

Olivet Nazarene University

Digital Commons @ Olivet

Ed.D. Dissertations

School of Graduate and Continuing Studies

5-1-2017

Gender Diversity in Business Schools: Examining the Learning Differences between Traditional Undergraduate Male and Female Students

Lisa A. Wallentine

Olivet Nazarene University, lwallentine@mnu.edu

Follow this and additional works at: https://digitalcommons.olivet.edu/edd_diss



This work is licensed under a [Creative Commons Attribution-Noncommercial 4.0 License](https://creativecommons.org/licenses/by-nc/4.0/)

Recommended Citation

Wallentine, Lisa A., "Gender Diversity in Business Schools: Examining the Learning Differences between Traditional Undergraduate Male and Female Students" (2017). *Ed.D. Dissertations*. 111.

https://digitalcommons.olivet.edu/edd_diss/111

This Dissertation is brought to you for free and open access by the School of Graduate and Continuing Studies at Digital Commons @ Olivet. It has been accepted for inclusion in Ed.D. Dissertations by an authorized administrator of Digital Commons @ Olivet. For more information, please contact digitalcommons@olivet.edu.

GENDER DIVERSITY IN BUSINESS SCHOOLS:
EXAMINING THE LEARNING DIFFERENCES BETWEEN TRADITIONAL
UNDERGRADUATE MALE AND FEMALE STUDENTS

by

Lisa A. Wallentine

Dissertation

Submitted to the Faculty of

Olivet Nazarene University

School of Graduate and Continuing Studies

In Partial Fulfillment of the Requirements for

the Degree of

Doctor of Education

In

Ethical Leadership

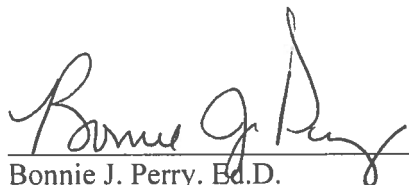
May 2017

GENDER DIVERSITY IN BUSINESS SCHOOLS: EXAMINING
THE LEARNING DIFFERENCES BETWEEN TRADITIONAL
UNDERGRADUATE MALE AND FEMALE STUDENTS

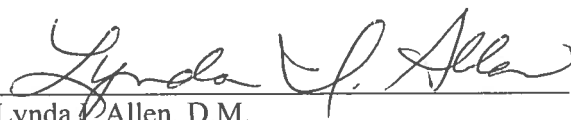
by

Lisa A. Wallentine

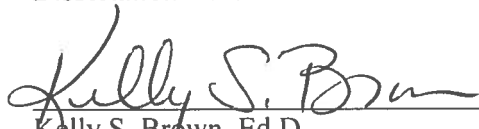
Dissertation


Bonnie J. Perry, Ed.D.
Dissertation Adviser

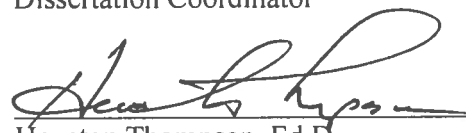
Mar 25, 2017


Lynda L. Allen, D.M.
Dissertation Reader


3/25/17


Kelly S. Brown, Ed.D.
Dissertation Coordinator

3/25/17


Houston Thompson, Ed.D.
Program Director

March 25, 2017


Carol Maxson, Ed.D.
Vice President for Academic Affairs

March 25, 2017

© 2017

Lisa A. Wallentine

All Rights Reserved

ACKNOWLEDGMENTS

Certainly, work of this magnitude cannot be accomplished alone. My ability to complete this dissertation is a result of the support and influence of people who have impacted my life, both personally and professionally.

I am grateful to my mom who instilled in me the passion for lifelong learning; my dad for teaching me to work hard and to become a proficient writer; my siblings who inspired me to achieve; my in-laws who offered unwavering support; the Ed.D. faculty who fueled my passion for academic excellence; my dissertation adviser, Dr. Bonnie Perry, and reader, Dr. Lynda Allen, who skillfully helped me navigate the process; my research assistant, Clair Plummer, who added joy to this journey; my Cohort XII friends who reminded me of what was truly important; my MNU colleagues who encouraged me every step of the way; and every female mentor who has taken the time to invest in me.

Thank you to my husband, Wally, for your unconditional love and support; your extra involvement was tangible and evident. You helped make this dream possible for me! Thank you to my children, Zach, Kylee, and Logan for being understanding while I pursued this degree; I pray you have grown by watching me rise to this challenge.

I thank Olivet Nazarene University and MidAmerica Nazarene University for the opportunity to pursue my doctoral studies. Thank you to Dr. Houston Thompson and Dr. Sue Moore for your strong and effective leadership of this outstanding program.

Above all, I give thanks and praise to the Lord, from whom all blessings flow!

DEDICATION

To my family, my biggest fans.

As would be most fitting in our family for an occasion like this,
imagine me raising your arms high in the air and shouting at the top of my lungs:

Champions of the world --- Team Wallentine!!!

ABSTRACT

This study was motivated by the researcher's interest in the gender disparity occurring in U.S. business schools. Female representation in business schools reached a highpoint in 2002-03 with women earning 50.6% of business degrees; however, by 2013-14 women were earning less than half, 47.4%, of business degrees. Moreover, female representation in business schools was not proportional to their representation in the overall university with females earning 57.1% of all bachelor's degrees. The purpose of the current study was to investigate differences in the learning styles and learning experiences between male and female traditional undergraduate business students to recommend strategies for business schools that address the unique learning needs of female students. The research included input from junior and senior business students from two small, private Midwestern universities. The researcher gathered quantitative and qualitative input from 176 students using a survey instrument with closed and open-ended questions and qualitative input from 22 students using four gender-specific focus groups. The findings of the research revealed that there were no significant differences between the learning styles of male and female students; however, there was a significant difference between male and female student's group experiences and attitudes toward male professors vs. female professors. The findings of this study will provide business school leadership with valuable information for recruiting and retaining female college students by recommending ways to create more appealing learning environments for women.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Statement of the Problem.....	6
Background.....	10
Research Questions.....	17
Description of Terms	18
Significance of the Study	18
Process to Accomplish.....	21
Summary	26
II. REVIEW OF THE LITERATURE.....	28
Introduction.....	28
History of Women’s Role in the US Workforce.....	30
History of Higher Education for Women in the US	51
Learning Style Theory	76
Experiential Learning Theory	88
Conclusion	92
Summary	93
III. METHODOLOGY	95
Introduction.....	95

Chapter	Page
Research Design.....	96
Population and Sample	101
Data Collection	103
Analytical Methods.....	104
Limitations	107
Summary	108
IV. FINDINGS AND CONCLUSIONS.....	109
Introduction.....	109
Findings.....	114
Conclusions.....	136
Implications and Recommendations	139
REFERENCES	142
APPENDICES	
A. Survey Instrument	166
B. Consent Forms.....	171
C. Focus Group Moderator Guide.....	174

LIST OF TABLES

Table	Page
Table 1: Females Earning Bachelor’s Degrees in the U.S.....	5
Table 2: Female Faculty Representation in Universities	7
Table 3: Female Student and Faculty Representation at Top Tier Business Schools.....	8
Table 4: Demographics of Study Participants Compared to Business Department Population	113
Table 5: Crosstabulation of Learning Style and Gender.....	115
Table 6: Kolb LSI Subscale Scores by Gender.....	116
Table 7: Learning Style x Gender Analysis of Variance in Satisfaction Rating Scores.	120
Table 8: Satisfaction Scores for Learning Style Groups by Gender	120
Table 9: Learning Style x Gender Analysis of Variance in Student Assertiveness Rating Scores	122
Table 10: Student Assertiveness Scores for Learning Style Groups by Gender	123
Table 11: Learning Style x Gender Analysis of Variance in Group Experiences Rating Scores	124
Table 12: Group Experiences Scores for Learning Style Groups by Gender	124
Table 13: Group Experiences Subscale Scores by Gender	125
Table 14: Learning Style x Gender Analysis of Variance in Business Department Environment Scores	128
Table 15: Business Department Environment Scores for Learning Style Groups by Gender.....	129

Table	Page
Table 16: Learning Style x Gender Analysis of Variance in Attitude Toward Professors Scores	131
Table 17: Attitude Toward Professors Scores for Learning Style Groups by Gender....	132
Table 18: Attitude Toward Professors Scores by Gender	133

LIST OF FIGURES

Figure	Page
<i>Figure 1.</i> Plot of the intersection from 2 x 4 between-subjects Factorial ANOVA	121

CHAPTER I

INTRODUCTION

The task of colleges and universities is to equip all students for success. In recent years, that job has become more challenging due, in part, to the increasingly diverse student population. In particular, universities nationwide have experienced greater numbers of female students than ever before (Goldin, Katz, & Kuziemko, 2006); business schools have also experienced growth in the number of female students. However, according to Davis & Geyfman (2015), the task of recruiting and retaining females in business programs has become increasingly difficult. Business school leaders desire to find ways to create appealing learning environments for female students who may bring different learning styles and characteristics (Crawford, Alhreish, and Popovich, 2012) into previously male-dominated classrooms (Goldin et al.).

Although most business professors possess high levels of education and practical expertise from working in their fields, many have not been equipped with the pedagogical training necessary to meet the educational challenges of gender diversity (Wooldridge, 1995). With an ever-changing population of students and unique learning styles, business schools must be prepared to hire appropriately qualified faculty, provide the most effective professional development and training, and adapt instructional methods and curriculum to meet the learning needs of the female business student population in the 21st century classroom.

Business school accrediting organizations require university business schools to maintain prescribed levels of faculty qualifications based largely on expertise in the field, academic credentials, scholarly activity, and professional development. In order to meet those standards, accredited universities hire individuals who are academically or professionally qualified to teach in specific content-areas (Accreditation Council for Business Schools and Programs, 2014; Association to Advance Collegiate Schools of Business [AACSB], 2009). Therefore, business professors often have business degrees in general management such as a Master's in Business Administration or Doctorate in Business Administration. Some have a Juris Doctorate and teach business law. Others earn a Ph.D. in a specific business area such as management, marketing, economics, accounting, finance, international business, or leadership. Many have earned additional discipline specific certificates including Certified Public Accountant, Certified Data Processor, Certified Financial Manager, Certified Management Accountant, and Professional in Human Resources in areas appropriate to the assigned teaching responsibility. In addition to their degrees and certifications, many business professors have employment experience in the field of business and bring real-world practice into the classroom.

Although all of these qualifications and experiences may be valuable in knowing the appropriate content to deliver, many business professors have not received formal training on how to deliver that content in an educational setting. "Traditional doctoral programs, which form the core of the training of university faculty, do not concern themselves with teaching future faculty about the teaching and learning process" (Wooldridge, 1995, p. 49). Therefore, the average business professor is likely to know a

great deal about the content, but not necessarily anything about effectively teaching it to the students.

According to previous research, the majority of teachers replicate the teaching methods from which they learned as students. Because many of them may have learned successfully from lecture-based instruction taught from an instructor-centered perspective, they model that same approach for their own classes (Dunn & Dunn, 1979; Marshall, 1991). This methodology can result in teachers who know the content, but deliver it with little regard to the differences reflected in the student population.

Merely sharing knowledge and transferring facts to students in the college business classroom may no longer be enough. Although many definitions of learning exist, most theorists agree that “learning is an active rather than a passive process. Few people now think of learning as ‘receiving instruction’” (Sheal, 1989, p. 11). In recent years, student learning has emerged as a primary focus in higher education (O’Banion, 2010). Because the classroom is comprised of a wide variety of learners, instructors should make an effort to understand the learners’ characteristics, including preferred learning styles. For example, some students prefer to learn by doing, others by thinking, some by analyzing, and others by reflecting (Kolb, 1984). An increased knowledge and understanding of student learning styles could lead to adjusted curricular strategies that more effectively meet the needs of a diverse student population (Crawford et al., 2012).

The college business classroom has experienced considerable change during the last 65 years, specifically in terms of gender composition. In 1947, the number of undergraduate men attending college outnumbered women at a rate of 2.3:1. As the role of women in society changed over time, college enrollment among females steadily

increased. By 1981-82, a monumental shift had occurred in the composition of the traditional undergraduate student population with the number of females graduating from college outnumbering men for the first time, thus beginning a new trend (Goldin et al., 2006; U.S. Department of Education, 2015b). Since that time the percentage of females graduating from college at higher rates than men has continued; in 2014, the number of women undergraduates enrolled in college outnumbered men at a rate of approximately 1.3:1 (U.S. Department of Education, 2016b).

As the number of female graduates increased, the gender gap began to close for all types of universities including research, liberal arts, public, and private. The gender gap also began to close among all types of students including those full-time, part-time, of all ethnicities, of all abilities, in most degree areas, and internationally. Over time, the gender shift led to a new dynamic in business schools with greater gender diversity in the classroom environment (Goldin et al., 2006). In 1959-60, only 7.5% of bachelor's degrees in business were earned by women; by 2001-02, that number had increased to 50.3%. However, while the number of women in universities continued to increase, the gender parity in business schools was short-lived. By 2013-14, the number of business degrees conferred to female students had dropped to 47.4% (U.S. Department of Education, 2015a). In addition, as shown in Table 1, women were earning 57.1% of all undergraduate degrees in 2013-14, but only 42.6% of the bachelor's degrees in the field of business at AACSB accredited schools (AACSB, 2015; U.S. Department of Education, 2015b).

