easier to accomplish something with a group of people. He observed there was an older student or generation X in each class. He considered his program as traditional and most students were full-time and living on campus. Ideally, he liked to set the structure of the class for himself because there were different directions that a business major could go in. He has been tailoring his degree program to what he wants to accomplish when he graduates. He currently has an administrative internship and he treats it like a self-study.

He initially looked for a program offering a sense of security which lead him to the traditional route. But, if he were to look back, he would be tempted to look at a program wrapped around real-world applications. His advice for younger millennials considering college, is to wait until they are certain or semi-certain what they want to do. He felt students do not need to pick a major right away. If a student is passionate about a subject, they will adapt to different instructional styles. Participant 1 advocates:

"I think it would be an injustice for anyone in business if they were not experiencing problem based learning. I mean think of how fast everything changes in the workplace. Can a text book keep up with that? It is invaluable to have an idea of what you will be stepping into when you graduate."

Participant 2. Participant 2 is a 22-year-old white female who is a second year student in an associate business degree program. She is a full-time student in her program. She does not relate to the millennial generation even though based on age she would be in the millennial cohort. She does not exhibit the entitlement she sees in her peers.

She attended two other colleges before attending her current program. She did not complete a degree program at the previous schools. She chose her current program because it was close to home. She did not give a lot of thought in choosing the business program. She did not want social work or nursing because of previous experience being a caregiver. She stressed feeling under-appreciated with all the work and life experience she brings to class. The younger students do not relate to her experience. In addition to being a full-time student, she is also a wife, mother, and caregiver. In classes, she looks for teamwork and collaboration, however not all classes offer this type of involvement. She prefers case studies, but the drawback is getting other students to contribute the same amount of work or discussion. One of her business classes did involve observing a business and developing a business plan. The actual business experience was a rewarding experience for her. Overall, she feels sheltered in class and not encouraged to explore outside businesses. Her biggest question is after she completes her degree, what opportunities will be available to her. Participant 2 advocates:

"I don't fit in as much as the average 18 year-old. I sit toward the front of class and the younger students sit in the back of the class. I tend to answer the questions as they are being asked. I participate a lot more. I find this frustrating because I want everyone to participate."

Participant 3. Participant 3 is an 18-year-old white female who is a freshman in a bachelor's business degree program. She is a full-time student in her program. She chose her degree program because of the favorable reputation of the school and good reputation of the business program. Her priority was to stay in the region. She is currently taking general education classes. She indicated that these classes are primarily lecture and do not allow for small group interaction. She finds it difficult to ask questions during the class period. She studies on her own with the help of the internet. Her ideal class would be where the professor interacts with the student, the students understand the material and the professor is realistic about the amount of information. She stated she is very much a millennial. She embraces technology. She would consider an online class because she has taught herself off the internet. She is a recent high school graduate where she felt taken care of by teachers. College is a more independent environment and she is required to function on her own. She feels college professors do not care about the students. Participant 3 advocates:

"If you have a question, you have to go to the internet. I have been using YouTube videos to teach myself. I don't know how I would get through college without the internet."

Participant 4. Participant 4 is a 21-year-old white female who is a junior in a bachelor's business degree program. She is a full-time student in her program. She chose

her degree program because she wanted to stay close to home. She also stated the degree program was desirable because of the high quality of classes and instructors. She feels she is definitely a millennial because millennials are addicted to technology. The new technology is helping her become knowledgeable and future oriented.

She has experienced an emphasis in hands-on learning. Almost every class she has taken involved break-out groups and problem-solving groups. This interactive learning has been beneficial to her learning. The real-world classroom application gives more meaning for future careers. She has had lecture-only classes and found it harder to learn. She found it hard to keep up with what the professor was saying and writing notes at the same time. She likes the group work because she experiences what the other students are thinking and sharing different ideas. She has work experience, but feels no work experience is not a problem in class. The business students get involved in a business challenge project directly with a business. The business challenge improves business knowledge, presenting ability, and teamwork. She considers this the most beneficial project she has done in school. Her business major requires an internship before graduation. She feels the internship pushes students to do something meaningful. She admitted having a hard time as a freshman because of the general education classes. She questioned what these classes were going to do for her future. Now that she is a junior, she is focused on classes that are more relevant to her educational and career goals. Participant 4 advocates:

> *"The general education classes should be related to a student's major so they can see the purpose of them. The easiest way for me to learn something is hands on and something that I am passionate about."*

Participant 5. Participant 5 is a 26-year-old white female who is a second year student in a Master's business degree program. She is a full-time student in her program. She is a majoring in brand and product management. She chose her degree program because of reputation, smaller classes, college community, and a career focus. She is an older millennial, but loosely considers herself a generation X. She worked for four years after finishing her bachelor degree. She believes the more effective people in her program are those who have work experience after the completion of their bachelors. Her opinion of a graduate degree is one of primarily building on your work experience. She stressed a graduate student should take time for practical experience and combine it with the learning. She identified the core courses in the program as mainly case work and the specialization classes involved outside work. She stated not all skill sets come with the degree, but students need to have the maturity to ask a business what skills are necessary. Students need to realize that casework and team work do not round out the degree. In her experience, some instructors encourage critical thinking and don't look for the grade but the thinking. She does poorly being lectured at. The computer is important for note taking and communication. She is a firm advocate of practice problems and learning by doing. What sets her degree program apart is the interaction she is having with people and not a computerized case study. Employers want graduates who can lead a team and manage people. She acknowledges getting this in her program. She added technology appears to be difficult for the instructors and not the students. Discussion boards and web sites are not coordinated. It is hard to find class information because there are multiple platforms. This impacts finding and learning the relevant information for my career. I want a real-world way of learning. Participant 5 advocates:

"We are currently working with a local company making brand guidelines for them. We pick a company and work on a digital strategy for them. I like these projects and it supplements people with less experience. Applied learning was a big draw for this school."

Participant 6. Participant 6 is a 26-year-old Indian male who is a second year student in a Master's business degree program. He is a full-time student in his program, majoring in supply chain management. He considered American MBA programs because of the good reputation. He worked for four years after his undergraduate program. He does not categorize himself in a specific generational group. He has worked with and has friends that are younger and older and identifies with all ages. He considers the most basic level of problem solving as the case study method. He defined case study as a real business problem, but not affecting a real business. The most applicable problem-solving would be the internship. Problem-solving is a mutually beneficial relationship where he can start making a difference in the company. His academic goal is to relate his actual experience with the classroom world. He accepts lecture-based classes because he previously experienced lecture classes in other programs. However, the class needs to be discussion oriented to connect with him. He did not consider attending a completely case based school. He prefers a variety of instructional styles in the curriculum. Other students offering different perspectives adds to his learning experience. He has the support of student mentors and the alumni network. The alumni network is a large part of his professional network. He would like the program to be more cross functional in different academic perspectives such as human resources or accounting. He is aware of bringing different experiences no one else can put on the table. The most important part of the

program is people management and the way people communicate. Participant 6 advocates:

> *"I appreciate how people learn differently. You have to keep that in mind as a manager. You need to find a common ground as an educator and manager of people. The biggest contributor for me is talking to people and keeping an open mind. Look for positive affirmations and recognize cultural diversity."*

Theoretical Foundation as it Relates to Cluster Themes of Research

Millennial learner perspectives and opinions which supported adult learning theory, transformative learning, constructivism and experiential learning were explored through the analysis of data from the student interviews. This study utilized Knowles' et al. (2015) andragogy theory to define millennial learners by their experience and motivation to learn. This research also used Mezirow's (2000) transformative learning theory to explore the impact of experience in transforming millennial learners' perspectives and mind-sets. Social constructivism focused on education as a continuing reconstruction of experience (Ormrod, 2012). This research also supports experiential learning by Kolb and Kolb (2006) applied in experiential classroom learning and experiential problem-based learning. The research is expected to contribute to the field of generational learning by providing an understanding of millennial learners' instructional preferences.

The first theme understanding generational differences in classroom instruction in current business programs was supported by Knowles et al. (2015) adult learning theory or andragogy. Andragogy supports millennial learners when learning is structured to incorporate generational instructional preferences. Andragogy recognizes as millennial

learners mature, learning becomes problem-centered because millennial learners see new information applied to life and work experiences. Andragogy supports millennial learners to make choices and self-direct their learning, an instructional preference expressed by the interview participants. Participants also felt that lecture was still a preferred instructional method because of their past educational experiences. Participants preferred interactive classroom instruction when it focused on real-world problems. The participants did not observe different generational instructional methods in their business programs. Participants felt that instructors embraced the traditional lecture due to the comfort level established over the years.

The second theme was participants' educational goals and the meaningful impact on choice of current business programs. Two assumptions defined in andragogy influencing the adult learner's choice of a business program are the need to know and orientation to learning (Knowles et al., 2015). The participants interviewed indicated their desire was to learn and achieve their degree. According to Zemke and Zemke (1981), adults are motivated to learn because of a changing workplace, adults learn by integrating new information into what is already known, adult learners appreciate the ability to direct their own learning, and self-directed learners usually enjoy face-to-face and collaborative learning activities (Zemke & Zemke, 1981). However, it appeared the participants' educational goals and program choice was strongly impacted by their life and work experience. Social constructivism supports engaging the adult learner in education which is viewed as a continuing reconstruction of experience (Ormrod, 2012). The older millennial participants stated that life and work experience impacted their choice of a

business program in achieving their educational goals and defined their choice of instruction.