Table 1

Females Earning Bachelor's Degrees in the U.S.

University Type	Bachelor's Degrees Conferred to Females		Female Student Population: 10-year trend
	2003-04	2013-14	
Universities - All programs	57.5%	57.1%	Steady, dominant percentage
All Business Schools	50.3%	47.4%	Declining, minority percentage
AACSB Schools	46.5%	42.6%	Declining, minority percentage

Note. Adapted from “Table 318.10. & Table 325.25,” National Center for Education Statistics, Digest of Education Statistics. (2015a; 2015b), & “Business School Data Guide 2015,” Association to Advance Collegiate Schools of Business.

Because the focus has been on the overall increasing number of females in college, the decline of women in business schools has not received much attention (Davis & Geyfman, 2015). Ball (2012) studied 2000-2001 Department of Education student data and found that females were 40% less likely to pursue a business major than males. Although females are not equally represented in business classrooms, they still comprise a larger percentage of the business student population than they have historically. Therefore, “if business educators believe they offer a valuable education and graduates of business programs are important to society, these educators need to ask themselves how they can better serve the new mix of potential students” (p. 261).

According to Herring (2009), while the gender shift in college attendance was occurring, employers began recognizing the need for a diverse workforce. In the early 1960s, Title VII of the Civil Rights Act of 1964 facilitated additional workplace diversity by making it illegal for companies to discriminate against employees based on race, color, religion, sex, or national origin. In the 1970s and 1980s, with increased levels of workforce diversity, companies began offering diversity training. In the 1990s, employers began to recognize the economic benefits of increased diversity including better business results, an expanded talent pool, and stronger organizations. All of these workforce developments created demand for well-prepared female college graduates who could add their unique abilities to the workplace.

Workplace demand continues to exist for female employees (“Women in the workforce,” 2010). Yet, business schools have traditionally produced well-qualified male graduates for a male-dominated workforce (Goldin et al., 2006). Due to the changing gender trend in college enrollment and the fact that fewer women are pursuing business majors, business schools might experience declining enrollments in the future (Ball, 2012). Therefore, business schools may need to readjust their strategies to address the unique learning needs of female business students to effectively recruit and retain them and prepare them for success in the business world.

Statement of the Problem

Females have not maintained proportional representation in business schools. Between 2003-04 and 2013-14, the percentage of females graduating from AACSB undergraduate business schools declined from 46.5% to 42.6%; during that same time, overall female college graduation percentages remained steady at approximately 57%

(Association to Advance Collegiate Schools of Business, 2015; U.S. Department of Education, 2015b). In addition, women were not equally represented among the faculty at business schools; in 2013-14, female faculty members comprised on average only 30.6% of the business faculty at AACSB schools (Association to Advance Collegiate Schools of Business, 2014). Table 2 shows the percentages of female faculty represented across university programs compared to the female faculty represented in business schools.

Table 2

Female Faculty Representation in Universities

University Type	Female Faculty Population		Female Faculty Population: 10-year trends
	2003-04	2013-14	
Universities - All programs	43.4%	48.8%	Increasing, yet minority percentage
AACSB Schools	27.1%	30.6%	Increasing, yet minority percentage

Note. Adapted from “Table 315.10.,” National Center for Education Statistics, Digest of Education Statistics (2015c), & “Business School Data Guide 2014,” Association to Advance Collegiate Schools of Business.

Table 3 shows the percentages of female representation among students and faculty at the top tier business schools, as ranked by the Financial Times in January 2015. Not one of the top tier business schools had more than 43% female students or exceeded 27% female faculty.

Table 3

Female Student and Faculty Representation at Top Tier Business Schools

Rank	School	Female Student Percentage	Female Faculty Percentage
1	Harvard Business School	41%	25%
2	London Business School	36%	27%
3	University of Pennsylvania: Wharton	40%	22%
4	Stanford Graduate School of Business	42%	21%
5	INSEAD	31%	15%
6	Columbia Business School	36%	17%
7	IESE Business School	22%	21%
8	MIT: Sloan	39%	21%
9	University of Chicago: Booth	36%	16%
10	University of California-Berkley: Haas	43%	22%

Note. Adapted from “20-first 2015: Global gender balance scorecard: Focus on business schools,” by L. Symons, 2015, *20-first’s focus on business schools*. Retrieved from http://20-first.com/wp-content/uploads/20first_Businessschools6.pdf

Although numerous factors likely contributed to the low percentages of female business students, business schools should investigate the unique needs of female students in order to develop appropriate strategies to address the downward enrollment trend. Severiens and Ten Dam (1994) asserted that because research has shown consistent differences in male and female students’ learning styles, different instructional methods might be necessary to appeal to student learning preferences. The findings of their research also indicated that “gender inequality in educational choices and careers appears

to be partially due to the way students learn” (p. 488). Davis and Geyfman (2015) found a positive association between the number of female business students and the number of female business faculty members at undergraduate business schools, especially at private schools. Varied instructional methods and experiences, including greater gender diversity among the faculty, could contribute to a more appealing learning environment for female business students.

The relationship between gender learning styles and student learning experiences in business schools is an understudied area. Loo (2002) conducted an analysis of multiple research studies that had used Kolb’s LSI to assess the learning styles of college business majors; only seven published studies from 1976 to 1999 met those criteria. Loo found that researchers in the area of business recognized and studied learning style differences between students in some majors, but none focused on gender. Hamer (2000) noted that previous research has been conducted on the use of innovative instructional methods and their impact on student learning, but there was still a need to explore the impact of individual student characteristics on the effectiveness of instructional activities. Farazmand and Green (2012) stated that very little documentation existed regarding the learning differences between male and female students using applied learning projects and their impact on student learning outcomes. They also recognized further research was needed regarding the needs and learning styles of female students in experiential team project settings in order to provide them adequate career preparation.

The purpose of the current study was to investigate differences in the learning styles and learning experiences between male and female traditional undergraduate

business students in order to recommend strategies for business schools that address the unique learning needs of female students.

Background

Workforce Advancements for Women

Women have made important advancements during the last 50 years in workforce participation, earnings, and educational attainment. According to the U.S. Bureau of Labor Statistics (2015b), women's participation in the workforce has increased dramatically since World War II. Right after the war ended, women's labor force participation rate was less than 33%; by 2014, that number had risen to 57%. Women working full-time still do not have earnings that are equivalent to men's; however, women's earnings as a proportion of men's were at 83% in 2014, a growth of more than 20% since 1979. The number of women with college degrees working in the labor force has risen considerably since 1970. Of women ages 25 to 64 in the labor force, only 11% had a college degree in 1970, compared with 40% in 2014. Women in the 21st century have many more choices about work, schooling, and education than they had in previous years, which give them greater opportunities for advancement in the workplace.

Demand for Women in Business

Businesses are interested in recruiting and retaining female employees because of the benefits of increased workforce diversity and female leadership in the workplace ("Closing the gap," 2011; Institute of Leadership and Management, 2011). Research conducted on more than 500 United States businesses showed that increased gender diversity was associated with higher sales revenues, greater numbers of customers, and increased profit (Herring, 2009). In addition, research conducted among more than 3,000

companies worldwide found that companies with at least 15% female representation at the senior management level had higher return on equity, dividend payouts, stock prices, and stock price-equity ratios than those with less than 10% female representation (Credit Suisse, 2014).

McKinsey & Company, a global consulting firm, has been researching gender diversity for nearly a decade. Their studies have consistently revealed that companies who embraced gender diversity, specifically at the top level of the organization, experienced improvements in overall organizational performance. The original *Women Matter* study by McKinsey & Company (2007) found that companies with a higher representation of female senior managers performed better on several criteria including leadership, accountability, innovation, operating margins, and market capitalization, while also outperforming other companies in the same industry on return on equity, earnings, and increased stock prices. McKinsey & Company (2008) found that women demonstrated more of the key leadership behaviors deemed important for organizational success than men did. Furthermore, the leadership behaviors women exhibited most often were those considered necessary for addressing the most critical global challenges of the future. The conclusion of the study was that women could add value to the leadership talent pool of the future because of their uniquely suited leadership abilities, such as inspiration, participative decision-making and motivational behavior.

McKinsey & Company (2015a) found that companies with greater gender diversity at the top of the organization were 15% more likely to have earnings higher than the national industry median. The reverse was also true; those companies with the lowest levels of gender diversity at the top of the organization were less likely to meet the

national industry median. The study suggested that a positive correlation existed between gender diversity and improved company performance. These results are consistent with other research including a study conducted by the nonprofit organization Catalyst (2011) that examined the financial impact of gender diversity among Fortune 500 companies from 2005 – 2009. Companies with a higher average percentage of female directors experienced higher returns on sales and invested capital than those with a lower average percentage of female directors. In addition, companies that maintained a representation of at least three females on the board of directors for a minimum of four years financially outperformed companies without any female representation on the board for that same length of time. The companies who demonstrated a long-term commitment to gender diversity had higher returns on sales, invested capital, and equity than those who did not prioritize female involvement on the board.

Not only has workplace diversity been shown to benefit organizations, researchers have estimated its impact on the overall economy. McKinsey & Company (2011) asserted that the U.S. economy would be much smaller without the contribution of working women; their research calculated that the additional productive power added to the U.S. economy by women working from 1970 - 2010 accounted for 25% of the 2010 Gross Domestic Product (GDP). The McKinsey Global Institute (2016) estimated that maintaining the 2014 women's labor participation rate, transitioning more women from part-time to full-time jobs, and elevating women to more productive industries could add more than \$2 trillion to U.S. GDP by 2025, adding more than 10% to its otherwise expected level.

Gender Viewpoints

In order to prepare female business students for careers in the business world, business schools must understand the unique needs of these students. The impetus for the current study was based on the premise that not everyone learns new concepts in the same way; furthermore, some patterns of learning may vary consistently based on specific criteria, such as gender (Philbin, Meier, Huffman, & Boverie, 1995).

Much of the existing research on gender differences was approached from a “‘dual cultures’ framework” (Grob, Meyers, & Schuh, 1997, p. 284), the perspective that males and females are raised in a world segregated by gender and socialized to develop gender-specific identities; therefore, gender roles and behaviors are unique (Wood, 2013). Because of this socialization process, males and females demonstrate differences, even in the classroom. Researchers have identified several gender differences in the college classroom including that male students, more than female students, had positive experiences in group projects (Kaenzig, Anderson, Hyatt, & Griffin, 2006; Kaenzig, Hyatt, & Anderson, 2007) and favored researching topics to learn new material (Kulturel-Konak, D’Allegro, & Dickinson, 2011). Female students, more than male students, preferred creative thinking materials, favored learning new content by testing out implications (Kulturel et al.), and utilized collaboration opportunities when learning (Stump, Hilpert, Husman, Chung, & Kim, 2011). Research has also shown that traditional educational methods may not be as effective for female students (Philbin et al., 1995).

As a challenge to the dual cultures framework and gender differences perspective, Hyde (2005) proposed the “gender similarities hypothesis” (p. 581) suggesting that the genders share tremendous similarities. Hyde (2005) completed a review of 46 meta-

analyses conducted on psychological gender differences and concluded that males and females have most psychological characteristics in common. In fact, 78% of the effect sizes for gender differences identified in the previous studies were in the ranges small or near zero. In other words, variability within each gender was usually larger than variability between the genders (Hyde, 2007). The gender similarities hypothesis did not state that males and females were the same; there were a few areas with key differences such as motor performance, sexuality, and physical aggression. Hyde (2005) argued that purporting gender differences in other stereotypical, but scientifically unproven areas such as nurturing behavior, mathematical ability, self-esteem, and communication was harmful because it added to the “overinflated claims of gender differences” (p. 581).

Ball, Cribbie, and Steele (2013) used statistical tests of equivalence to determine that there were no significant differences between the genders on the math section of the Scholastic Aptitude Test from 1996 – 2009. According to them, the debate over gender similarities and differences continues today, with many scholars in the field still citing Maccoby and Jacklin’s (1974) comprehensive research study on the issue. Even though the research is 40 years old, it serves as a landmark, seminal study. To conduct the study, the researchers synthesized findings from more than 1,600 research studies that examined gender differences. In total, they identified consistent differences between males and females on four key variables: aggression, and verbal, visual-spatial, and mathematical abilities. No significant differences were associated with other the variables, including learning styles. However, because the findings revealed both similarities and differences between the genders, researchers on both sides of the issue have used the study to further their viewpoints (Hyde, 2005). Additionally, because of

research study findings like those of Maccoby and Jacklin and Ball et al. that yielded conflicting results, in this case regarding mathematical ability, research around gender differences has continued.

Learning Style Theories

Active research about learning styles dates back to the 1960s with the goal of explaining individuals and their differences (Curry, 1983). Therefore, much of the foundational research and theory associated with learning styles originated from the field of psychology. Since then, learning-style research has expanded to other disciplines and fields including education, healthcare, management, industry, and vocational training (Cassidy, 2004).

Over the past five decades, various researchers immersed themselves in the study of learning styles; therefore, numerous opinions, constructs, and theories have emerged on the topic. In the process, terms have been defined differently, theoretical models of all kinds have been constructed, and wide varieties of measurement instruments have been created to measure the constructs (Cassidy, 2004; Curry, 1983). To organize the study of learning styles, Curry developed a model depicting the multi-faceted aspects of learning. In the research, Curry referred to the model as the learning style onion because the layer-like model likened the various constructs of learning to the layers of an onion. The model initially contained three layers: (a) the center, inner layer - cognitive personality style, (b) the second, middle layer - information processing style, and (c) the outermost layer - instructional preference. Curry later split the outer layer into two layers, adding a layer for social interaction (Cassidy). The onion model outlined the learning process with each layer describing a specific part of the way that learners learn.

According to Curry (1983), personality dimensions fundamentally control learning; therefore, the center inner layer, cognitive personality style, focused on the learner's personality preferences and the relationship to learning. Information then passes through the learner's information processing dimensions; therefore, the second layer, information processing style, described the way the learner synthesizes material. Finally, the external environment impacts learning; therefore, the two outer layers, social interaction and instructional preference, described the learner's reaction to the collective aspects of the learning environment and the learner's classroom preferences.

In order to organize the vast number of learning style models, Curry (1983) grouped the existing learning style models into three levels, assigning each model to the layer of learning addressed by that model. After surveying 21 models of learning, Curry identified ten models that met sufficient levels of reliability and validity. Curry then organized nine of those models into the taxonomy of learning style models. By clearly defining the complete process of learning and organizing the wide variety of learning models, Curry provided a thorough description of the way people learn and the learning models used to measure all aspects of learning (Cassidy, 2004).

The research findings from studies using the various learning models resulted in very different recommendations. Findings and recommendations from the models used to measure the inner layer, cognitive personality style, were associated with altering instructional methods to address the personality traits of students. Findings and recommendations from the models used to measure the middle layer, information processing style, were associated with altering instructional methods to address the way the students best receive and process information. Findings and recommendations from

the models used to measure the two outer layers, social interaction and instructional preference, were associated with changes to the social interaction within a teaching lesson or changes in the physical classroom setting (Williamson & Watson, 2006a, 2006b, 2007).

Because the construct of learning styles is complex, the current study did not attempt to examine all aspects of it at one time. The current study addressed the learning process identified in Curry's (1983) middle layer, information processing style. Research in this area involves studying the way in which learners prefer to receive and process information. The goal of the researcher was to delve into the complex cognitive issues of information processing addressed in the middle layer of Curry's model. Kolb is a leading researcher in Curry's middle layer dealing with information processing styles (Curry; Williamson & Watson, 2006b). Because the Kolb Learning Styles Inventory (KLSI) was one of the most documented tools for measuring learning styles (Cano-Garcia & Hughes, 2000), the researcher selected it for use in the current study. Results of the current study will lead to suggestions for business schools that address the unique learning needs of female business students.

Research Questions

Given the importance of preparing female business students for the business world and the lack of research regarding the impact of gender on the learning styles and learning experiences of traditional undergraduate business students, the following research questions guided this study:

RQ1: What differences exist in the learning styles of traditional undergraduate male and female business students?

RQ2: What differences exist in the learning experiences of traditional undergraduate male and female business students?

RQ3: What differences exist between traditional undergraduate male and female business students' attitudes toward male professors vs. female professors?

Description of Terms

The following definitions clearly explain two key terms used in this study:

Learning styles. "Learning styles are cognitive, affective, and physiological traits that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (Keefe, 1982, p. 44).

Traditional undergraduate student. A college student "who is dependent, attends full time until completing a bachelor's degree, and works no more than part time while enrolled" (U.S. Department of Education, 2002a, p. vii).

Significance of the Study

Increasingly, business schools face internal and external pressure to teach and model diversity. Internally, business schools teach diversity as a necessary component for 21st century businesses; therefore, they often have mission statements and goals that reflect an emphasis on diversity. Externally, educational accrediting bodies and legal regulations, including Title IX of the Educational Amendments of 1972, often require compliance with diversity principles and guidelines. Therefore, a study of female business students will help provide suggestions for business schools seeking to provide an equitable educational experience for female students (Davis & Geyfman, 2015).

Researchers have established the business case for women in the workplace. They have found that increased numbers of women contributes to improved financial

performance and provides an expanded talent pool that possesses skills and abilities necessary for businesses to compete in the future (Catalyst, 2011; McKinsey & Company, 2008, 2015). Therefore, employers are particularly interested in hiring women (Sharpe, 2000). Meanwhile, women are the main driving force in the college enrollment growth rate; therefore, colleges and universities have become increasingly competitive in recruiting them. Although the number of women attending college has increased over the last decade, the number of women pursuing business degrees declined during that same period (Ball, 2012). In order for business schools to be competitive in the recruiting process and produce successful female graduates for the workplace, they must become more effective at attracting and retaining female students.

Kolb (1984) found that academic achievement was not only a result of students' intelligence, but also their learning styles. Philbin et al. (1995) found that males and females learn differently and traditional educational programs were designed for teaching male students. When a student learner identifies with a particular learning style, learning may not occur as easily when exposed to an incompatible teaching style (Felder & Silverman, 1988). Previous studies have shown that academic performance was linked to learning styles (Cano-Garcia & Hughes, 2000), and that learning styles were effective predictors of test scores and course grades (Gadzella, Stephens, & Baloglu, 2002). Therefore, an understanding of and the appropriate response to the unique learning styles and experiences of female students may result in a more appealing learning environment for women.

Although women currently do not comprise the majority of students in business schools, there has still been a large increase in the number of women in business school

classrooms over the last several decades (Goldin et al., 2006). Loo (2002) asserted that, “given the increase in the number of women entering business schools, such an examination would be helpful” (p. 253). Moreover, because business schools are experiencing difficulties maintaining that growth by continuing to attract and retain female students (Davis & Geyfman, 2015), the timing is right for studying the learning needs of female students.

The current study was conducted on the campuses of two private Christian universities. For Christian educators, Jesus was the perfect example of a teacher who knew how to adjust His teaching method for the audience and the occasion. “He willingly adapted His teaching style to fit the specific situation, matched His teaching method with the message He needed to communicate, and led His learners in moving from concrete experiences to abstract principles” (Williamson & Watson, 2007, p. 75). Williamson and Watson (2006a) pointed out that Jesus used lecturing to reach the multitudes, prepared object lessons to demonstrate, asked questions to provoke deep thought, told stories to connect, and mentored a few to share the faith. Jesus took extreme measures to teach all of His followers in unique ways with the goal of transforming lives. Furthermore, even in a male-dominated society, Jesus empowered women. He demonstrated care, concern, and compassion for women. “He continually affirmed women, honouring them, encouraging them in their faith, giving them dignity, equality, and value” (Strickland, 2011, p. 102).

As Christian business faculty who are shaping the next generation of business leaders, we are responsible to exemplify the love of Christ, not only in how we treat our students, but in how we shape their understanding of the world. Faculty

can infuse our course design – content, assignments, and discussions – with sensitivity to important issues facing women and society. (Havens, 2013, p. 20)

This study was important because it addressed the unique learning styles and learning experiences of female business students and offered suggestions for business schools to meet those unique learning needs in order to attract more female students, enhance their learning experience, and transform lives.

Process to Accomplish

For a complete study of the topic, the researcher conducted a quantitative study with supplemental qualitative input to gather information about traditional undergraduate business students' learning styles and learning experiences in the business department (Robson, 2011). The researcher received approval from two small, private Midwestern universities to distribute a survey to junior and senior business majors during the fall of 2015. In total, at both universities, 296 students met the criteria for completing the survey: 189 male students and 107 female students.

The study's sample was comprised of the junior and senior business students who completed the survey and participated in the focus groups. The survey was given to students in seven upper-division business courses at the two universities; 176 students in those classes, 109 male and 67 female, met the parameters for the study and completed the survey. The researcher conducted four focus groups: one all-male group and one all-female group at each university. All junior and senior business students at both universities received an email invitation to participate; everyone who responded was invited to attend. In total, 22 students participated in those groups. The researcher

compiled the findings of the study from the sample respondents' survey and focus group input.

Research Design

The researcher created a combined questionnaire using three previously developed reliable and valid survey instruments, along with 11 newly developed questions, to gather quantitative data from the sample. Gathering quantitative data provided large amounts of standardized numerical responses for the researcher to analyze using statistics (Robson, 2011). In addition, the researcher included three open-ended questions on the last page of the survey instrument. These questions, along with four gender-specific focus groups, allowed the researcher to gather the supplemental qualitative data. The open-ended questions allowed the researcher to explore student input on each research question topic in greater depth (Robson). According to Salkind (2012), focus groups are beneficial because of the group dynamics, interaction, and discussion. The group conversations provided insight into the participants' deeply held thoughts and ideas. Having both quantitative and qualitative data allowed the researcher to corroborate the research findings when consistencies between the two types of data were found (Robson).

Instrument

Part A of the survey instrument included the Kolb Learning Styles Inventory 3.1 (KLSI 3.1), which provided the information necessary to answer research question one. The creators of the KLSI 3.1 have revised the instrument four times since its original development in 1976 in order to improve the statistical accuracy of the instrument. Version 3.1 "includes new norms that are based on a larger, more diverse and representative sample of 6,977 LSI users" (Kolb & Kolb, 2005b, p, 10). Based on

responses to 12 questions, each with four ranked sentence endings, the KLSI 3.1 identified the learning style of each participant. The numerically ranked responses provided subscale scores in the areas of abstract conceptualization (AC), concrete experience (CE), active experimentation (AE), and reflective observation (RO). Those subscale scores were used to calculate a perception continuum score (AC-CE) and a processing continuum score (AE-RO). Based on the two continuums, Kolb's model identified four learning styles: Divergers, Assimilators, Convergers, and Accommodators (Kolb, 1984).

Accommodators are best at learning from 'hands on' experience (doing and feeling). Divergers excel in using imagination and brainstorming, combining concrete experience and reflective observation (feeling and watching).

Convergers' dominant learning abilities are focused on finding practical uses for ideas and theories (doing and thinking). Assimilators are most adept at logically organizing and analyzing information, building and testing theories, and designing experiments [(thinking and watching)]. (Philbin et al., 1995, pp. 486-487)

Part B of the survey instrument included questions from two previously designed surveys by Kaenzig et al. (2006) and Kaenzig et al. (2007), which provided the information necessary to answer research question two. Although the surveys were unnamed in the original research, the researcher will refer to them as the Learning Experiences Surveys (LES). The two surveys were designed to evaluate various aspects of the educational experiences of business students including overall satisfaction, student assertiveness, group experiences, and business department environment. The questions

from this section, answered with a Likert-type scale, provided subscale scores about student learning experiences in the areas of overall satisfaction, student assertiveness, group experiences, and business department environment.

Part C of the survey instrument included three questions from the Kaenzig et al. (2006) and Kaenzig et al. (2007) surveys, supplemented with 11 additional questions developed using terms from Schein's Developmental Index (SDI), which provided the information necessary to answer research question three. These 14 questions, answered with a Likert-type scale, created a subscale score that evaluated students' attitudes toward male professors vs. attitudes toward female professors. To identify areas of difference regarding the gender of the professor, the researcher divided the 14 questions into two subscales, positive statements about male professors and positive statements about female professors.

In total, the survey instrument contained 64 questions: Part A – 12 learning style questions; Part B – 32 learning experiences questions, Part C – 14 attitudes toward male professors vs. female professors questions, Part D – three open-ended questions, and Part E - three demographic questions.

Process

A professor, or a research assistant, at both universities distributed the paper-based survey to students in seven upper-division business courses at two small, private Midwestern universities during the fall 2015 semester. The researcher attached a set of instructions to the survey instrument in order to ensure consistent distribution and administration of the surveys at both universities. Students were allowed approximately 30 minutes during a designated period of class to take the survey.

Students at both universities received an email invitation requesting their participation in the focus groups. At University A, four male students and three female students attended. At University B, eight male students and seven female students attended. The focus groups were gender-specific, two all-male and two all-female, as a way to provide a safe and open discussion atmosphere for sharing gender-specific opinions and preferences (Salkind, 2012). The researcher, or a research assistant, served as the facilitator for the groups; the researcher attended all of the groups. Each group lasted approximately two hours, was audio recorded, and followed a prepared guide of open-ended questions created to address issues related to each research question.