The third theme was the value of participant feedback on instructional preferences. Andragogy supports problem-based learning, self-directed learning and life-long learning (Knowles et al., 2015). Social constructivism and transformative learning support a millennial learning environment which promotes questioning, critical reflection, and generational perspectives (Ormrod, 2012). The participants beginning their business programs with little or no work experience preferred more knowledge-based instruction and were not as focused on their educational goals. The participants with work experience were more aware of the value of problem-based learning and self-directed learning as instructional preferences due to being focused on their career goals. These participants agreed learning was not confined to the classroom, but part of a larger system of experiences. The participants with work experience indicated their instructional preferences include real-world managerial processes such as problem-based learning, strategy formulation, creativity, problem solving, decision making, and leadership.

The fourth theme was the role of personal and professional participant experience**.** All the participants interviewed were looking for experience within their business programs even if they were not entering their program with experience. As Vygotsky suggested in the constructivist theory of learning, each learner's experience is valid, learners construct knowledge and meaning based on past and present experience, and learners use previous knowledge to construct new knowledge which is personally relevant (Moll, 2014). The participants were able to define their educational goals and instructional preferences with academic experience and work experience. Experiential

learning as defined by Kolb and Kolb (2006) serves as a useful tool to design and implement education programs in higher education for adult learners. Experiential learning is driven by real-world problems in which millennial learners identify and pursue their own learning needs and objectives (Kolb & Kolb, 2006). The participants expressed a desire for business programs which involved experiences such as internships, field projects, apprenticeships, case study, and problem-based learning.

Summary of Qualitative Research

In summary, the data analysis of the interview data revealed participants preferred a wide variety of instructional methods. The data analysis found the instructional preferences of the participants with little or no work experience prior to their business program did not have strong instructional preferences which impacted their program choice. The participants with prior work experience had clearer preferences on instructional methods and program choice. Participants with prior work experience sought out business programs with class discussion, team collaboration, and problem solving real business problems. The participants with little or no work experience accepted the traditional knowledge-based class, which was instructor driven. The instructional preferences that were similar between the participants interviewed were listening to the instructor lecture, work individually, collaboration with peers, assignments using technology, and providing real world business problems. Of the six millennial participants interviewed, half of the participants did not identify with the millennial cohort. Millennial generational differences did not appear to impact instructional preferences. The amount of work experience appeared to be the most significant factor in participant instructional preferences.

Summary

A mixed method approach was used in this descriptive study to determine the instructional preferences of millennial business learners. The specific statistical tests used include the following: descriptive analysis and frequencies; a two-tailed, independent sample t-test; and Pearson correlation coefficients. This study also included phenomenological methodology to form descriptive themes from one-on-one interviews.

Study results from survey data and interview data focused on providing an explanation of millennial learner's instructional preferences and how this affected the millennial learner's choice of post-secondary business programs. Recommendations for further research include; expand the target population to include a more diverse student demographic and degree programs directed to working millennial learners, focus on the impact prior work experience has on instructional preferences, and include analysis of the university faculty's understanding of their students' prior experiences, specifically work experience.

Chapter 5 – Discussion

This study used a mixed methods approach to examine the instructional preferences of millennial business learners enrolled in a post-secondary business programs. The purpose of this study was to examine the statistically significant differences within the diverse group of millennial learners. The significant differences in instructional preferences addressed the challenges between the two millennial age groups emerging in higher education. This chapter is a comprehensive review and discussion of; the research question, correlations to the literature review, theoretical context, limitations of the study, implications for millennial learners' instructional preferences, and suggestions for future research.

Previous studies have been conducted on learning preferences for millennial learners, however few studies investigated the difference of preferred instructional methods of post-secondary business millennial learners. The findings in this study contribute to the body of literature describing instructional preferences of millennial learners in post-secondary business programs by providing a description of the role of experience, the role of generational differences, and the impact on instructional preferences.

The results of this study identified an instructional preference gap within the millennial generation. The post-secondary business programs for the 20 and younger millennial represented different instructional preferences from the 21-34 millennial learner. The findings of this study suggested the post-secondary business programs could promote a transition into a more interactive instructional environment from the 20 and younger millennials' preference for instructor involvement and structure. Kolb and Kolb

(2007) discussed the neuroplasticity and the millennials' learning styles. Post-secondary business programs need to assess the millennial age challenge of younger millennials and older millennials to consider their different perspectives. According to Kolb and Kolb, this is a developmental process in the learning environment which shapes millennial learners' experiences and impacts how millennial learners think and process information.

A study by Sandeen (2008) described the typical millennial as the digital generation expecting a high degree of collaboration and problem-solving in their educational opportunities. According to Sandeen (2008), millennial learners expected programs providing real-world access and interactive learning, such as case studies and internship opportunities. The literature review's description of the millennial generation's values, preferences, and behaviors was not confirmed in this study. The most influential variable affecting the instructional preferences of the millennial learners in this study was not technology or collaboration, but was work experience. Work experience divided and defined the millennial generation more significantly than the 23 instructional preferences tested.

The findings of this study also suggested the importance of not labeling the generational cohorts. Howe and Strauss described the peer personality of a generation as a caricature of its prototypical member (Howe & Strauss, 2007). Millennial learners in both undergraduate and graduate levels, regardless of age, expected educational programs to prepare them for the professional work world (Conklin, 2012). The findings of this study suggested the millennial participants were a blurred and diverse generation which could be more accurately defined as individuals rather than a unified generation with similar characteristics.

The two millennial age groups which participated in this study, strongly preferred lecture. The high preference for lecture was somewhat surprising given the number of journal articles in the literature review discussing adult learner preferences for active learning versus passive learning. Instructional preferences and differences within the two millennial age groups suggested their decade of birth was less predictive of their instructional preferences than previous generations. The methodology used in this study provided evidence for the value and need for both knowledge-based and interactive-learning to meet the millennial learner's career and educational goals.

Summary of Methods

The Learning Preference Survey was administered to post-secondary business program students. Survey participants represented varied demographics, age, and business programs. *The Learning Preference Survey* included a seven-point Likert scale ranking preferred instructional methods, instructional methods ranking, and open-ended questions on primary and secondary reasons for business program choice. Participants were asked to volunteer for a one-on-one interview with the researcher to further examine the phenomenon of students' instructional preferences, the impact on their choice of a business program, and associated generational category influences.

Two millennial age groups were identified in the study and used for instructional preference comparisons. The instructional differences between the 20 and under age group as younger millennials and the 21-34 age group as older millennials were determined. The specific statistical tests used included the following: descriptive analysis and frequencies, a two-tailed, independent sample t-test, and Pearson correlation

coefficients. The study also used the Hycner (1985) phenomenological analysis methodology to form descriptive themes through one-on-one interview data.

The coded themes developed from the interview analysis provided a discussion framework for study findings. The first theme, *understanding generational differences in classroom instruction in current business programs*, described how participants similarly experienced their learning as traditional instruction and showed little generational differences. The second theme, *participants' educational goals and the meaningful impact on choice of current business programs*, described participants with prior work experience to be more focused on their program of choice and educational goals. The third theme, *value of participant feedback on instructional preferences*, described similar instructional preferences of participants, which included lecture with discussion and interaction with professor, collaboration with peers and group work, and real-world learning. The fourth theme, *the role of personal and professional participant experience*, described participants with work experience gave instructional methods more consideration.

Role of Experience

Prior work experience appeared to be the significant difference between the two millennial age groups. The interview participants with prior work experience were more focused on how they preferred to learn, had stronger career and educational goals, and gave more consideration to their choice of business program. The participants with little or no prior work experience were the younger millennial group who preferred the traditional knowledge-based program to gain the foundational information in their discipline.

The instructional variables preferred by the younger age millennial and by the older age millennial were measured in the survey and further explored in the one-on-one interviews. The significant difference in instructional preferences appeared to be impacted by the level of work experience the participants had before beginning their program. This difference became apparent during the one-on-one interview process. The participants with work experience stated they looked for business programs to validate and build on their work experience or to provide additional real-world experience during their program. The role of experience was not tested in the survey process, but was a significant finding in the interview process.

The role of professional experience was one of the four themes identified in the interview analysis. The participants interviewed were looking for experience within their business programs even if they were entering their program with little or no previous work experience. Participants defined their educational goals and instructional preferences by academic experience, work experience, and career goals.

The choice of the business program differed between the two millennial age groups. The interview participants with work experience chose a program which offered real-world experience and recognized their prior work experience. The participants with little or no prior work experience chose a program based on geographic proximity to home, financial assistance, and school reputation. However, these participants also expected their program to provide the real-world experience in their program. These participants were younger millennials and new to post-secondary education and recent high school graduates.

The literature review supported experiential learning where millennial learners had the opportunity to; problem solve, experience interactive learning, and develop real-world solutions (Lewis & Williams, 1994). There was ample and varied evidence in this study to support the importance of work experience in millennial learners' choice of a program and instructional preferences. Experiential learning theory, as defined by Kolb and Kolb (2006), serves as a useful tool to design and implement education programs in higher education for millennial learners. Experiential learning programs involve internships, field projects, apprenticeships, case study, and problem-based learning (Kolb & Kolb, 2006). The conventional understanding of experiential learning comes from the constructivist theory perspective and defines learning as an act of participation and practice (Sandlin et al., 2011).

The history of adult learning was described in the literature review. Historically, adult learning has its roots in apprenticeships, trade guilds, indentured servants, educational internships, and practicums. The acquisition of vocational skills and experiential approaches are considered fundamental to all meaningful learning (Lewis & Williams, 1994). Current post-secondary programs should explore the principles inherent in the apprenticeship model for vocational education and the principles of problem-based learning programs for millennial learners (Kolb et al., 2001, Kolb & Kolb, 2007)).

Role of Generational Differences

An adult learner is a product of their environment (Knowles et al., 2015) resulting in a classroom mixture of varied work expectations, values, and degrees of technical knowledge. Because of this diversity, the definitions of the various generational cohorts are blurred.

The interview analysis indicated that half of the interview participants identified with the millennial cohort and half of the interview participants did not identify themselves with millennial cohort. The phenomenological analysis of the interviews revealed the millennial generation cohort characteristics were not tightly defined.

The millennial cohort has collective attitudes about family, institutions, politics, lifestyle, and the future (Howe & Strauss, 2007). Millennial adult learners are assumed to prefer entertainment, technology, experiential learning, and teamwork. However, based on the participants' responses, there was a blurring of this generational cohort definition. Participants defined themselves by geographical region, family, culture, and economic need. This raises a significant issue for educators to recognize the diversity within the classroom, not the stereotype of the millennial generational cohort. A quote from an interview participant spoke to this diversity, "The millennials are more of a movement encompassing political and social conscience, appreciation for the arts, experience, and community culture."

Role of Instructional Preference

The literature review defined the millennial cohort with a strong desire to socialize and network with peers. However, based on this study, the older millennial age group expressed a higher preference for classroom interaction with peers than the younger age millennial participants. The difference may be due to the role of work experience between these two millennial age groups. The younger millennial age group participants could be viewed as traditional students with little or no work experience and looking for a learning environment offering just foundational information. The younger millennial age group also indicated their instructional preferences were aligned with

traditional classroom knowledge-based learning. The older millennial age group participants with work experience appeared to be looking for business application, problem solving, and collaboration in their business programs.

The statistically significant differences between the two millennial age groups included the following instructional method preferences; *visual aids for new concepts, instructor sharing relevant experiences, supplemental handouts with lecture, instructor provides structure, participation in group discussion, and solving real business problems.*

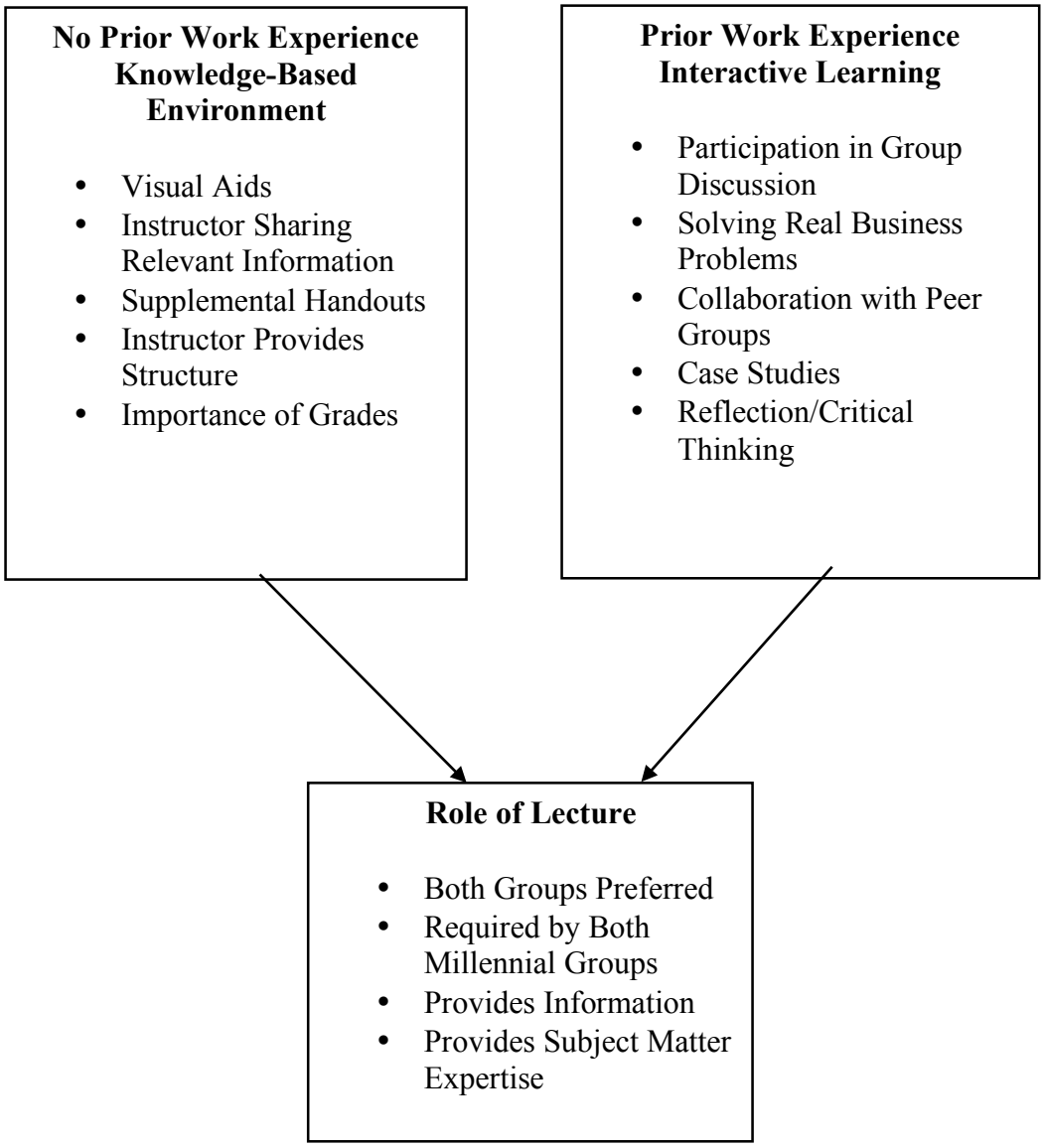
Statistically significantly similarities between the two millennial age groups was the preference for lecture. Lecture, traditionally a passive form of education, does not typically allow for interaction between professors and students. However, in this study both millennial age groups rated lecture as a preferred instructional method. Walker et al., (2006) had a similar finding in their study on generational differences in preferred instructional methods with the majority of students (83%) from both millennial and generation X indicating a preference for lecture. The high preference for lecture was somewhat surprising given the number of journal articles in the literature review discussing millennial learner preferences for active learning versus passive learning. Research results indicated lecture was important to both millennial age groups. Lecture appeared to be the bridge between knowledge-based learning and interactive-learning. The knowledge-based learning environment preferred by the younger age millennial provided foundational facts. The interactive-learning environment preferred by the older millennial provided and enhanced knowledge relevant to real-world applications.

The preference for lecture may be due to students' continual exposure to this teaching method within the educational system of the 21st century. The literature review

indicated traditional lecture followed the pedagogical model of teacher-centered education and was found to be the most utilized teaching method by faculty. Lecture is a convenient way to convey information in an organized format and may be more appealing to faculty especially when covering large amounts of content in a short class period. It is estimated that 80% of college instruction occurs utilizing the lecture format (Hartman, Dziuban, & Brophy-Ellison, 2007).

Figure 5

Instructional Preferences based on Participants Work Experience



Overall, both millennial age groups indicated a high preference for a variety of teaching methods, such as; lecture, peer groups, participation in group discussion, importance of collaboration, case studies, relevant assignments consistent with goals, reflection, and problem solving. One reason millennial learners have a preference to learn

through interaction and group work may be due to growing up in school systems utilizing peer group activity as a primary teaching method (Conklin, 2012). Another reason may be millennial learners' desire to share work experiences to develop improved business practices and processes. The role of work experience in the classroom was demonstrated in the interviews with the graduate school participants who had four to six years of experience prior to returning to graduate school. The graduate students interviewed agreed the more effective people in the program are those who had relevant work experience after earning their bachelor degree. According to Knowles's adult learning theory, educators must take into account the role of the learners' experiences (Knowles et al., 2015). Although work experience was not one of the variables investigated in the survey, it warrants consideration for investigation in future studies.

The results of the data analysis were consistent with the literature findings for millennial learners who preferred a more social environment which provided the ability to interact with their peers. The literature review provided studies of millennial learners not attending class if they were not provided with opportunities to interact with their peers or work in groups (Conklin, 2012). One interview participant declared without the class participation opportunity, students would not attend class. Participants' preference for using case studies to learn new concepts was slightly higher among the older millennial participants compared to the younger millennial participants. The older millennial participants' preference for case studies may have been higher due to the preference for real-life applicability and relating work experience to the case study.

In post-secondary business programs, the implementation of problem-based learning has not been as common as other disciplines. Stinson and Milter (1996)

proposed problem-based learning to enhance problem solving skills in business students. However, few empirical studies on the impact of problem-based learning in business education exist. This study supported the data on millennial learners preferring a flexible model of learning which allows them to make choices and contextualize their learning in real-world learning. Problem-based learning contributes to a blended learning experience by advancing the skills of millennial learners for professional practice and goes beyond direct, expert-driven, instruction (Holyoke & Larson, 2009). The graduate interview participants chose their degree program based on the cross functional flexibility to learn different academic perspectives and interaction with businesses in the field.

The literature review supported the use of a variety of interactive teaching methods for the millennial learner. Munro and Rice-Munro (2004) advocated for the use of a variety of teaching methods because there is not a single instructional method for all learners. Research conducted by Gould et al. (2015) has shown problem-based learning and traditional instruction were equally effective in increasing content knowledge in health professional students. Academic success was achieved even in the absence of interactive learning suggesting the millennial learning environment can be designed to effectively support all learners.

Correlation Findings

The correlation analysis supported two findings associated with millennial instructional preference. The first, collaboration was significantly and positively associated with solving real business problems. One explanation of this relationship could be explained through formal learning in a participatory classroom. Another explanation

for this finding was millennial learners are motivated by an interactive classroom which meets their career goals.

The second correlation finding was web-based instruction and hybrid learning. Web based instruction and hybrid learning were not positively associated with collaboration and solving real business problems. The literature review indicated that there was a strong association with online learning for the millennial generation due to their comfort with technology. However, this study found that classroom interaction with peers and lecture were more significant than the use of technology. These findings could be explained by the preference for an interactive model driven by ideas of collaborative learning, and reflective practice (Cornelius et al., 2011).