Analysis

The researcher conducted both descriptive and inferential statistical analysis with the survey data using SPSS statistical software. Because this study involved comparing differences between two gender groups, the researcher used both non-parametric and parametric statistics that measured differences including Chi-square, for categorical data, and *t*-tests, for numerical data. The researcher also looked for differences between students in each of the four learning style categories on their numerical subscale score totals using ANOVAs (Gay, Mills, & Airasian, 2012).

The researcher conducted thematic coding analysis with the qualitative data to discover consistent, recurring response themes (Creswell, 2013). The researcher examined each open-ended survey response by listing, categorizing, and grouping them according to commonality. The researcher reviewed the focus group audio recordings and notes to find consistent perceptions and preferences according to gender. Using this information, the researcher incorporated the qualitative data into the quantitative findings

using recurring themes and important, representative quotations from the qualitative study.

Research Ethics

The researcher conducted all aspects of the study in an ethical manner. Prior to the study, the researcher secured approval from the Institutional Review Boards at both universities to conduct the research. As part of that process, the researcher secured formal written approval from the Hay Group and received a research grant to use the Kolb Learning Styles Inventory 3.1 (KLSI 3.1) paper-based version. The researcher also secured approval from one of the original authors to use the LES and from the business departments at both universities to collect data from the traditional undergraduate junior and senior business students. The risks associated with participating in this research were minimal. To clarify and disclose any minor risks associated with the study, the researcher secured informed consent forms from all participants prior to participation. The researcher did not include the primary investigator's name and removed the words *male* and *female* from the title and purpose of the research on the informed consent form to avoid gender biasing. Survey participation was voluntary and respondent information remained anonymous. Focus group participants were assured confidentiality. Focus group respondents were not identified by name, and individual comments were not attributed to individual students; the researcher reported only general themes and overall findings from the sessions.

Summary

This study contributed to the literature on learning styles and learning experiences by focusing on female traditional undergraduate business students, a previously

understudied group. The timing was right for this study because of the growing number of females attending college, yet not opting to major in business at the same rates as men. The findings of this study are important so that business schools can more effectively address the unique learning needs of female traditional undergraduate students and prepare them for successful careers in business.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The role of women in American culture has changed dramatically during the last two centuries in both the workplace and in higher education. The changes have resulted in a greater presence of women in the university classroom and the need for more properly educated female business students ready to enter the workplace and lead in the future.

Women have made dramatic educational advancements during the last two centuries. In the late 1700s, universities did not admit female students (Thelin, 2011). In the mid-1800s, some institutions of higher education admitted women, but often the female students pursued studies that included stereotypical female coursework (Rudolph, 1962). By the 1980s, women began outnumbering men in the overall pursuit of undergraduate degrees; moreover, that trend has continued, and the gap has widened (Freeman, 2004). By the fall of 2014, females comprised 56% of the total 17.3 million in traditional undergraduate enrollment in American higher education, with 9.7 million women attending college (U.S. Department of Education, 2016b). However, by that same time in business schools, the number of women earning traditional undergraduate business degrees had not yet exceeded the number of men. At the end of the 2013-14 academic year, postsecondary institutions in the United States awarded 358,079

bachelor's degrees in business fields; men earned 52.6% or 188,418 of those degrees, while women earned 47.4% or 169,661 of them (U.S. Department of Education, 2015a).

The change in workplace opportunities for women has been equally as dramatic. In the early 1800s, relatively few women worked outside the home, and those that did tended to work in select industries holding stereotypical female jobs; more typically, men were the breadwinners and women were the homemakers. In the early 1900s, women experienced expanded opportunities to participate in the workforce by filling typically male-dominated jobs during the wars, but vacated those roles when the men returned home and the economy declined (Kwolek-Folland, 2002). From 1950 - 2000, drastic changes in United States laws and shifting cultural attitudes brought about new requirements for companies and increased opportunities for women in the workplace (Toossi, 2002). By the 2000s, "some executives [said] they're beginning to develop a new hiring bias. If forced to choose between equally qualified male and female candidates for a top-level job, they [said] they often pick the woman" (Sharpe, 2000, p. 76).

Business schools have more female students in the business classroom than in previous decades, yet in recent years have had difficulty recruiting and retaining them (Davis & Geyfman, 2015). In 2001-02, the number of degrees conferred to female students exceeded the number of degrees conferred to men in U.S. business schools for the first time; the highpoint of female representation in earning business degrees was in 2002-03 when women earned 50.6% of U.S. business degrees. However, between 2003-04 and 2013-14 the percentage of females earning business degrees declined from 50.3% to 47.4% (U.S. Department of Education, 2015a). In 2008, business was the most popular

major for women; women were pursuing business degrees at twice the rate as the second highest major, in the field of health sciences (Tulshyan, 2010). Women were pursuing business for practical reasons, including the likelihood of finding a job after graduation; however, each year from 2007 to 2012, more female students indicated increased interest in pursuing health-related degrees (Zlomek, 2013). Similarly, Ball (2012) found the females were 40% less likely than males to pursue business majors. In 2014, 169,661 bachelor's degrees were conferred to females pursuing business; however, 167,839 bachelor's degrees were conferred to females pursuing health-related programs, a difference of less than 2,000 (U.S. Department of Education, 2016a). These educational realities, along with the increase in workplace demand for women, are the impetus for business schools to examine the collegiate educational experience of female students. In order to better understand the needs of female business students, this examination should include student learning styles and preferences, learning experiences, and perceptions of faculty. Despite the popularity of other majors among women, business schools have the challenge of continually recruiting additional female students and preparing for the task of educating future female leaders for the twenty-first century business world.

History of Women's Role in the US Workforce

Evolution of the Workforce

From the initial establishment of this country, the United States Constitution, ratified in 1789, did not provide any specific rights to women. Later legislation passed during the nineteenth and twentieth centuries remedied the omission with laws increasing the rights of women (Solomon, 1985). The advancements for women have not occurred rapidly; in fact, the progression toward women's rights has been centuries in the making.

1800 - 1850. In the mid-1800s, the factory system became the dominant way in which textiles such as cotton, flax, and wool were produced. When the manufacture of textiles and clothing moved from the home to the factories, so did the women. Factory owners found cheap laborers in women, making it attractive to hire them in vast numbers. By 1845, there were 20,000 more women employed in the United States textiles industries than men (Woody, 1929). However, it was “significant that women were more numerous only as employees, not as employers” (p. 9). Because of their lower-level status, the women often earned little money working long hours in crowded factories while enduring substandard conditions. The culture did not easily accept this new paradigm of women in the workplace; social commentators of the day predicted that factory work would reduce the influence and happiness women brought to men through their love, tenderness, devotion, affection, and care (Woody).

1850 - 1900. In 1860, in several parts of the country there were more women than men, making it impossible for all women to marry; therefore, education and labor became increasingly viable options. During the Civil War, 1861-1865, women worked in hospitals, camps, and clothing distribution centers. Following the war, in the 1880s, society was much more open to women working in professional jobs. In 1882, Massachusetts led the way by legally authorizing women to practice law, and two years later opening the path for women to practice medicine (Woody, 1929).

By 1880, every state provided married women legal protection for their property; however, there was considerable variation among the states regarding protection of wages and earnings. At the same time, the laws regarding divorce became less rigid, granting women more latitude to end marriage. These two changes gave women the legal

permission they needed to construct their own lives. The result was that from 1887 to 1928, the divorce rate increased from 2% to almost 17%, with women initiating 71% of those lawsuits (Kwolek-Folland, 2002).

1900 - 1950. In 1900, if women were sole proprietors, they were largely dressmakers, milliners, tailors, corset makers, laundresses, or boarding house keepers; women did not play an important role in industrial management. Although women were working more and in a variety of careers, female wage earners were still blamed for increased crime, decreased marriage rates, increased divorce, decreased birth rates, decreased wage rates for men, decreased domestic work, and the destruction of women's morals (Woody, 1929). The prevailing philosophy at the time was that men should be the primary wage earners for the family. Women could work outside the home, but they were still viewed as more fragile than men, worthy of special protection, and in a separate working class category. In 1908, the Supreme Court ruled in *Muller v. Oregon* that women should be restricted from certain working conditions, such as working at night, and given special provisions, such as chairs to sit on by the assembly line. The advancements of the late 1800s were short-lived; by the 1920s, opportunities in professional areas decreased and shifted back to work in more stereotypical women's professions (Kwolek-Folland, 2002). Women became managers of retail operations, editors at publishing companies, operators of theater establishments, and directors of hospitals, however, "women were managing businesses, either as owner/operators or at the middle level in firms they did not own, mostly in fields related to their sphere" (p. 75).

The number of women entering the workforce drastically increased over the next several decades. From 1870 to 1930, the number of women employed in the workforce increased by 10%, from 15% to 25%; during that same time, the number of women in the clerical sector rose from 2.5% of all workers to 53%. The proportion of married women working outside the home doubled from 1900 to 1930 (Kwolek-Folland, 2002). In many ways, society had accepted women working in the workplace, and business seemed like a viable option for women. “A striking feature of turn-of-the-century America was the sense that business offered special, perhaps even unique, opportunities to women. Many saw business as almost a panacea for women” (p. 97). However, in the business literature of that era, the articles addressed job opportunities for women in writing and publishing, food production, music lessons, and other stereotypical female jobs. In fact, very few women held jobs in traditionally male-dominated fields; in 1900, women comprised less than 1% of lawyers and only 5% of doctors (Kwolek-Folland).

World War I, 1914 - 1918, brought a shift of women leaving stereotypical female jobs into jobs previously occupied by the men who were at war; however, those positions largely returned to the men after the war was over (Kwolek-Folland, 2002). In June of 1920, The Department of Labor established the federal Women’s Bureau. The bureau’s purpose was to “formulate standards and policies which shall promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment” (U.S. Department of Labor, n.d., para. 1). This organization was responsible for gathering statistics on work-related topics including wages, childcare, and working conditions; investigating issues dealing with workplace well-being for women; and regularly reporting the results to the Department of

Labor. The Women's Bureau was "the only federal agency mandated to represent the needs of wage-earning women in the public policy process" (para. 1). Just two months later, in August of 1920, as the culmination of an effort dedicated to the women's suffrage movement that spanned several decades, women earned voting privileges with the ratification of the 19th amendment to the United States Constitution.

Shortly thereafter, the Equal Rights Amendment (ERA) was introduced to Congress in 1923. The goal of the amendment was for the Constitution of the United States to reflect equal rights for women; however, the ERA did not secure enough votes to pass. (It was reintroduced in 1972. Although it received approval from both houses of Congress, it did not receive ratification from enough states. One final attempt for state ratification failed in 1982. The ERA never passed.) (Kwolek-Folland, 2002; U.S. History, n.d.).

Beginning in the 1930s, more women were entering the labor force, securing office and clerical jobs with better working conditions (Goldin, 2006). Even though they were attending college, few women were rising the corporate ladder in male-controlled organizations; women in business were often employed in family-owned businesses in female-oriented industries. To further complicate matters, the depression during the 1930s was especially hard on women's opportunities in business because of the economic decline (Kwolek-Folland, 2002). Women often worked in helping professions; in 1930, women comprised nearly 70% of social workers, more than 90% of librarians, and nearly 100% of nurses. "The bright prospects that seemed attainable in 1880 seemed less possible 50 years later" (p. 126). Advances in business meant the need for more capital, more education, and more experience, all things women lacked. Therefore, the same

patterns of gender-segregation in the workplace continued to repeat themselves even during the twentieth century. “Traditional models of women’s business role continued to hold such force for so many. Women developed a managerial role for themselves, but it was a role justified and shaped by domesticity” (p. 127).

In 1931, Congress amended the Cable Act separating a woman’s citizenship from her husband’s. By the mid-1930s, married women had established property rights, freer divorce options, voting privileges, and independent citizenship (Kwolek-Folland, 2002). Working opportunities for women once again increased during World War II, 1939 - 1945, but quickly declined afterward when the men returned home. Not long after the men returned, the baby boom began; the societal expectation during the baby boom years was for women to stay home and raise the children. “After nearly 20 years of depression and war, which often made family formation and maintenance impossible, perhaps the emphasis on women’s domestic nature so emblematic of the 1950s is understandable” (p. 131).