Both millennial age groups indicated similar preferences for the use of technology in the classroom. The younger millennial age group had a slightly higher mean preference than the 21 to 34 millennial age group. This finding was surprising given all of the literature on the high use of technology with millennial students. The millennial generation is known as the most technologically savvy generation in history and millennials have grown up with technology all of their lives to the point where it is embedded in their world (Coates, 2007). However, the results did not indicate a strong preference for the use of technology in the classroom from both millennial age groups. In fact, both groups of participants had a mean of 4.92, indicating an occasional preference for the use of technology. Although millennials use technology in every aspect of their personal lives to communicate, perhaps this does not translate to their preference for use of technology in classroom settings. This finding also warrants further investigation in future studies, especially as technology continues to change the global environment.

An interesting finding, which did not reveal any statistical significance, was the extremely low preference for a totally web-based course of study with both millennial age groups. Both millennial age groups had similar means reflecting their low preference for web-based instruction. Walker et al. (2006), found similar results in their study with 90% of the students from both generation X and millennials not preferring a totally web-based course of study.

These findings did not correlate with the some of the studies in the literature review. According to Coates (2007), both generation X and millennial students have a higher preference for distance learning in part due to their comfort with technology.

The hybrid classroom instructional method was slightly preferred by both millennial age groups with similar means. Walker et al. (2006), did not identify any difference in results for a combination web-based and classroom course of study. The inconsistent correlation with the literature regarding hybrid instruction method justifies a need for future studies to examine millennial generational differences in on-line formats of learning versus hybrid instruction.

Interview Findings

The qualitative interview process explored the link between the millennial age groups and instructional preferences. The participants shared professional and personal opinions and experiences of their classroom instruction, generational identification, educational needs, and perspectives of effective instruction. The interview results were used to gain a deeper understanding of the participants' instructional preferences and program choice. The interview data confirmed participants possessed millennial characteristics but, not always identified with the millennial generational description.

Millennial characteristics expressed by the participants were feeling comfortable communicating with the instructor, participating in two-way classroom communication, and having an instructor who cares about the well-being of students. Coates (2007), explained that millennials possess a need for connectivity, which confirmed the participants preferred communication with the instructor to feel more connected. The similar instructional preferences of the interview participants were lecture with discussion, interaction with professor, collaboration with peers and group work, a real-world way of learning with internships, and interaction with businesses. The older millennial participants who had prior work experience appeared to be more focused on their program of choice, educational goals and instructional preferences. The younger participants looked for a program close to home with little focus on program structure and educational goals. Based on participants' comments, classroom instruction preferences did not account for millennial differences. Work experience before beginning a post-secondary program was a significant factor which allowed participants to readily engage in interactive discussions, case studies and internships. Half of the participants with little or no work experience believed the college would provide experiential opportunities and appeared more accepting of the business program and how the classes were taught. The data from the interviews appeared to favor interactive and collaborative course environments.

The interview data supported the following coded themes. The first coded theme was understanding generational differences in classroom instruction in current post-secondary business programs. The most frequently coded clusters from the interview data were generational classroom preferences were not distinctively apparent and instructors

were perceived as teaching in a traditional manner. The second coded theme was participants' educational goals and the meaningful impact on choice of current business programs. The most frequently coded clusters from the interview data for this theme were prior work experience impacted program choice and participants with little or no work experience chose programs close to home**.** The third coded theme from the interview data was the value of participant feedback on instructional preferences. The most frequently coded clusters for this theme were classes could be improved with a more problem solving approach and the need to understand similar instructional preferences versus dissimilar instructional preferences of adult learners. The fourth coded theme was the role of personal and professional participant experience. The most frequently coded clusters from the interview data for this theme were prior work experience allowed for more interactive classes, program choice, instructional preference related to experience, and millennial learners with little or no work experience expected the business program to provide experience in the field.

Theoretical Context

Andragogy, constructivism and transformative learning served as theoretical foundations for this study to help understand the millennial learner, their preference for a classroom environment, and instructional methods which contribute to greater learning. These adult learning theories demonstrated significant support for experiential learning as interactive instruction. The mix of findings across qualitative and quantitative phases from this study support broadening the impact of experience in post-secondary business programs.

Constructivist adult learning experiences allow millennial learners to be prepared to critically reflect on prior knowledge, assumptions, and practices to develop thoughtful, justified, and flexible competencies (Brookfield, 2013). Reflection was defined by Dewey (2008) as active, persistent, and careful consideration of knowledge. Reflection corrects inaccurate assumptions in existing knowledge pertaining to how to think about a problem. Individual reflection can lead to transformation of perspectives and improved critical thinking (Mezirow, 2009).

As millennial learners require a greater emphasis on student experience and student involvement in their education, these theories become an umbrella under which instructional methods are identified. The theoretical umbrella offers educators new avenues in which more sustainable and relevant learning environments can be created. The interactive methods supported by these theories create more classroom meaning, value, and learning. These findings are important due to the uncertainty in the current and future business environments (Collins & Hansen, 2011).

Per Knowles et al. (2015), adult learners are defined by their independence, experience, readiness to learn, and motivation to learn. An examination of constructivist learning theory and transformative learning theory supports experience as the key to meaningful millennial learning. Research has shown additional levels of experience increase the ability of millennial learners to make connections between theoretical concepts and the potential application to the everyday life of the millennial learner. Prior experience influences what the millennial learner will pay attention to and how they learn (Knowles et al., 2015). Based on coded interview themes, group learning can be influenced positively by the millennial learner's prior experience. Millennial learners

enrolling in postsecondary business programs appear to show a deep desire to integrate experience and education and tailor their education. Studies of the millennial generation currently enrolling in postsecondary business programs demonstrates a preference toward customized, blended learning experiences allowing integration of work and learning (Soares, 2013).

Delimitations of the Study

A delimitation of this study was the data analysis was confined to three post-secondary business programs in the upper mid-west area. This study focused on classroom instructional methods and did not include strategies used in online or hybrid learning. This study only investigated the instructional method preferences of post-secondary business millennial learners and did not examine the preferences of millennial learners from other degree programs.

Limitations of the Study

A limitation of this study was the inability to obtain a higher reliability of the survey tools due to modification of the student survey. Due to the time frame for which the study was conducted, a test and re-test was not completed. Although the re-test may have assisted in obtaining better reliability of the survey tools, obtaining the exact same participants for this method would have been challenging for the design of this research study.

Another limitation of this study was the use of purposive sampling. This type of sampling did not allow for random selection of participants and since the study was only conducted in the upper mid-west region of the United States. The limited location may have been atypical of a more global population, therefore affecting the variables being

studied. The findings from this study cannot be generalized to other millennial learners in other post-secondary programs. The study was conducted during the fall semester; a more longitudinal study design could have provided more in-depth data.

A third limitation to the study was the number of variables analyzed. There were numerous variables analyzed in this study and the identification of correlations between variables was at times difficult to control. There was also no way of knowing if participants in the study were being truthful about their age, which could have inadvertently affected how they were categorized. Millennial learners who did not have experience with certain teaching methods may not have ranked them as high simply due to a lack of exposure, thus affected the overall rankings and results.

Implications for Post-Secondary Business Instruction

This research study has numerous implications for post-secondary business programs. The study adds new knowledge to the overall body of post-secondary business education literature and provides educators with the opportunity to learn more about millennial age differences in instructional preferences. Post-secondary business educators can utilize the information in this study to enhance the classroom setting and provide an effective learning environment for millennial learners with a variety of instructional preferences. The study reminds faculty to not only assess for differences in millennial learners' instructional preferences, but also to assess what instructional methods are being used in the classroom setting.

Suggestions for Future Research

Although the literature review found many research studies on millennial generational learning styles, there were few studies which investigated generational

differences among post-secondary business millennial learners, therefore this topic is in need of further research. A replication of this study is suggested to compare the results and determine additional correlations. If this study were to be replicated, the survey tools would be modified providing a wider range of demographic, instructional preferences, and work experience options to obtain better variability in participant scores and reliability of the tools. Additional replication of the study could be expanded to include schools from areas other than the upper mid-west region of the United States.

Additional recommendations for further research include expanding the study population to include a more diverse student demographic and degree programs directed to working adult learners, further research on the impact of work experience on millennial instructional preferences, and exploring how university faculty experience and understand their millennial learners. Future research could solicit additional behaviors of millennial learners using qualitative data collection regarding impact of work experience before beginning a post-secondary business program. More studies could be conducted on the effectiveness of interactive teaching methods, such as case studies, collaboration, problem solving, and internships as discussed in this study. Further study could include the relationship between instructional preferences and student retention or graduation rates.

Summary

The research question analysis identified the instructional preferences of millennial learners in post-secondary business programs and statistically significant differences and similarities between instructional preferences. The statistically significant instructional preferences for the 20 and younger millennial age group were *visual aids for*

new concepts, instructor sharing relevant experiences, supplemental handouts with lecture, instructor provides structure, and all coursework counts toward grade.

Statistically significant instructional preferences for the 21 to 34 millennial age group were *active participation in group discussion, and solving real business problems, lecture; working in groups; actively participating in class discussions; and participating in group assignments with peers during class time.* The data analysis indicated participants with little or no work experience did not display strong instructional preferences which impacted program choice. Participants interviewed who had work experience expressed stronger instructional preferences and program choice. The participants with work experience sought out business programs with class discussion, team collaboration, and problem solving real business problems. The amount of work experience appeared to be the most significant factor in participant instructional preferences and program choice.