1950 - 2000. Although women could choose to work outside the home, they had not succeeded in changing the conservative, traditional stereotypes. Therefore, married women were still working, often part-time, in female-dominant roles as teachers, secretaries, nurses, and social workers (“Closing the gap,” 2011). In 1950, the federal Women’s Bureau published its Report on Women in Higher-Level Positions stating that:

Often a firm which believes it offers every opportunity for women maintains discriminations . . . [such as] the manufacturing firm, which reported that all openings in the higher-level jobs are posted and anyone can apply but no woman ever had, might ask itself whether its hiring practices do not exclude the

promotional type of woman right from the start. In many manufacturing firms women are hired only for the dead end jobs, and the possibility of using women in some of the jobs requiring higher education has never been explored. (Kwolek-Folland, 2002, p. 128)

The biggest legal changes for women happened in the 1960s; prior to that time the law granted them very few rights; therefore, they were still dealing with 19th century legal ideology. The election of John F. Kennedy, a progressive Democrat, in 1960 ushered in a new era in women's rights. Women associated with Kennedy's administration influenced society toward the advancement of women. Important legislative reform took place incrementally over the next decade that dramatically affected the status of women. In 1963, women were granted equal pay for their work; in 1964, women were protected from workplace discrimination; in 1965, the Supreme Court ruled that married couples could use birth control; in 1967, affirmative action guidelines were expanded to encompass sex discrimination; in 1972, women were protected from discrimination in educational programs and activities; and, in 1973, women were granted the right to have an abortion (Leonore Annenberg Institute for Civics, n.d.). In the years following the war, along with the increased workplace opportunities came several other shifts in the culture as it related to women. Their marrying patterns changed, often leaving them single either by personal choice, through divorce, or because of waiting longer to get married. They spent more time in school earning higher degrees, opted to delay childbirth, had fewer children, and remained in jobs for longer periods of time (Toossi, 2002).

The 1970s became the decade of women's liberation; women decided it was time to fight for their rights, seeking equality to men. The movement of activities aimed at

increasing the rights of women was referred to as feminism. Feminism ushered in a new era of acceptance regarding the liberation of the rights of women to seek gainful employment, attend school, and remain independent, free from marital, patriarchal and motherhood constraints. The movement promoted “the abolition of gender” (Eisenstein, 2010, p. 415) asserting that women should be able to do all that men could do. The positive strides women made during the 1960s and 1970s were dramatic. Especially during this period, the United States government took action through both Congress and The Supreme Court to protect women from gender bias and discrimination in the areas of education, employment, and financing.

Laws intended to equalize work opportunities were not only passed, but were supervised by government administrations to assure that they were implemented. Laws equalized women’s access to bank credit and their right to own and control property and earnings. Laws also guaranteed women’s equal access to higher education, and for the first time in U.S. history, women entered universities in equal numbers to men. Problems that had never been identified as problems were now named: the double standard that punished women for sexual behavior that was approved of for men was challenged; rape was identified as a crime of violence by men against women, no longer as deserved behavior for women’s sinful ways; wife battering was identified as a crime against women, no longer as a husband’s prerogative; women’s “double-day” as wage worker and home worker was challenged and men learned that they, too, could cook and clean and care for children alongside their wives who now worked as many hours outside the home as men did. It was no longer considered appropriate to represent women

as stupid or clumsy or as existing solely to satisfy men's sexual needs on television and in other forms of media. Women writers, women's experiences in history, women's social issues became respected topics for academic research the transformation of women's lives since the mid-1960s has been enormous, but it is neither complete nor all encompassing. (Moses, 2012, pp. 767-768)

The combination of the civil rights movement, equal opportunity legislation, and feminism facilitated a paradigm shift, opening the doors of acceptance for women to join the workforce in large numbers (Toossi, 2002).

By the 1970s, girls had watched their mothers work outside the home and envisioned themselves following their mother's example. Goldin (2006) referred to the 1970s as the beginning of the "quiet revolution" (p. 8), a decade marked by the highest percentage increase of women in the workplace, increasing from 40.8% of women working in 1970 to 47.5% in 1979 (U.S. Bureau of Labor Statistics, 2015b). "No other labor force group has ever experienced an increase in participation rates of this magnitude in one decade" (Toossi, 2002, p. 18). During the 1980s, for the first time, more women earned bachelor's degrees than men (Freeman, 2004), further expanding their future career opportunities.

Additional legislation on behalf of women continued to piece together, one by one, the rights of women; although, legislation for the equal treatment of women was more difficult to define than other discrimination legislation because women were not the minority, making up 51% of the population in 2000 (Kwolek-Folland, 2002). In 1974, the Equal Credit Opportunity Act was enacted making gender discrimination illegal when evaluating loan applicants. In 1980, Congress enacted the Pregnancy Discrimination Act,

which protected women from workplace discrimination due to pregnancy, classified as a temporary disability. In 1986, the Supreme Court officially ruled that sexual harassment was illegal job discrimination in *Meritor Savings Bank v. Vinson* based on statutes included in Title VII of the 1964 Civil Rights Act (Kwolek-Folland).

In 1991, historian Joan Hoff (1991) asserted that “the legal status of women in the United States changed more rapidly in the last twenty-five years than in the previous two hundred” (p. 229); that progress continued in the 1990s. In the 1992 congressional election, the number of women elected doubled their representation in Congress, prompting newspapers to pronounce it “The Year of the Woman” (U.S. Senate, n.d., para. 5). In 1993, under President Clinton, the Family and Medical Leave Act became law, allowing time off for workers due to a new birth or a family illness (Kwolek-Folland, 2002). By the end of the decade, “the concept of ‘male’ professions doesn’t apply . . . by 1997, women [were] earning over 40% of medical, law, and doctorate degrees” (Discovery Education, n.d., para 2). Women were also becoming the primary consumers and decision-makers for the purchases of numerous household products, to which companies responded by hiring more female employees to meet the needs of this new target market (Silverstein & Sayre, 2009). With all of these monumental achievements, the 1990s were predicted to usher in the “golden era” (“Closing the gap,” 2011, p. 4) for women.

However, even with all the advancements, there remained many challenges to women. Those challenges included extreme childcare costs making it difficult for married couples or single households to work and provide care for their children, the wage disparity between female and male workers who hold the same job title, and the lack of

women at the highest level in Fortune 500 companies (Carter & Silva, 2010; Moses, 2012). Thus, early in the twenty-first century there was already a “palpable sense of frustration” (“Closing the gap,” 2011, p. 5), because the predictions of the previous century had not fully materialized for women.

Women’s Impact on the Workforce

Women have made dramatic employment progress since the days during WWII when the government created the fictitious Rosie the Riveter image flexing her muscle with the slogan “we can do it” to inspire women to join the workforce (“We did it,” 2010, p. 7). In fact, nothing has contributed more to the overall growth in the U.S. labor force more than the increased involvement of women. Women’s participation during the second half of the twentieth century grew dramatically at an average annual growth rate of 2.6%. Their participation rate in the labor force was 34% in 1950, with 18 million women working. In 1960, the rate was 38%, in 1970, 43%, in 1980, 52%, in 1990, 58%, and by 2000, the participation rate reached its highest level at 60%, with 66 million women working. There have always been more men working than women; however, the growth in women’s participation rates in the labor force has been higher than men’s. This rapid growth in women in the workforce caused the gap in the comparative men-women workforce participation rates to narrow. In 1950, 53 percentage points separated the two, with approximately 87% of men working and 34% of women working; in 2000, the difference had narrowed to 15%, with 75% of men working and 60% of women working (Toossi, 2002). In just a few decades, the gender composition of the workforce shifted dramatically contributing to increased “women’s economic empowerment” [which has been] arguably the biggest social change of our times” (“We did it,” p. 7). Women held

37% of all jobs in 1970; by 2009, women held 48% of all jobs (McKinsey & Company, 2011), comprising nearly half of the labor force. McKinsey & Company's research estimated that the additional productive power added to the U.S. economy during those 40 years by the extra women working accounted for 25% of the 2010 U.S. Gross Domestic Product (GDP). According to McKinsey and Company (2013), adding women to the marketplace has benefitted the economy in the past and remains a necessity for the future. There is an expected shortage of 40 million highly skilled workers by 2030; an increased employment rate among women, equal to that of men, could nearly close that gap.

Despite the workplace advancements for women over the last two centuries, gender disparity still exists. Women remain underrepresented in corporate leadership; women CEOs are still rare, comprising only 4.4% of the CEOs of companies listed on Standard & Poor's 500 index (Catalyst, 2016). According to McKinsey & Company (2015b), based on the .9% growth rate in the number of females at the C-suite level in organizations from 2012 - 2015, gender equality among top corporate leadership would not be achieved within this century. Although the majority of women have not reached the highest levels of organizations, they are equally represented in mid-level managerial positions. Between 1900 and 1974, there was a 44% increase in the number of women in management-level positions; in 1996, more than 30% of all management-level employees were women (Kwolek-Folland, 2002); and by 2015, 51.5% of management and professional occupations belonged to women (U.S. Bureau of Labor Statistics, 2015a). Some of the other workplace disparities among women included starting their careers at

lower levels, moving up the career ladder more slowly, earning lower salaries, and reporting significantly lower levels of career satisfaction (Carter & Silva, 2010).

According to King et al. (2010), a type of “benevolent sexism,” (p. 6) the view that women need protection and shelter from difficult situations, still exists among men, preventing women from receiving challenging work assignments. Biernat, Tocci, and Williams (2012) identified a form of benevolent sexism when women received more comments that were positive and less containing criticism than men during performance evaluations, yet the evaluators recommended the women as partner material at a rate nearly 10% less often than men. Overall, women remain “underestimated in the workplace” (Silverstein & Sayre, 2009, p. 48). Men continue to receive more opportunities for advancement than women through assignment to mission-critical and visible projects, responsibility for larger budgets, management of more staff members, and opportunities for international assignments (Silva, Carter, & Beninger, 2012). Men still hold the most critical positions in United States companies; 90% of “line jobs” belong to men, those that play a critical role regarding profit and loss responsibilities needed for advancement to the top of organizations (Berry & Franks, 2010, p. 6).

“One result of gender differences has been that women have remained outsiders, even as they have made a place for themselves in the business world” (Kwolek-Folland, 2002, p. 214). It appears that even after years of attempting to facilitate opportunities for women, “inequity remains entrenched” (Carter & Silva, 2010, p. 20). In most occupational categories, women’s earnings are proportionally less than men’s. In 1996, women earned 75% of the amount men earned for the same jobs (Kwolek-Folland); in 2015, women earned 81.1% of the amount men earned, among all full-time workers

(Institute for Women's Policy Research, 2016). Often the earnings gap has been attributed to an interrupted work cycle, women stepping away from work to raise children and maintaining a flexible schedule to meet family needs. However, research has shown that when men and women stepped away from their careers, men outpaced women in moving up the corporate ladder upon returning (Carter & Silva). Research has also shown that "female executives have consistently made less than male executives with the same training, education, and experience" (Kwolek-Folland, p. 178). Although the gender wage gap has decreased, equality remains elusive.

Women have not risen to the level of equality with men in the workplace; however, more and more employers recognize the business case for adding them to the team. Corporations can benefit from the communication and interaction qualities women bring to the table. "A growing appreciation for collaboration, participation, and relationship-building [has] created a perfect storm for women who want to rise through the ranks" (Milazzo, 2015, p.70).

Workplace Obstacles Faced by Women

Despite the potential to rise, the barriers women face are numerous and multifaceted. In 1991, the government officially recognized the glass ceiling, the invisible barriers that prevent women from advancing to the highest levels of organizations, by creating The Glass Ceiling Commission (Berry & Franks, 2010). Since that time, the glass ceiling phenomenon has become more prominent in public discourse and the subject of much sociological research. The Institute of Leadership and Management (2011) conducted research among 3,000 female managers and reported that nearly three-quarters of them still acknowledged the reality of the glass ceiling, feeling it hindered

their advancement. In the following years, researchers have offered revised views of the glass ceiling model and others identified additional types of barriers women face.

McKinsey and Company (2013) found that women are not only held back by the glass ceiling, but by a “leaky pipeline” (p. 9). The leaky pipeline represents the lack of advancement of women at all levels of the organization resulting in fewer women at the top. In their study involving 130 large companies, men were three times more likely than women to achieve mid-level management positions, two times more likely to be promoted to upper management or to advance to the executive level, and five times more likely to become CEO.

Research also found that women face “sticky floor” barriers, “the forces that keep women stuck at the bottom of the economic pyramid” (Berry & Franks, 2010, p. 1). In addition, “glass walls” barriers reflect that women managers tend to be confined to certain industries (p. 6). Bosse and Taylor (2012) identified a second glass ceiling, which negatively affects women entrepreneurs. While avoiding the initial glass ceiling by leaving the corporate workplace and striking out on their own, women business owners encountered negative gender bias in raising capital funding. The “access to capital barrier” (p. 56), the second glass ceiling, prevented female entrepreneurs and business owners from securing the funding necessary for starting and operating successful small businesses. Muravyev, Talavera, and Schafer’s (2009) study using data from more than 5,500 companies worldwide revealed that firms managed by women were 5% less likely to secure bank loans than men, and the approved loans were offered at slightly higher interest rates. Research has demonstrated that women face barriers of all kinds, resulting in fewer women at the top of organizations. “The increasing scarcity of women as one

goes up the corporate ladder is nothing less than a loss of potential talent” (McKinsey & Company, 2013, p. 8).