There appears to be two different learning environments for the two millennial age groups identified in this study. The younger millennial age group preferred the knowledge-based environment to gain information with traditional classroom instructional preferences. The older millennial age group preferred the interactive, problem-solving environment to meet their career goals. The instructional preference which bridged these two learning environments was lecture. Both millennial age groups had significantly similar preferences for lecture. Both age groups preferred lecture due to the need for subject matter expertise. The younger millennial group looked for information from a creditable source. The older millennial group looked for application

expertise and situational analysis knowledge. Other learning preferences for the two age groups were relatively similar.

Based on the interview analysis of this study, there appeared to be a blurring of the generational defined millennial cohort. Half of the interview participants did not identify with the millennial cohort. Participants did not want to be tightly defined as a millennial group, instead they preferred to be defined by culture, economics, and geography.

The role of prior work experience or work in the field was an important factor in identifying instructional preferences and choice of program. Participants with work experience appeared to have significantly stronger preferences for instruction which enhanced their career goals and allowed interaction with real-world problem solving. Participants with little or no work experience appeared to have strong preferences for traditional instruction which provided information in a knowledge-based environment.

Post-secondary business education is experiencing a generational phenomenon in the 21st century with student enrollment spanning three generations. According to Coates (2007), today's millennial learners are quite different from past generations of learners because the world has changed. Millennial learner preferences for instructional methods are not static and may change over time. According to Pedrosa de Jesus, Almeida, and Watts (2004), millennial learners continue to develop in their learning process and instructional preferences based on their educational and career goals. To enhance the learning environment for millennial learners it is important for business educators to recognize diverse instructional preferences, acknowledge personal generational

characteristics, and utilize a variety of instructional methods (Johnson & Romanello, 2005).

Conclusion

This study provided meaningful information on millennial learners' instructional preferences. The role of work experience appeared to impact a more focused program choice and instructional preferences. The difference between younger age millennials with little or no work experience and older age millennials with 2 to 6 years of work experience was significant. Participants with work experience preferred to work collaboratively on case studies and solve real business problems. The younger age millennials little or no work experience preferred visual material, structure, handouts, and all work counted toward their grade. The variable of work experience divided and defined the millennial generation more significantly than any of the other 23 instructional variables tested. This study provides evidence for the value and need for knowledge-based and interactive learning to meet the millennial learner's career goals.

Preferences and differences of the two millennial age groups studied suggested their decade of birth is less predictive of their instructional preferences than previous generations. The millennial generation has become increasingly less defined by the events surrounding their time of birth. The study findings suggested millennials are a blurred and diverse generation and may be more accurately defined as individuals then a unified generation with similar characteristics. The results of this study identified an instructional preference gap within the millennial generation. Post-secondary business programs need to assess the millennial age challenge of younger millennials and older millennials to consider their different instructional preferences. According to Kolb and

Kolb (2006), this is a developmental process in the learning environment which shapes millennial learners' experiences and impacts how millennial learners think and process information.

References

Alleyne T., Shirley, A., Bennett, C., Addae, J., Walrond, E., West, S., & Pinto Pereira, L. (2002). Problem-based compared with traditional methods at the Faculty of Medical Sciences, University of the West Indies: A model study. *Medical Teacher*, 273-279.

Amador, J. A., Miles, L., & Peters, C. (2006). *The practice of problem-based learning*. Boston, MASS: Anker.

Association for Experiential Education (2017, March 11). *Theory & Practice of Experiential Education.* Retrieved from the 2017 AEE Publications website: www.aee.org.

Barrows, H. S. (2002). Is it truly possible to have such a thing as PBL? *Distance Education*, 119-122.

Beckett, K. S. (2013). Paulo Freire and the concept of education. *Educational Philosophy and Theory*, 49-62.

Billington, D. (2000). *Seven characteristics of highly effective adult learning programs*. Seattle, WA: New Horizons.

Black, A. (2010). Gen Y: Who they are and how they learn. *Education Horizon*, 92-101.

Brookfield, S. (2005). *The power of critical theory for adult learning and teaching*. Berkshire, IL: Open University Press.

Brookfield, S. (2013). *Powerful techniques for teaching adults.* San Francisco, CA: Jossey-Bass.

Bureau, U.S. Census (2010, April 2). *The national data book for education*. Retrieved from The 2010 Statistical Abstract website: www.census.gov

Coates, J. (2007). *Generational learning styles*. River Falls, WI: Learning Resources Network.

Colorado State University. (2009, September 1). *Resources for disabled students*. Retrieved from Disability Awareness Colorado State University website: http://rds.colostate.edu/history-of-legislation

Commerce, U. S. (2014). *The millennial generation research review*. Washington D. C.: National Chamber Foundation.

Collins, J., & Hansen, M. T. (2011). *Great by choice: Uncertainty, chaos, and luck – why some thrive despite them all.* New York, NY: Harper Business.

Conklin, T. A. (2012). Making it personal: Creating autonomy: Supportive classrooms for millennial learners. *Management Education*, 499-538.

Cornelius, S., Gordon, C., & Ackland, A. (2011). Toward flexible learning for adult learners in professional contexts. *Interactive Learning Environments*, 381-393.

Crady, T.& Summer, J. (2007). *Key issues in new student enrollment.* San Francisco, CA: Jossey-Bass.

Creswell, J. W. (2014). *Research Design Qualitative, Quantitative and Mixed Methods Approaches.* Thousand Oaks, CA: Sage.

Dewey, J. (2008). *The later works of John Dewey: The development of American pragmatism*. Carbondale, IL: Southern Illinois University Press.

Dochy, F., Segers, M., Van den Bossche, P., & Gijbels, D. (2003). Effects of problem-based learning: A meta-analysis. *Learning and Instruction: The Journal of the European Association for Research on Learning and Instruction*, 533-568.

Dubois, Jacques. (1999). *Distance learning: A transformational model for higher education, going the distance.* PBS Adult Learning Service.

Dzubinski, L., Hentz, B., Davis, K., & Nicolaides, A. (2012). Envisioning an adult learning graduate program for the early 21st century. *Adult Learning*, 103-110.

Education, U. S. (2014, April 29). *No child left behind*. Retrieved from U.S. Department of Education website: www.ed.gov

Fakin, S. (2000). Giants of American education: Horace Mann. *Technos: Quarterly for Education and Technology*, 4.

Fraenkel, J., Wallen, N., & Hyun, H. (2015). *How to Design and Evaluate Research in Education.* New York, NY: McGraw Hill.

Freire, P. (2000). *Pedagogy of the oppressed.* New York, NY: Bloomsbury Academic.

Fry, R. (2014, February 28). *For millennials, a bachelor's degree continues to pay off, but a master's earns even more.* Retrieved from PewResearch Center website: www.pewresearch.org.

Gallagher, S., Stepien, W., Sher, B., & Workman, D. (1995). Implementing problem-based learning. *School Science and Mathematics*, 36-46.

Gregoryk, K., & Eighmy, M. (2009). Interaction among undergraduate students: Does age matter? *College Student Journal*, 1125-1136.

Gould, K., Sadera, W., & McNary, S. (2015). Comparing changes in content knowledge between problem based learning and traditional instruction in undergraduate health professional, *Journal of Online Learning and Teaching*, p. 74.

Haggbloom, S. J., Warnick, J. E., Jones, V. K., Yarbrough, G. L., Russell, T. M., Borecky, C. M., & McGahhey, R. (2002). The 100 most eminent psychologists of

the 20th century. *Review of General Psychology*, 139-152. doi:10.1037/1089-2680.6.2.139

Hansman, C. A; Sissel, P. A. (2001). *Understanding and negotiating the political landscape of adult education.* San Francisco CA: Jossey-Bass.

Hartman, J. L., Dziuban, C., & Brophy-Ellison, J. (2007). Faculty 2.0. *EDUCASEreview, 42*(5), 62-76.

Hertzberg, H. W. (1988). Foundations. The 1892 committee of ten. *Social Education,* 144-45.

History of Apprenticeship. (2015, December 12). *Washington State Department of Labor and Industry*. Retrieved from Washington State Department of Labor and Industry: www.lni.wa.gov.

Holyoke, L., & Larson, E. (2009). Engaging the adult learner generational mix. *Journal of Adult Education*, 12-21.

Howe, N., & Strauss, W. (2000). *Millennials Rising*. New York, NY: Vintage Books.

Howe, N., & Strauss, W. (2007). *Millennials go to college*. Great Falls, MT: LifeCourse Associates.

Huang, H.-M. (2002). Toward constructivism for adult learners in online learning environment. *British Journal of Educational Technology*, 27-28.

Hycner, R. H. (1999). Some guideline for the phenomenological analysis of interview data. In A. Bryman, & R. G. Burgess, *Qualitative research* (pp. 143-164). London: Sage.

Jacoby, D. (2015, December 5). *Economic History Association*. Retrieved from EH.net: www.EH.net.

Joham, C., & Clarke, M. (2012). Teaching critical management skills: The role of problem-based learning. *Teaching in Higher Education*, 75-88.

Johnson, S. A., & Romanello, M. L. (2005). Generational diversity: Teaching and learning approaches. *Nurse Educator, 30*(5), 212-216.

Johnson, S.B., Blum, R., & Giedd, J. (2010, June 27). *Maturity and the brain: The promise and pitfalls of neuroscience research.* Retrieved from HHS Public Access: www.ncbi.nlm.nih.gov.

Justice, E., & Dornan, T. (2001). Metacognitive differences between traditional-age and nontraditional-age college students. *Adult Education Quarterly*, 236-249.

Kitchenham, A. (2008). The evolution of John Mezirow's transformative learning theory. *Journal of Transformative Education*, 104-123.

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2015). *The adult learner*. New York, NY: Routledge.

Knowlton, D. S., & Hagopian, K. J. (2013). *From entitlement to engagement: Affirming millennial students' egos in the higher education classroom*. San Francisco, CA: Jossey-Bass.