Some people have wondered if women were not reaching the top of organizations because they did not want to, that perhaps they opted out of promotion for other reasons, often personal. However, McKinsey & Company (2013) found in a survey of 1,400 managers worldwide, representing numerous companies and industries, that women are just as interested as men in reaching management positions within the organizations for which they work. The results revealed that 79% of women and 81% of men wanted to achieve a senior executive role during their career. Moreover, both men and women equally, more than 60%, were willing to make personal sacrifices to make that happen. The key difference was the lack of confidence women possess about their chances to get there. In the same survey, 76% of men and 58% of women in mid-level management, and 86% of men and 69% of women in senior management indicated confidence that they would actually succeed in reaching the top level of management in the organization. The Institute of Leadership & Management (2011) also found that women tended to demonstrate lower levels of self-confidence about career advancement than men.

Why are women so many women stuck on the organizational hierarchy and not reaching the highest levels? Companies may not purposefully exclude women from moving up in the organization; however, workplace realities such as lack of female executive role models, lack of network involvement, and gender designated work assignments result in a “second-generation gender bias” that impedes the leadership development of women (Ibarra, Ely, & Kolb, 2013, p. 64). McKinsey and Company (2011) identified several barriers women face when seeking to move up the employment

hierarchy including structural obstacles, embedded institutional mindsets, embedded individual mindsets, and lifestyle issues. Structural obstacles include lack of inclusion in informal networks, access to female mentors, and connections to leaders at the top of the organization. The embedded institutional mindset includes the subtle deep-rooted traditional mentality within organizations that men are better leaders than women. The embedded institutional mindset includes the attitudes of women themselves and their hesitance to self-advocate. Lifestyle issues include the irreconcilable mentality that executives must maintain an “anytime, anywhere” 24/7 availability, seemingly impossible for women who face the “double burden” syndrome of handling the combined responsibilities of both work and home (McKinsey & Company, 2010, p. 6). The concern is that women’s lifestyle issues are incompatible with the demands of senior management positions.

Research has shown that workplace concern about these lifestyle issues has led to a phenomenon widely recognized in business literature called the “motherhood penalty” (Correll, Benard, & Paik, 2007, p. 1298) for women with children seeking employment in today’s workplace. Because of the motherhood penalty, it continues to be more difficult for them to find a job and receive equal pay for their work. Correll et al. conducted an experiment where college students rated two job applicants after examining their job application materials. The paperwork identified the two job candidates as having equal qualifications; however, one of the applicants was a parent. The results of the study showed that mothers were evaluated as less competent and committed, recommended for jobs, advancements, and management level positions less often, and presented with starting salaries averaging \$11,000 less than women without children; moreover, there

was no penalty whatsoever for fathers. Benard and Correll (2010) conducted a second similar study except that the evaluators were also shown previous positive performance review evaluations of two equally competent and committed parent/nonparent candidates. Even so, the raters evaluated the mothers as possessing fewer positive interpersonal qualities than fathers, still resulting in fewer job offers and recommendations for promotion.

There is a societal perception that women with careers must juggle more of the conflicting priorities and demands of work, family, and home than men. McKinsey and Company's (2013) research showed that of 1,400 managers worldwide, 80% believed that men were well-suited for men having senior-level careers and children, but only 62% believed the same for women. Additionally, 90% of respondents did not believe flextime work schedules were compatible with senior-level careers. Interestingly, research has shown that "while it is almost impossible to find a reference to the children of male managers and executives in newspaper and magazine articles, it is almost impossible *not* to find such references in articles on executive or managerial women in the 1990s" (Kwolek-Folland, 2002, p. 202). At the time of this writing (2016), it was possible to find in popular literature a *Working Mother* magazine and numerous online blogs aimed at professional women with children; however, similar resources were not available for fathers. According to Silverstein and Sayre (2009), maintaining a work-life balance is especially difficult for women because they carry the additional burden of household chores more than men; the study's findings revealed that approximately 33% of men never help with household tasks. McKinsey & Company (2007) found that European women spend double the amount of time as men on every day household tasks. Research

has also shown that women devote more hours to work than men (Berry & Franks, 2010). With so much to balance, women may feel as if they never have enough time (Silverstein & Sayre, 2009).

Stone (2013) found that among over 50 female professionals who had exited the workplace, 90% of them left mainly due to frustrations with the workplace, especially scheduling. According to Hom, Roberson, and Ellis (2008), a consequence of women being unable to reach the highest levels in an organization is that they are leaving organizations at a faster rate than men. The seeming lack of opportunity, independence, status, control, rewards, challenge, achievement, and flexibility has led some women to exit large companies, and at times start their own small businesses (Orhan & Scott, 2001). In 2009, the 8 million firms in the U.S. owned by women provided 23 million jobs, boosted the economy by \$3 trillion, and were growing two times faster than other firms. "If U.S.-based women-owned businesses were their own country, they would have the 5th largest GDP in the world, trailing closely behind Germany, and ahead of countries including, France, United Kingdom, and Italy" (Center for Women's Business Research, 2009, p. 1).

Advantages of Women in the Workplace

Women have been flooding into the workplace over the last several decades. Meanwhile, researchers have conducted numerous studies on the differences between men and women in the workplace. The general conclusion is that each gender brings different skill-sets and abilities to the workplace. For example, when compared with men, female loan officers demonstrated lower confidence, less self-assurance, and higher levels of risk aversion when extending bank financing (Bellucci, Borisov, & Zazzaro,

2010). However, just because women are different does not mean they are less effective. In fact, research has identified many of women's strengths. Woolley, Chabris, Pentland, Hashmi, and Malone (2010) found that the presence of women in teams increases the collective intelligence of the group, largely due to fact that women scored significantly higher than men on measures of social sensitivity. Similarly, in a study of the boards of directors of 600 companies, female directors were more likely to demonstrate cooperation, collaboration, consensus building, and other positive social behaviors than male directors (Benko & Pelster, 2013).

One of "the most long-standing and pernicious [gender] stereotypes is that men are business leaders and women are not" (Godwyn & Stoddard, 2011, p. 73). Zenger and Folkman (2012) conducted research among 7,280 leaders who completed the Extraordinary Leader 360 assessment. The results revealed that females received more positive ratings than males on 12 out of 15 leadership functions, 12 out of 16 leadership competencies, and an overall leadership index. Hagberg Consulting Group studied 425 executives; the company found that female managers were rated more favorably on 42 out of 52 leadership skills. Personnel Decisions International conducted research analyzing the multi-source feedback of 58,000 managers and found that out of 23 categories, women received higher scores in 87% of the areas (as cited in Wells, 2001). These studies revealed that women executives consistently scored higher than male executives on nearly every leadership skill, including producing high-quality work, mentoring employees, motivating others, fostering communication, listening to others, facilitating teamwork, demonstrating care for employees, generating ideas, recognizing trends, and communicating effectively. "Overall, female executives were judged more

effective than their male counterparts” (Sharpe, 2000, p. 75). Researchers attributed the results to the fact that “women’s strengths are stronger than men’s and their weaknesses are not as pronounced” (p. 78).

Especially in today’s business climate, businesses should consider hiring women for the advantages they bring to the workplace (Sharpe, 2000). One area where women excel is in ethical decision-making. Kennedy and Kray (2014) conducted a study posing ethical dilemmas to 65 women and 38 men. The women, more often than men, recognized the unethical decisions as both morally questionable and lacking business sense. In a second study among college students, the researchers showed job descriptions in consulting and finance to 85 females and 94 males. The females were just as likely to pursue the job openings as men, unless the job description contained an unethical business practice. In a final study, respondents participated in a word association test. The findings revealed that women identified a stronger connection between business and immorality than men. Overall, the authors concluded from results of the three studies that women have stronger negative reactions to ethical compromises in business than men. Therefore, women may be able to bring a positive ethical presence to the workplace. Moreover, as women move up the organizational ladder, they can extend those same standards throughout the organization.

At the same time that society was experiencing political and social evolution, and business had developed a need for women in the workplace, institutions of higher education began to change in order to accommodate the new rights of women and the growing need for them in the workplace.

History of Higher Education for Women in the US

History of Women's Involvement in US Colleges and Universities

1700s. The traditional view of women during the colonial times was that they were incapable of intellectual pursuits and not worth educating because they “had smaller brains and weaker minds than men” (Solomon, 1985, p. 2). Although some colleges had been established to educate men, including Harvard College in 1636, William and Mary College in 1693, and Yale in 1701, none educated women. “There is no record of a woman in the colonial period having received a degree” (Thelin, 2011, p. 55).

Women were considered to be useful in the home to fulfill the functions set forth by the men. Women showed deference to men and seldom challenged their position, even when they were self-educated. Evidence of this prevailing mindset occurred in 1783 when Yale University declined admission to Lucinda Foote saying she was “fully qualified, except in regard to sex, to be received as a pupil of the Freshman class of Yale University” (Woody, 1929, p. 137). Although formal education was not an option for women, with statutes excluding them, many alternative methods of education existed allowing them to excel in literacy and other necessary skills (Thelin, 2011).

Although most women did not challenge their position in society, a few did including Abigail Adams (1744-1818), Mercy Warren (1728-1814), Catharine Macaulay (1731-1791), and Judith Murray (1751-1820). In particular, New England woman Abigail Smith Adams, who was born into privilege, raised reading books, and exposed to domestic training, questioned the unfortunate status of women. Her father was a liberal Puritan minister and she later married Harvard graduate, John Adams. She used her unique status, married to a prominent male government leader, to remind him of the

educational deficiencies among women and specifically requested that he “remember the ladies” (Solomon, 1985, p. 8) by providing them protection as new laws were being developed. In one letter to him in 1776, she wrote:

If you complain of neglect of Education in sons, What shall I say with regard to daughters, who every day experience the want of it. With regard to the Education of my own children, I find myself soon out of my depth, and destitute and deficient in every part of Education. I most sincerely wish that some more liberal plan might be laid and executed for the Benefit of the rising Generation, and that our new constitution may be distinguished for Learning and Virtue. If we mean to have Heroes, Statesmen and Philosophers, we should have learned women. The world would perhaps laugh at me, and accuse me of vanity, But you I know have a mind too enlarged and liberal to disregard the Sentiment. If much depends as is allowed upon the early Education of youth and the first principals which are instilled (sic) take the deepest root, great benefit must arise from literary accomplishments in women. (p. 1)

The sentiment expressed in her letter was contradictory to the ideology of the male patriots who feared the changes that would occur with a rise in the number of intellectual females (Solomon, 1985).

After the American Revolution, 1775-1783, the needs of the people along with the enlightenment movement changed many of the long-held traditional beliefs about women's roles. American women had numerous responsibilities including educating their children, preparing their sons for citizenship, helping the family achieve the American dream, and completing domestic duties. In order for women to complete these tasks

adequately, a limited amount of education with a focus on domestic studies was necessary. After the Revolution, varieties of academies were established with some permitting women to attend (Solomon, 1985); however, college was still not considered as suitable for most women, except to prepare them for raising responsible male citizens (Rudolph, 1962). “The American female was recognized as capable of being educated – up to a point . . . for after all God had intended them for marriage and motherhood” (p. 310).

1800 -1850. Although a few academies opened prior to 1800, the largest growth in female academies occurred from 1830 to 1850 (Kwolek-Folland, 2002). By 1850, 6,000 academies were educating more than 250,000 students (Solomon, 1985). Not only was education as a whole expanding, but also important and monumental educational advancements for women occurred throughout the 1800s. In 1821, Emma Willard’s Troy, New York, Seminary opened, setting a new precedent for female seminaries by educating women with a competitive curriculum and paving the way for others such as Mount Holyoke in 1837, a university well-known for its advanced and integrated curriculum (Kwolek-Folland, 2002; Thelin, 2011). In 1837, Oberlin College in Ohio initiated the coeducational model when it enrolled four female students, offering a distinct “Ladies Course” along with traditional bachelor’s coursework (Rudolph, 1962, p. 311). Although, instead of pursuing ministerial training, the female students pursued training to become minister’s wives (Kwolek-Folland, 2002). The trend toward coeducational institutions did not spread quickly; only a handful of other colleges embraced the coeducational model. In 1839, the women’s college movement began with the opening of Georgia Female College in Macon (Rudolph). In the years of academic expansion between 1830 and

1850, more female academies opened than in any other time in United States history (Kwolek-Folland). Because of the desire to maintain regional and religious values among women, numerous local institutions sprang up; some even in the same town. By 1860, women could earn a respectable collegiate degree from over 45 institutions of varying types including colleges, academies, female seminaries, and literary institutes (Thelin).

Although the doors had begun to open for women to attend college, the prevailing attitude remained that sending a woman to college was a reckless and foolish idea that might undermine the American household. Educating sons made sense; educating daughters was a waste. The only value of women's education was that "education would give women a fallback position if, for whatever reason, they found themselves without a male breadwinner" (Kwolek-Folland, 2002, p. 67). Even though in 1890, more girls were graduating from high school than boys, and women comprised 35.9% of college enrollment (Solomon, 1985); still only a few "pioneers" and "lone voyagers," as they referred to themselves in diaries and journals, found themselves in uncharted territory pursuing professional careers in the academy (Thelin, 2011, p. 143).