Kolb, D. A., Boyatzis, R. E., & Mainemelis, C. (2001). *Experiential learning theory: Previous research and new directions.* Mahwah: Lawrence Erlbaum Associates.

Kolb, A., & Kolb, D. (2006). *A review of multidisciplinary application of experiential learning theory in higher education*. Hauppauge, NY: Nova Publishers.

Kolb, A., & Kolb, D. (2007, February 7). *Experiential Learning Theory Bibliography*. Retrieved from Learning from Experience website: www.learningfrom experience.com.

Lancaster, L., & Stillman, D. (2002). *When generations collide*. New York, NY: Harper Collins.

Lewis, L. H., & Williams, C. J. (1994). *Experiential learning past and present*. New York, NY: Jossey-Bass.

Lindeman, E. (1926). *The meaning of adult education.* New York, NY: New Republic.

Maslow, A. H. (1943). *A theory of human motivation.* Psychological Review, 370-396. *doi:10.1037/h0054346 – via psychclassics.yorku.ca.*

Majid, F. A., & Dahan, H. M. (2008). An assessment of 21st century adult learners' needs: Issues and challenges for institutions of higher education. *Strategies for Malaysian Education*, 53-76.

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach.* Thousand Oaks, CA: Sage.

McLeod, S. (2015). *Humanism*. Retrieved from Simply Psychology website: www.simplypsychology.org/humanistic.html.

Merriam, S. B., & Biereme, L. L. (2014). *Adult learning linking theory and practice*. San Francisco, CA: Jossey-Bass.

Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow, *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3-33). San Francisco, CA: Jossey-Bass.

Mezirow, J., & Taylor, E. W. (2009). *Transformative learning in practice.* San Francisco, CA: Jossey-Bass.

Michelson, E. (2012). If the self is a text, what genre is it? Structure and ideology in narratives of adult learning. *Adult Education Quarterly*, 199-214.

Mohammed, M. (2009). Don't give me a fish; Teach me how to fish. *Adult Learning*, 15-18.

Moll, L. C. (2014). *Vygotsky, L.S*. New York, NY: Routledge.

Munro, Roderick A., & Rice-Munro, Elizabeth J. (2004). Learning styles, teaching approaches, and technology. *Journal for Quality and Participation,* 26-32.

Nagy, P. (2000). The three roles of assessment: Gatekeeping, accountability, and instructional diagnosis. *Canadian Journal of Education*, 262-279.

Nardi, D.A., & Kremer, M.A. (2003). Learning outcomes and self-assessments of baccalaureate students in an introduction to nursing course. *The Journal of Scholarship of Teaching and Learning*, 43-56.

National Commission of Teaching America's Future. (2010). *Team up for 21st century for teaching and learning.* New York: National Commission of Teaching America's Future.

Norman, G., Schmidt, H. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine,* 557-565.

Northwestern Mutual (2016, February 10). *2016 Northwestern Mutual Planning & Progress Study.* Retrieved from Northwestern Mutual: www.northwesternmutual.com.

Ormrod, J. (2012). Constructivism. In J. Ormrod, *Human learning* (pp. 154-155). Boston, MASS: Pearson.

Ornstein, Allan C; Levine, Daniel U. (1993). *Foundations of education.* Boston, MASS: Houghton.

Pedrosa de Jesus, H., Almeida, P., & Watts, M. (2004). Questioning styles and students' learning: Four case studies. *Educational Psychology, 24*(4), 531-548.

Rangachari, P. K. (2015). Drugs, devices, and desires: A historical Exploration of Medical Technology. In A. Walker, H. Leary, C. Hmelo-Silver, & P. Ertmer, *Essential readings in problem-based learning* (pp. 261-279). West Lafayette, IN: Purdue University Press.

Raubinger; R., Piper, & West. (1969). *The development of secondary education.* New York, NY: Macmillan.

Rentner, D. S., & Kober, N. (2014). *Common core state standards in 2014: Districts' perceptions, progress, and challenges*. Washington, D.C.: Center of Education Policy.

Robinson, M. T. (2015, October 11). *CareerPlanner*. Retrieved from CareerPlanner website: www.careerplanner.com.

Rogers, C. (1969). *Freedom to Learn: A View of What Education Might Become*. Columbus, OH: Charles Merill.

Ruey, S. (2010). A case study of constructivist instructional strategies for adult online learning. *British Journal of Educational Technology*, 706-720.

Ruffalo Noel Levitz. (2017, March 12). *Adult Learning Inventory*. Retrieved from Ruffalo Noel Levitz: www.ruffalonl.com.

Russ-Eft, D. (2004). *Toward a meta-theory of learning and performance*, Oregon State University.

Sandeen, C. (2008). Boomers, Xers, and Millennials: Who are they and what do they really want from continuing higher education? *Continuing Higher Education Review*, 11-29.

Sandlin, J., Wright, R., & Clark, C. (2011). Reexamining theories of adult learning and adult development through the lenses of public pedagogy. *Adult Education Quarterly*, 3-23.

Smith, B. L., MacGregor, J., Matthews, R., & Gabelnick F. (2004). *Learning communities: Reforming undergraduate education.* San Francisco, CA: Jossey-Bass.

Smith, M. (2010, February 7). David A. Kolb on experiential learning. Retrieved from Informal Education website: http://infed.org.

Smith, T. & Ravitz, J. (2008). Problem based learning in college economics. *Academic Exchange Quarterly*, 22-28.

Soares, L. (2013). Post-traditional learners and the transformation of postsecondary education: A manifesto for college leaders. *American Council on Education*, 1-18.

Spigner-Littles, D. A. (1999). Constructivism: A paradigm for older learners. *Educational Gerontology*, 203-209.

Srinivasan, M. M., Wilkes, M. P., & Stevenson, F. M. (2007). Comparing problem-based learning with case based learning. *Academic Medicine*, 74-82.

Statistics Solutions. (2013). Data analysis plan: Bivariate (Pearson) correlation. Retrieved from www.statisticsolutions.com.

Stratton, M., & Julien, M. (2014). Xtranormal learning for millennials: An innovative tool for group projects. *Journal of Management Education*, 259-281.

Stinson, J., & Milter, R. (1996). Problem-based learning in business education: Curriculum design and implementation issues. *Bringing problem-based learning to higher education: Theory and practice.* San Francisco, CA: Jossey-Bass.

Takahashi, S., & Saito, E. (2013). Unraveling the process and meaning of problem-based learning experiences. *Higher Education*, 693-706.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences.* Thousand Oaks, CA: Sage.

Thorndike, E., Bregman, E., Tilton, J., & Woodyard, E. (1928). *Adult learning.* New York, NY: Macmillan.

Tough, A. M. (1971). *The adult's learning projects: A fresh approach to theory and practice in adult learning.* Ontario, Canada: Ontario Institute for Studies in Education.

United States Department of Education, National Center for Education Statistics. (2012). *Integrated Postsecondary Education Data System (IPEDS-EF:96).* Retrieved from National Center for Education Statistics website: https//www.nces.ed.gov.

United States Department of Veterans Affairs. (2006, December 31). VA History in Brief. Retrieved from Veterans Administration Government website: https://www.va.gov/opa/publications/archives/docs/history_in_brief.pdf.

United States Department of Veteran Affairs. (2013, November 21). *Education and Training*. Retrieved from U.S. Department of Veterans Affairs Website: http://www.benefits.va.gov/gibill/history.asp.

Van Dyk, D. (2008, May 1). Who's holding the handbag? A new generation of consumers. *Time Magazine.*

Villar, F., Triado, C., Pinazo, S., Montserrat, C., & Sole, C. (2010). Reasons for older adult participation in university programs in Spain. *Education Gerontology*, 244-259.

Walker, A. (2015). Summarizing and assessing the impact of problem based learning, *Essential readings in problem-based learning* (pp. 275-279). West Lafayette, IN: Purdue University Press.

Walker, J. T., Martin, T., White, J., Elliott, R., Norwood, A., & Mangum, C. (2006). Generational age differences in nursing students' preferences for teaching methods. *Journal of Nursing Education, 45*(9), 371-374.

Watt, S., Simpson, C., McKillop, C., & Nunn, V. (2002). Electronic course surveys: Does automating feedback and reporting give better results? *Assessment & Evaluation in Higher Education.* 27(4), 325–337.

Westbrook, R. B. (1991). *John Dewey and American democracy.* Cornell University Press.

Westerman, J. (2007). Motivating millennials in the classroom. *Teaching Excellence*, 5.

White, P. (2012). Modelling the learning divide: Predicting participation in adult learning and future learning intentions. *British Educational Research Journal*, 153-175.

Xian, H., & Madhavan, K. (2015). A scientometric, large-scale data, and visualization-based analysis of the PBL literature. Walker, H. Leary, C. Hmelo-Silber, & P. Ertmer, *Essential readings in problem-based learning* (pp. 281-302). West Lafayette, IN: Purdue University Press.

Zemke, R., & Zemke, S. (1981). 30 things we know for sure about adult learning. *Training*, 46-52.

Appendices

Appendix A: Instructional Preference Electronic Survey

To Research Participant: The title of this study is: **A phenomenological study of the generational differences of adult learners' preferred instructional methods in post-secondary business programs**

You are invited to be in a research study to examine the educational preferences of adult learners across generations. You were selected as a possible participant because you are currently enrolled in a business degree program. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Cynthia West, Doctor of Education student, at the University of Minnesota Duluth as part of her dissertation research.

If you agree to be in this study, I would ask you to do the following: Access the survey and complete the electronic survey. There are 35 questions that indicate the importance of your instructional preferences and delivery of your business program. This survey should take you 30 minutes to complete and your responses are very important to my research goals. Thank you for taking the time out of your busy schedule to respond to this survey.