1850 – 1900. With growing numbers of mothers working in factories and leaving their roles at home, the natural socialization process that had occurred to train the next generation in domestic and parental duties was gone. With women out of the home, a need arose for formal theoretical and practical education in matrimony and domestic tasks, opening the door for formalized vocational schools of cooking, teaching, practical arts, horticulture, nursing, and industrial education (Woody, 1929).

In the 1862, President Lincoln signed the Morrill Land Grant Act that made federal land available to the states to establish educational institutions in agriculture and

the mechanical arts. The law promoted “the liberal and practical education of the industrial classes in the several pursuits and professions of life” (Solomon, 1985, p. 44). States could use or sell the land and allocate the proceeds to fund new educational institutions. Overall, the Morrill Act allocated more than 17 million acres of land, valued at nearly \$7.5 million (The 1890 Land-Grant Universities, n.d.), to further higher education in the United States. The Second Morrill Act in 1890 provided additional funding and further specified that the United States Land Grant Higher Education System not discriminate based on race, requiring land-grant institutions to admit African Americans (Solomon). Although, the second act did not specifically address gender, women were able to capitalize on the intent of the acts, which was to offer instruction to anyone wishing to pursue a profession. Although the law did not stipulate admission for women, women demanded it. “The Morrill Acts led to great changes in American society by opening up higher education to working-class men, women, minorities, and immigrants and giving them the education to succeed in a changing society” (Law & Higher Education, 2011, para. 6).

While the Morrill Act opened up opportunity for women, the western United States region was the first to recognize that women were fully capable and should be included in the opportunity for educational attainment. In 1855, the University of Iowa opened its doors as the first coeducational state university. Soon afterward, other western universities in Wisconsin, Kansas, Indiana, Minnesota, Missouri, Michigan, and California followed suit (Solomon, 1985). Educational attainment for women did not take hold as quickly in the south and east where men had pampered and adored women for

their feminine qualities and treated them with chivalry; single-sex educational institutions were still the norm (Rudolph, 1962; Solomon).

However, the Civil War, helped to change that part of the country's mindset about women's qualities and abilities as women responded to demanding situations and shouldered responsibilities normally handled by the men. In 1865, Cornell was founded as the first coeducational university in the eastern United States. The founders of the university, Ezra Cornell and Henry Sage, had in mind to educate both men and women, but did not state that explicitly in the school's charter. The first president "stalled on the admission of women, and in 1868 Cornell opened with more than four hundred students from many walks of life, all of whom were men" (Solomon, 1985, p. 51). Cornell finally began accepting women a few years later when Jenny Spencer arrived with scholarship money from Ezra Cornell and federal and state land-grant money, making it impossible for the institution to deny her admittance. This confrontation was just one of many of its kind at coeducational institutions. Nevertheless, the institution began allowing women and with a coeducational presence in the east, it seemed that all across the country the movement for women in the collegiate arena might overcome the skepticism.

Although women were making their way into the collegiate realm, the coursework offered to them still focused on stereotypical feminine roles of homemaking, domestic studies, and home economics (Solomon, 1985). To combat the stereotypical curriculum offerings, women's colleges such as Vassar, Smith, and Wellesley were established with the goal of offering coursework "almost identical with that of the best men's colleges" (Rudolph, 1962, p. 318). According to the catalogues of the 107 women's seminaries in existence between 1830 and 1871, most offered nearly the same upper-level curriculum

offered to men at men's liberal arts institutions. "Three out of five listed logic, nine out of ten offered chemistry and physics, and four out of five listed mental philosophy (psychology) and moral philosophy (mainly ethics)" (Green, 1979, p. 221).

By the late 1800s, the landscape of higher education was beginning to change as numbers of enrolled women increased. In 1871, the Commissioner of Education reported that there were 84 business colleges, with female students representing 7% of the student population. By 1882, there were 217 business colleges, with female students representing 15% of the student population. A decade later, in 1893, there were 518 business colleges, with females representing 31% of the student population. With the increasing numbers of female students came an attitude shift. In 1872 the University of Wisconsin board of visitors declared that, ". . . it is too late, amid the noontide splendours of the nineteenth century, to ignore the claims of woman to higher education . . . Whatever will make her wiser and better, that she may learn; whatever knowledge she may be able to use, either in adding to her own happiness, or in promoting the happiness of others—that knowledge she may rightly acquire" (Woody, 1929, p. 242). The philosophy in the board's statement represented a movement that brought about the development of numerous additional denominational, coeducational, and co-ordinate institutions during the remainder of the century (Solomon, 1985). Numerical proof of the movement to provide higher education to women was evidenced by the fact that in 1880, 30% of United States colleges were coeducational; by 1900 that number had increased to 70% (Woody).

However, just because women were attending colleges with men did not mean they were being educated equally. Many times women were there primarily as a means to enhance the social and educational environment for men, rather than to advance women's

educational opportunities. On some occasions, women were offered separate courses of study housed in ladies' departments with female instructors, offered less rigorous coursework focused on female-dominant careers (Rury & Harper, 1986), excluded from participation in student newspaper, student government, and social organizations (Thelin, 2011), and segregated from men even in gender-neutral extracurricular activities such as literary societies (Rury & Harper). Although women were viewed as intellectually capable of more difficult study, they were relegated to certain female-specific careers. Women were treated as "second-class citizens" in the coeducational environment (Thelin, 2011, p. 183) A "structural metaphor for the marginalization of women on campus is that they were confined to the 'academic kitchen' of the emerging American university" (p. 143).

Horace Mann, educational reformer and President of Antioch College, called coeducation the "Great Experiment" because although it represented progress for women, many concerns remained on both sides (Rury & Harper, 1986, p. 485). First, coeducational institutions might contribute to moral decline due to the regular intermingling of the opposite sexes. Women were to be sheltered, kept from the competitive man's world, and morally pure. Second, with men and women together in the classroom, women could compare themselves to men, consider new career paths, and begin to challenge their status in society. Third, with such a dramatic shift in gender composition, some colleges were fearful of the change to their collegiate culture and character. Fourth, due to their educational success, women were blamed for lowering the academic performance of men. There was an unspoken fear that women would monopolize and dominate the education system (Solomon, 1985). As a remedy,

universities such as Northwestern and Stanford imposed limits on the number of women admitted and bolstered male-dominated coursework to maintain higher numbers of male students (Rudolph, 1962). Finally, coeducation was occurring at a time when the religious guidelines within the culture instructed women to refrain from speaking in church or in front of mixed company; therefore, women felt uncomfortable asserting themselves in a classroom full of men. As a result, women in a coeducational rhetoric class at Oberlin asked the administration to separate them from the men into their own course (Solomon, 1985).

Women's only colleges offered a distinct alternative to coeducational institutions. Women could fully participate in all extra-curricular activities, including student government and athletics, pursue advanced studies, work in advanced scientific laboratories, enroll in professional curriculum in medicine and law (Thelin, 2011), while receiving mentoring and support from female faculty (Kwolek-Folland, 2002). Moreover, when historians have analyzed course catalogs, faculty notes, and student records, indications are that slightly different content was emphasized; however, "female seminaries were usually comparable in academic rigor to the colleges for men in the same area" (Thelin, p. 56). Nevertheless, even though they were prestigious, women's colleges meant female students were segregated.

Between 1880 and 1920, women's colleges played an important role in higher education; the most famous, Wellesley, Radcliffe, Mount Holyoke, Smith, Vassar, Barnard, and Bryn Mawr, became known as the "Seven Sisters" institutions (Thelin, 2011, p. 180). Some of those arose from all male universities who were not willing to take the risk of offering a coeducational experience. Therefore, coordinate institutions,

separate women's colleges sponsored by the larger university, became an appealing alternative. Some of the most famous included Sophie Newcomb Memorial College, a sister school to Tulane University, Barnard, a sister school to Columbia University, and Radcliffe College, a sister school to Harvard University. At Harvard, the coordinate model began after the University started allowing women to take exams and complete the same liberal studies coursework that men did, but did not allow women to earn a degree. After numerous complaints, the institution established Radcliffe College in 1894 "as a degree-granting institution to offer the equivalent of a Harvard degree" (Solomon, 1985, p. 55).

Despite the advancements for women in the 1800s, women still could not erase the idea among society that college was too strenuous and too much of a distraction from their main roles as wives and mothers. Society remained suspicious that the pursuit of education would eliminate the gentleness, charm, grace, femininity, and even sex appeal of women (Thelin, 2011; Woody, 1929). New research emerged restarting the argument that women were inferior, both physically and mentally. In 1873, Dr. Edward Clark studied several female college students and "concluded that if women use up their 'limited energy' on studying, they would endanger their 'female apparatus'" (Solomon, 1985, p. 56). At this point, the arguments against education were not about rights, they were about the health and well-being of society. Other studies followed finding mixed results about the impact of college on a woman's health. Nevertheless, from 1870 to 1900, the number of females enrolled in college increased by 672%, from 11,000 to 85,000 (Solomon).

1900 – 1950. Early in the twentieth century from 1900 to 1940, overall college enrollment increased by 526%, and the number of bachelor's degrees earned increased by 580%. In 1910, higher education institutions enrolled more than 140,000 women; by 1940, that number had increased to 600,953. While enrollment and degrees increased for both men and women during that time, men experienced higher rates of growth (Nash & Romero, 2012). At the turn of the century, women had a variety of educational opportunities at seminaries, vocational colleges, private women's colleges, private and secular coeducational institutions, and private coordinate women's colleges (Solomon, 1985). Although women were attending college in vast numbers, the skeptics remained. David Starr Jordan, President of Stanford University, responded to the cynics in 1906 when he said, "if the college woman is a mistake, nature will eliminate her" (p. 207); obviously, that did not happen. By 1940, women comprised 40% of undergraduate enrollment at U.S. colleges; although that number then went into decline and would not be reached again until 1970 (Thelin, 2011).

Attending college dramatically changed the marriage patterns of women. Women with college degrees were prepared to use their degrees to obtain careers or go to graduate school, delaying marriage. On average, those women attending Mount Holyoke from 1837 to 1850 married later or remained single after college (Solomon, 1985). In order to preserve the proper roles of married women, some legislation and company regulations specified that women were not allowed to work outside the home after getting married. The social norms of the 1920s and 1930s were strong and influential on women's decisions about their future. It was still the custom for jobs to be assigned first to men and then to women, and men were paid more for those jobs. Although it was

acceptable for single women to work outside the home, the primary expectation was still for women were to get married and to have children. Education could give single women what American female education activist Catharine Beecher called an ““honorable independence”” (Solomon, p. 32). However, marriage was primary; education was secondary. “Unmistakably, marital status affected work status” (p. 173). There had been, up to this point, just two acceptable paths for educated women: stay single and pursue a career or get married and become a wife and mother. By the end of the 1930s, a new alternate path emerged for public debate, combining marriage and a professional career. By 1945, approximately 25% of married women were working despite the general feeling among the American public that they should be at home taking care of the family.

Supporters of education for women argued that it had a positive influence on both women and society. First, proponents argued that education was valuable because it would not only provide women with practical skills, teach mental discipline, broaden their horizons, give them greater confidence, and create a better understanding of the important issues in life, but it would also make them better wives and mothers. Second, education was valuable in teaching them to be more effective citizens. With the passing of the 19th Amendment to the United States Constitution in 1920 granting women the right to vote, women needed to be informed in order to effectively perform their civic duty. Education was not solely about individual achievement for women, but also their ability to contribute to the common good of society (Nash & Romero, 2012).

World War II brought a new level of acceptance for married women to work outside the home in order to maintain the jobs of the men gone to battle. This opportunity caused women to sense new possibilities for pursuing fields previously reserved for men.

Due to the war, the coeducational schools experienced a decline in the number of male students. “For the short time of national emergency, the curriculum provided women with opportunities that seemed to belie sex labels” (Solomon, 1985, p. 188). Women’s colleges and coordinate colleges also saw increases in the number of women majoring in the sciences, meteorology, and electronics. In 1943, women were admitted to Harvard, two years later, a few gained admission to Harvard Medical School, and by mid-century, some entered Harvard Law School. Wartime allowed women to gain experience with men’s work and men’s curriculum and develop confidence in their ability to pursue education and professional careers. However, once the war ended, so did the opportunities for women. Men resumed their jobs and pursued college in increasing numbers. The GI Bill contributed to the increased composition of male students in college classrooms by providing returning soldiers funding to pursue educational opportunities; therefore, more men than women were enrolling in college. As a result, “one consequence of the GI Bill was to masculinize the postwar campus” (Thelin, 2011, p. 267). The men were home, and the focus was on them. Unfortunately, “in peacetime American women lacked clout at the highest levels everywhere . . .” (Solomon, p. 189).