The records of this study will be kept secure and private. In any sort of report, I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and I alone as the researcher will have access to the records. Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or the business program in which you are enrolled. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

This is an online survey and by entering the survey you are providing consent to be a participant and acknowledgment of the information above.

The researcher conducting this study is Cynthia West. If you have questions, you are encouraged to contact her at westx038@d.umn.edu. This researcher is a student and her adviser's name is Dr. Joyce Strand. Dr. Strand's contact information is (218)726-8182 or jstrand1@d.umn.edu. If you have questions or concerns regarding this study and would like to discuss with someone other than the researcher, you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. SE, Minneapolis, Minnesota 55455; (612)625-1650.

Thank you for your participation!

Q2 The following survey is an effort to determine your perception of the business program in which you are currently enrolled.

Q3 The following are short answer questions about your reasons for selecting your current business program.

Q4 What was your primary reason for choosing your business program?

Q5 What were your secondary reasons, if any, for choosing your business program?

Q6 Preferences of teaching methodologies in your business program. Select the appropriate level of importance to you from (1) to (7)

	Not Important (1) (1)	Not very important (2) (2)	Somewhat unimportant (3) (3)	Neutral (4) (4)	Somewhat important (5) (5)	Very important (6) (6)	Extremely important (7) (7)
1.Listening to instructor lecture (1)	❍	❍	❍	❍	❍	❍	❍
2.Classroom discussion of reading assignment (2)	❍	❍	❍	❍	❍	❍	❍
3. Work in groups with peers (3)	❍	❍	❍	❍	❍	❍	❍
4. Case studies applicable to work & career goals (4)	❍	❍	❍	❍	❍	❍	❍
5.Assignments relevant to career goals (5)	❍	❍	❍	❍	❍	❍	❍
6.Visual aids when learning new concepts (6)	❍	❍	❍	❍	❍	❍	❍
7.Work individually (7)	❍	❍	❍	❍	❍	❍	❍
8.Participate in class discussions (8)	❍	❍	❍	❍	❍	❍	❍
9. Web-based course (9)	❍	❍	❍	❍	❍	❍	❍
10.Instructor shared experiences to make relevant point (10)	❍	❍	❍	❍	❍	❍	❍
11.Collaboration with peers (11)	❍	❍	❍	❍	❍	❍	❍

Q7 Preferences of teaching methodologies in your business program. Select the appropriate level of importance to you from (1) to (7)

	Not Important (1) (1)	Not very important (2) (2)	Somewhat unimportant (3) (3)	Neutral (4) (4)	Somewhat important (5) (5)	Very important (6) (6)	Extremely important (7) (7)
12. Hybrid combination of web-based & classroom learning (1)	❍	❍	❍	❍	❍	❍	❍
13. Assignments requiring technology (2)	❍	❍	❍	❍	❍	❍	❍
14.Supplemental hand-outs with class lecture (3)	❍	❍	❍	❍	❍	❍	❍
15.Self-directed learning (4)	❍	❍	❍	❍	❍	❍	❍
16.Instructor provides structure and guidance (5)	❍	❍	❍	❍	❍	❍	❍
17.Academic relationship with instructor (6)	❍	❍	❍	❍	❍	❍	❍
18 All course work counts toward a grade (7)	❍	❍	❍	❍	❍	❍	❍
19. Material consistent with overall program objectives (8)	❍	❍	❍	❍	❍	❍	❍
20 Participate in group/team assignments (9)	❍	❍	❍	❍	❍	❍	❍
21 Reflection & critical thinking (10)	❍	❍	❍	❍	❍	❍	❍
22.Assignments that strengthen	❍	❍	❍	❍	❍	❍	❍

problem solving skills (11) 23.Problem solving real business (12)	❍	❍	❍	❍	❍	❍	❍

Q8 Check the five most effective teaching methods you prefer

_____ Lecture (1)

_____ Case Studies (2)

_____ Relevant Business Stories (3)

_____ Technology based assignments (4)

_____ Handouts (5)

_____ Audio Aids (recorded lectures, expert statements) (6)

_____ Visual Aids (video, images, diagrams) (7)

_____ Group Activities (presentations, working with peers) (8)

_____ Games (9)

_____ Simulations (10)
_____ Group Discussions (11)

_____ Team Assignments (12)

_____ Problem solving for real business (13)

_____ Internships (14)

Q9 Demographic Information

Q11 Gender/Identity
❍ Male (1)
❍ Female (2)

Q12 Age
- ❍ 20 and under (1)
- ❍ 21-34 (2)
- ❍ 35-50 (3)
- ❍ 51 and over (4)

Q13 Race/Ethnicity
- ❍ African-American (1)
- ❍ American Indian or Alaskan Native (2)
- ❍ Asian or Pacific Islander (3)
- ❍ Caucasian/White (4)
- ❍ Hispanic (5)
- ❍ Other (6)
- ❍ Prefer not to respond (7)

Q14 Current Business Program
- ❍ Associate Degree (1)
- ❍ Bachelor's Degree (2)
- ❍ Graduate Degree (3)
- ❍ Other (4)

Q15 Please name your school and program name:

Q16 Employment
- ❍ Full-time (1)
- ❍ Part-time (2)
- ❍ Not employed (3)

Q17 First Generation College Student
- ❍ Yes (1)
- ❍ No (2)

Q18 Would you be willing to participate in a confidential 60-minute interview with the researcher regarding your educational experience as an adult learner?
- ❍ Yes (1)
- ❍ No (2)

Q19 If you answered yes to the interview above please provide email contact information below. Thank you.

Appendix B: Interview Consent Form and Interview Questions

CONSENT FORM
A phenomenological study of the generational differences of adult learners' preferred instructional methods in post-secondary business programs

You are invited to be in a research study to examine the educational preferences of adult learners across generations. You were selected as a possible participant because you indicated your willingness to be interviewed on the electronic survey. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Cynthia West, EdD doctoral candidate, Department of Education at the University of Minnesota Duluth.

Background Information:

The purpose of this study is to examine the instructional preferences of adult learners' and how it affects their choice in post-secondary business programs at the community college, 4-year bachelor degree, and graduate degree levels.

Procedures:

If you agree to be in this study, you will be asked to participate in one interview session lasting about 60 minutes. The interview session will be digitally recorded. You can refuse to answer any of the questions during the interview session. You also have a right to review your transcripts of the interview.

Risks and Benefits of being in the Study:

There are no known risks associated with your participation with this research. However, if you find the nature of some of the questions too sensitive, the researcher will respect your wishes to move to the next question.

Although you will receive no direct benefits, this research may help post-secondary business programs better understand and meet the educational needs of adult learners.

Compensation:

There is no compensation for being a participant in this interview.

Confidentiality:

The records of this study will be kept private. In any report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. Study data will be encrypted according to current University policy for protection of confidentiality. The digital recording of the interview will only be accessed by the researcher and used only for the purposes of this study.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or other cooperating post-secondary business programs. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is: Cynthia West. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at westx038@d.umn.edu. This researcher is a student and her adviser's name is Dr. Joyce Strand. Dr. Strand's contact information is (218)726-8182 or jstrand1@d.umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature: _____ Date: _____

Signature of Investigator: _____ Date: _____

A phenomenological study of the generational differences of adult learners' preferred instructional methods in post-secondary business programs

INTERVIEW QUESTIONS:

1. Please tell me about your educational background and career leading up to your decision to attend your current business program. Please identify what business program you are enrolled in and where you are in the program.

2. Tell me about your professional goals.

3. Describe an average working day that includes your business program activity.

4. I would like your reaction to being an adult learner so far. What was the most positive, most unexpected, and most negative?

5. Practice based learning is students developing a solution for an actual and important business problem. How have you experienced practice-based learning in your business program?

6. What activities, situations or circumstances have encouraged your participation in practice based learning? Or discouraged your participation in practice based learning?

7. Before you decided to enroll in your business program, what information did you consider in your decision process?

8. If you could change one thing in your current business program to improve its effectiveness, what would that be?

9. What additional information regarding your educational experience would you like to share?

Appendix C: Instructional Preference Survey Flyer

VOLUNTEERS NEEDED FOR RESEARCH STUDY

A study of the generational differences of adult learners' preferred instructional methods in post-secondary business programs

You were selected as a possible participant because you are currently enrolled in a business degree program.

You are invited to be in a research study to examine the educational preferences of adult learners across generations.

Survey Link: TinyURL.com/jqxta7g

If you agree to be in this study, I would ask you to do the following:

- Access the survey link and complete the electronic survey.
- There are 35 questions that indicate the importance of the selection and delivery of your business program.
- The survey should take you 30 minutes to complete and your responses are very important to my research goals.
- This is an online survey and by entering the survey you are providing consent to be a participant.

The records of this study will be kept secure and private. In any report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and I alone as the researcher will have access to the records. This study is being conducted by: Cynthia West, Doctor of Education student, at the University of Minnesota – Duluth as part of her dissertation research.
I thank you for taking the time out of your busy schedule to respond to this survey!

Appendix D: Interview Units of Meaning Relevant to Research Question

Participant One

3. He wants as much flexibility for career when he graduates
4. He feels that his business program is allowing him to get to his professional goals
7. He strongly identifies with millennials
8. He feels that millennials identify themselves as a movement than any other generation.
9. He feels that this movement consists of political, social conscience, arts, diverse culture and focus on careers that they are more passionate about
13. He feels that his business program is meeting his needs.
15. He feels that his is given the opportunity to practice in his field
17. When a class is theory based, he is lecture oriented.
19. In more practical classes, he likes more collaborative learning.
20. He prefers collaboration with both instructors and peers.
22. He identified a few older students in his class as being in their late 20's or 30's.
23. He felt there was one Gen X in each class.
25. He would like to set the structure of his class for himself.
26. He would like to have total control over his degree program and course choice.
27. He felt he has been tailoring his degree program to what he wants to accomplish when he graduates.
28. He has experienced experiential and problem based learning
29. He has participated in professional groups in the community for the experience.
30. He has a business internship as part of a self study.
31. His experience is valuable because he will have a realistic idea of what is beyond graduation.
35. When he graduated from high school there was a sense of security of going the traditional college route.
36. If he could look back, he would have been tempted to look at a problem based program based on real world applications
38. He would look for a problem based program if he were considering a Masters program.
41. His advice to millennials is to wait before beginning an undergraduate program so the student has some focus.
42. This is because of the cost of school.
43. This is because many millennial students began school with no focus on area of study.
46. He stated that the student will adapt to different learning styles.

Note: General interview statements not relevant to the phenomenon being studied are excluded from the units of meaning relevant to research question, therefore numbering is not sequential.

Participant Two

2. She feels that she does not fit into the millennial category
6. After several years she decided to return to school
7. Choose college because of close proximity to home
8. She just chose business without much thought
9. She feels under appreciated
10. She has so much life knowledge
13. Instructor for Business Management, offers teamwork and collaboration in class
14. In other classes no collaboration.
16. She prefers ppt (power point) and instructor provided written word
18. She likes lecture with visual support
19. She likes case studies.
21. She has worked directly with a business as part of her business class
24. As part of Business Management class, the class did go to a business
25. The class went to observe to develop a business plan
27. She felt that she received so much information from the experience
30. She felt that that it would be beneficial to allow students to see more businesses
31. Yes I have a goal to own a group home
32. She has work experience in four different group homes.
35. She was in a smart classroom
36. Instructors are not familiar with technology
38. She does not feel she fits in like the 18 year-old students
40. She participates more and answers the questions in the class
42. She is a full time student taking 19 credits
46. She has taken the same prerequisites four times due to college transfers
47. Retaking prerequisites becomes boring and additional cost
50. She has not been offered credit for her work experience
51. When she looks for a bachelor program, she will look for a problem based learning program
52. She does not learn unless she has the experience
53. She likes to be hands on
56. College has good sources of student communication and support services
57. She would like child care at all campuses
58. Bookstores should be available at all campuses
59. The student activities keep people involved and unified

Note: General interview statements not relevant to the phenomenon being studied are excluded from the units of meaning relevant to research question, therefore numbering is not sequential.

Participant Three

1. She looked at her program because of national reputation.
2. Program has a good business and research program.
3. Program offered the degree program she was looking for
4. She looked at other schools just for backup schools
6. She felt that she would stay at university to pursue a higher degree
9. She is currently taking chemistry as a general education class
10. She indicated that in her general education classes are primarily lecture.
11. There is small group activity in chemistry
12. She likes being instructed by the professor, but finds it hard not to ask questions.
13. She would prefer more discussion.
14. She feels it is not too bad to study on her own
15. Her ideal class would be in science and where the professor interacts with the student, makes sure students understand, and does not just throw information at the students.
16. She feels that she is a millennial
17. She wants more interaction in class.
18. She would like more examples of problems and not just complex information.
19. She would like more examples of how the information will be used in life.
20. She does not feel she gets time to think about what she is learning.
21. She refers to her notes after class and clarifies questions on the internet.
22. She feels that she needs to study on her own with the internet.
24. She has an adviser.
27. She would want to improve the large classes and lecture.
28. She would like more help in class with small group discussion.
29. There is a difference between information presented by the professor and the small group leader
32. She feels her anthropology instructor brings his experience into the class.
33. She feels that her math class is text book based.
34. She stated instruction depends on the professor.
35. She would probably consider an online class.
36. She feels that if she is teaching herself, she could take a class online.
37. She prefers visual instruction.
38. She does not prefer lecture.
39. She prefers the anthropology class because of the participation in class and real world examples.

Note: General interview statements not relevant to the phenomenon being studied are excluded from the units of meaning relevant to research question, therefore numbering is not sequential.

Participant Four

1. She chose university because she wanted to stay close to home
2. She stated that the program is so desirable because the quality of classes and instructors are high.
3. She also felt that the extra curricular programs were good.
6. She finds it harder to learn in lecture only classes.
7. She feels it is hard to keep up with what the professor is saying and writing notes.
8. She feels it is hard to establish a working relationship with the professor in a lecture based class.
9. She has group projects in her classes.
10. She has had classes with group project due every couple of weeks.
12. She does not necessarily feel that prior work experience is a requirement.
13. She breaks classes into base level knowledge and experience is not necessary.
14. She agrees that her program promotes problem based learning.
15. She has participated in a business challenge working with a business on a problem, identify solution and present the solution.
17. She considers herself a millennial
18. She states that there a lot of stereotypes for millennials.
19. She sees being addicted to technology a good thing.
20. She welcomes new technology and says that will help her in the future
21. She has observed that the students in her classes are primarily her own age.
22. She has not noticed any older generations with the exception of larger lecture classes
23. Her professional goal is to work with businesses to improve their productivity
25. She does receive notifications on internship information and resume workshops.
27. She feels that the internship pushes students to do something meaningful.
29. She enjoys classes with hands on experience.
30. She feels that the general education classes should be related to the student's major.
31. Now that she is a Junior, she is more focused on classes relevant to her major.

Note: General interview statements not relevant to the phenomenon being studied are excluded from the units of meaning relevant to research question, therefore numbering is not sequential.

Participant Five

6. The three things she considered when choosing a MBA program were small class size, career assistance and a campus feel.
7. The MBA program allows student to segment or focus their major outside the generic majors.
13. She considers herself more of a Gen X.
15. She did work after finishing her undergrad degree.
23. She clarified that in the core classes case work is done and in the specialization classes they do outside work.
24. She felt that not all skill sets come with the degree.
30. She feels that MBA students need 5-6 years of experience before beginning the MBA.
31. She needs technology and computers due to her dyslexic condition.
33. She prefers group work.
34. She prefers videos presented online.
35. She prefers practice problems to learn by doing.
36. She stated other universities promote a problem based program, but wasn't a draw for her because of the huge class size and questions about their career placement and infrastructure.
37. Other university programs have no assurances, she said students need to apply for the practicum.
38. Her current program is allowing her to work with many local businesses.
39. Applied learning was a big draw for her for choosing this school.
40. She stated that companies come to campus regularly to talk and present case studies.
41. When she came to campus is when UW talked about their applied learning.
42. She stated that the international trip gets promoted as an opportunity to work with global companies.
44. She felt that the problem based learning is not promoted until the student talks to the people in the program.
45. The value in problem based learning is moving away from case studies.
47. She stated that employers do not want an autonomic employee.
48. Employers want employees who can lead a team and manage people.
50. She feels that the professors have trouble with technology.
51. Her experience is that discussion boards and sites are not coordinated.
52. Students and professors do not how use the software because it is frequently changed.
56. She feels that because students have a wide or narrow depth of experience, the professor teaches to the median.

Note: General interview statements not relevant to the phenomenon being studied are excluded from the units of meaning relevant to research question, therefore numbering is not sequential.

Participant Six

1. A factor for him was place.
2. He was looking for a cultural experience outside of India.
3. He choose the United States because the U.S. has the reputation of having the best MBA programs.
4. He also wanted a robust supply chain program.
5. The three factors for him were: Curriculum of supply chain, financial aid, and the smaller size of the program.
6. He worked approximately four years before beginning his MBA
7. He does not categorize himself in a specific generational category
8. He feels he connects with them all and not a specific category
9. He is a full-time student.
10. He indicated that problem based learning varies in classes.
11. He feels that the most basic level is the case study method.
12. He feels that the most applicable problem based level would be the internship.
13. All MBA students are required to do an internship.
14. He said there are consulting projects as recommendations to businesses.
15. Then there are projects where the students work more closely with implementation of ideas.
16. It is a case study until the students start making a difference in a company.
17. He likes the problem based learning style.
18. He wanted a MBA because he felt it would give him structure to his experience.
19. His academic goal is to relate his actual work experiences with the classroom world.
20. He stated that there are definitely classes that are lecture based.
21. He does not mind lecture based because that is what his past educational experience was.
23. His learning style is discussion oriented or step by step problem solving.
25. He would rate case based learning as one of his top three instructional preferences.
26. Discussion based would be one.
27. White board problem solving would also be a preferred instructional preference.
28. He stated that there are MBA programs advertising their program as problem based learning.
29. He stated that there are MBA programs that are entirely case based methodology.
31. He feels that the majority of MBA students come with work experience.
32. The MBA students seem to know what their career goals are before entering the program.

Note: General interview statements not relevant to the phenomenon being studied are excluded from the units of meaning relevant to research question, therefore numbering is not sequential.

Appendix E: Reprint Permission for Figure 1 Experiential Learning Cycle

Copyright Clearance Center

Confirmation Number: 11631021
Order Date: 03/10/2017
If you paid by credit card, your order will be finalized and your card will be charged within 24 hours. If you choose to be invoiced, you can change or cancel your order until the invoice is generated.

Payment Information

Cynthia West
westx038@d.umn.edu
+1 (608) 635-8291

Order Details

Learning styles and learning: a key to meeting the accountability demands in education

- **Order detail ID:**70343369
- **Order License Id:**4065411233010
- **ISBN:**978-1-59454-608-2
- **Publication Type:** Book
- **Publisher:** Nova Science Publishers
- **Author/Editor:** Sims, Ronald R.; Sims, Serbrenia J.
- **Permission Status:** **Granted**
- **Permission type:** Republish or display content
- **Type of use:** Thesis/Dissertation
  Note: This item will be invoiced or charged separately through CCC's **Rights Link** service.