1950-2000. The expanse of education for women in the forties led to criticism in the fifties; women’s education had taken two steps forward and one step back. The pendulum had swung far in the direction of advancing women’s educational opportunities, now the conversation returned to the need for a more feminine education, in addition to the liberal curriculum. Women working, single or married, was accepted, but still criticized. “Motherhood was the primary function that no real woman would deny; and in the fifties women felt the burden of demonstrating their fitness for the

maternal role” (Solomon, 1985, p. 194). College became a meeting ground for men and women, leading to marriage, and ultimately to the baby boom. A research poll, conducted in 1956, revealed that most women would choose marriage over a career. Even educated women were abandoning their educations and potential careers. “In real life women who had careers had no support from the culture, especially when they combined marriage, career, and motherhood” (p. 200).

The 1960s brought a renewed emphasis on women’s rights from the U.S. government. President John F. Kennedy established the Commission on the Status of Women in 1960; former first lady Eleanor Roosevelt served as the chair (Solomon, 1985). Congress passed two key landmark legislative acts to ensure equal treatment for women in the workplace. The Equal Pay Act of 1963 addressed disparities in workplace pay by requiring employers to provide men and women equivalent pay for equivalent work. In 1964, Congress passed Title VII of the Civil Rights Act in order to prohibit workplace discrimination based on race, color, sex/gender, religion, and national origin. This Act ensured protected group class status for women, which provided special safeguards under the law for discriminatory employment practices including disparate treatment, adverse impact, sexual harassment, and retaliation (McKinney, 2013). To ensure implementation of the legislation, the Equal Employment Opportunity Commission (EEOC) was established in 1965. The EEOC chose not to address women’s economic issues; therefore, frustrated female leaders created the National Organization for Women in 1966 (Solomon).

In 1972, Congress passed Title IX prohibiting discrimination in educational programs and activities subsidized with federal funding, based on gender (Wood, 2013).

In the 1970s and 1980s, the prominent male universities of Yale, Princeton, University of Virginia, and Columbia University began admitting female students. After 1980, only three male-only colleges remained (Solomon, 1985). The decade of the seventies brought remarkable growth in the number of females enrolled in college; their enrollment increased by approximately 75% from 3.1 million to 5.5 million (U.S. Department of Education, 2016b). All of these events ushered in the monumental shift in collegiate education in the 1980s when the number of women graduating from college outnumbered men for the first time (Goldin et al., 2006). “In a reversal of history, women have more collegiate options than men” (Solomon, p. 207). Women were now more than numerically equal to men in colleges; however, achieving true curriculum equality had not been achieved. Universities would need to adapt the traditional male-dominated curriculum to address women’s issues and recognize women’s achievements within the main curriculum.

Evolution of the University Business Classroom

The gender composition of the business classroom has changed over the years (Goldin et al., 2006); however, the classroom teaching methods (Spence, 2001) and gender composition of the faculty in business schools (Flynn, Cavanagh, & Bilimoria, 2015) have not kept pace with the student body changes. Between World War I and World War II, business administration became the most popular major at the undergraduate level; however, very few women studied in the area. Business coursework offered to women was quite different from the men’s curriculum for managers and executives; women studied curriculum to develop secretarial skills. Additionally, graduate MBA programs enrolled nearly all male students (Thelin, 2011).

After WWII, the GI Bill increased the number of male students enrolling in college. Enrollment in the field of business exploded; however, none of the numerical gains came from women. In the 1950s, the number of women pursuing business actually declined (Thelin, 2011). In 1959, Harvard-Radcliffe began admitting female business administration students; however, they could only earn a Radcliffe degree. In 1963, women gained full access to Harvard degrees, including the prestigious MBA (Kwolek-Folland, 2002). In the 1970s, women regained a strong numerical presence in colleges across the country, at 41% of the overall population. However, women enrolled in graduate school were concentrated in specific majors such as education, humanities, and home economics, with relatively low enrollment in other programs such as medicine, law, business, and engineering (Thelin). In 1977, women earned 6% of all MBAs; from 1985 to 2000, that number had increased to 31% (Kwolek-Folland).

By 2000, women were still pursuing undergraduate majors in the fields of education and health in higher numbers than men, and men were pursuing undergraduate majors in the fields of engineering and computer science in higher numbers than women. However, there was no difference in the percentages of men and women pursuing undergraduate business degrees, at approximately 19% each (U.S. Department of Education, 2002b). In 2012, the gender gap in students pursuing degrees in education, health, computer science, and engineering remained consistent; however, men were pursuing undergraduate business degrees at slightly higher rates than women, 18% to 15% respectively (U.S. Department of Education, 2014). Warner (2014) reported that at the graduate level women were pursuing business degrees at lower rates than men, and they comprised less of the student population in business schools compared to other

professional degrees. Women earned nearly 50% of law and medical degrees; however, they only earned 37% of all MBAs and 44% of other business master's degrees.

Overall, women got a relatively late start into the educational field of business administration, but they gradually caught up to the number of men in business classrooms (Goldin et al., 2006). However, in recent years, the number of women in business schools has declined (Davis & Geyfman, 2015). Certainly, the higher education business classroom is composed of more women than ever before, but to maintain and increase those numbers, business schools must understand the unique learning needs of female students who may bring varying learning styles and learning preferences to the classroom. Business schools face the challenge of understanding the possible existence of gender differences in the business classroom, looking for potential challenges and opportunities.

Even though the student composition of the university classroom has changed in many ways, the traditional teaching methods often have remained the same. Spence (2001) speculated that instructors from 15th century European universities would find little change in today's university classroom.

Why is education more resistant to innovation than business, agriculture, or communication? Because parents, reporters, citizens, children, politicians, and professional educators share an unshakable image of what teachers and students are supposed to do. A common machinery of schooling prevails from kindergarten through corporate training programs. And these accepted arrangements and practices are what we think a 'real' school, a 'real' university, or a 'real' training program ought to look like. Its assumptions are that teaching is

telling, learning is absorbing, and knowledge is subject-matter content. Teachers tell you what to learn and how to learn it. Physical and institutional arrangements are teacher-focused and stimulus-deprived. A bureaucratic schedule of instruction, cottage-industry course design, isolated delivery, rote-detail testing, and an antiquated curriculum complete the picture. This machinery has successfully processed large numbers of students for more than 150 years. It can't be wrong – or can it? (p. 12)

Many college professors are the by-product of a traditional lecture-driven instructional model; most teach using the same teacher-centric behaviors, repeating the cycle for a new generation of students (Spence, 2001). Research has shown that teachers often instruct students according to their own personal learning style, mimic the instruction methods most effective for them as a student, or follow the example of an instructor they esteemed (Gilakjani, 2012; Spence). Then, once they have taught a course, they continued to teach it using the same methods year after year (Grasha, 1996). Hodges (1982) stated that 90% of the teaching taking place in school classrooms was the *chalk and talk* approach of lecture and discussion, which appealed to auditory learners. However, although university instruction is still largely lecture-based, research conducted by Eagan et al. (2014) indicated that in 2013-14, the number of faculty members who reported relying solely on lecturing in their courses had decreased to approximately 51%, with professors increasingly incorporating group projects and discussions.

According to research conducted by Philbin et al. (1995), male students were more likely to relate to the instructor as the expert, while female students were more likely to relate to the instructor as a coach or motivator. Grasha (1996) found that female

students are more collective and participatory than male students. Therefore, use of the traditional teacher-centered delivery methods still found in the majority of today's university classrooms reflects a teaching method that might more effectively relate to male students.

Female Faculty Members in the University Business Classroom

Since the days of coeducational instruction, universities have not afforded the same opportunities to male and female faculty members. In the late 1800s, female faculty members were not included in traditional faculty activities including faculty clubs, academic processions, and tenure. University department leaders often assigned them to departmental administrative duties, in addition to their teaching and research load. By 1900, female scholars sought solutions to this isolation and discrimination and responded by creating the Association of American Women, which developed a membership of 2,000 women. Despite their efforts, even toward the end of the twentieth century, little progress had been made (Thelin, 2011).

In 1970, the number of female faculty in American higher education who had academic rank higher than lecturer was “miniscule” (Thelin, 2011, p. 344). Overall, in the 1972-73 academic year, female faculty comprised only 21% of the faculty positions in all academic fields at four-year institutions. Specifically, female faculty were overrepresented at lower levels of rank; 44% of all faculty members were females holding untenured instructor positions. In addition, females were largely underrepresented at higher levels of academic rank; 10% of full professors, 16% of associate professors, and 24% of assistant professors were women (Thelin). In 1974, the American Association of University Professors (AAUP) (2005) observed that “[t]here is

strong evidence that a very common discrimination takes the form of appointing women faculty members predominately to the lower ranks, and appointing or promoting disproportionately few to the rank of full professor” (p. 27). In 1982, Hall and Sandler introduced a new term, “chilly climate,” (p. 3) to describe the cold, unwelcoming atmosphere toward females both learning and teaching in higher education. In a second study, Sandler, Silverberg, and Hall (1996) found that although the number of women in the classroom was increasing and some faculty and institutions had attempted to address the issues revealed in their first study, the classroom and university environment had not been fully adapted to the needs, styles, communication patterns, or perspectives of women.

More recent research by the AAUP (2005) indicated that in 2004, full-time male faculty members more than doubled the number of full-time female faculty members at doctoral universities, yet full-time female faculty members slightly outnumbered full-time male faculty members at associate degree colleges. At all university types, male faculty members were more likely than female faculty members to have tenure, 70% to 40% respectively, or tenure-track positions. Additionally, female faculty members at all types of institutions earned lower salaries than male faculty members. Eagan et al. (2014) found that female faculty members felt like they had to prove themselves by working harder than their male colleagues in order to gain credibility as a scholar within the academy. After all these years, gender inequity still exists in academia for female faculty members.

Specifically, among the top 12 business schools identified in the Financial Times Global MBA rankings, female faculty representation was low. Of the 12 business

schools, one had female faculty representation of more than 30%; seven had female faculty representation of 20 to 29%, and four had female faculty representation of 10 to 19% (Symons, 2015). Among business schools in the United States, females comprised only 18% of the full professor positions, 19.3% of the dean positions, and 23.6% of the tenured faculty (Flynn et al., 2015). Female faculty were in short supply in business schools across the country; therefore, from a classroom composition and instructional perspective “neither women nor men are getting much experience at gender balance at business schools” (Symons, p. 1). Business schools were not modeling the gender diversity that is a growing reality in the business world; they were not embracing the very principle taught to their students (Flynn et al.). Symons concluded that increasing the gender-balance among business faculty could contribute to students’ learning a diverse perspective during the university experience, necessary for both male and female students.

The gender of the faculty member can influence student perceptions and student evaluations. Sprague and Massoni (2005) found that students tended to characterize all of their best teachers as caring, intelligent, and energetic; however, the gender of the professor affected some of the other descriptors selected. Students rated their best male faculty members as funny, while they rated their best female faculty members as nurturing. Bacon (2015) found that college students tended to describe the traits and behaviors of male and female faculty members in gender-stereotypical ways. Students attributed positive traits such as being caring, warm, approachable, compassionate, kind, supportive, and cheerful to the typical female faculty member more often than to the typical male professor. Students attributed negative traits such as being sarcastic,

arrogant, insensitive, condescending, hypocritical, intimidating, and cold to the typical male faculty member more often than to the typical female professor. Overall, students had much higher expectations of female faculty members. According to Meltzer and McNulty (2011), when the traits and behaviors of professors do not match the gender-stereotypical perceptions, those professors are overly rewarded or excessively punished on student evaluations of those characteristics.

Student reactions to receiving a negative evaluation from a professor varied depending on the gender of the professor; when students received poor performance evaluations from a female professor, the students gave her lower competency ratings than a male professor (Sinclair & Kunda, 2000). At times, the gender of the student influenced the reaction to the gender of the professor. Sprague and Massoni (2005) found that when selecting a top professor, students were significantly more likely to choose a professor of their same gender. Likewise, Basow (2000) found that female students, when selecting a best professor, chose female faculty more often than expected; male students, when selecting a best professor, chose female faculty less often than expected. Additionally, Basow, Phelan, and Capotosto (2006) found that male students were not as likely to select a female professor as a favorite; however, in contrast to the other studies, the researchers found that female students did not select favorite professors according to gender.

Gender Theories

Do differences in gender behaviors and characteristics exist? Do men and women learn or perceive learning experiences differently? Do they respond to instructors differently? Gender is a distinguishing feature that human beings use to guide social

perception and characterize others (Macrae & Bodenhausen, 2000). Because men and women are different biologically, people often assume psychological differences as well. Those assumptions have led to a number of gender stereotypes, of which society continues to perpetuate and routinely espouse to children throughout the socialization process. Some of those stereotypes include men being considered strong, competitive, and dominant, yet, stoic, quiet, and analytical and women thought of as gentle, cooperative, submissive, nurturing, emotional, interpersonal, and talkative (Wood, 2013). Differences in the communication patterns, emotional needs, and behaviors of men and women became a topic of popular culture literature in the 1990s, highlighted in Gray's (1992) book *Men are from Mars, Women are from Venus*. Other studies asserting that gender differences existed have supported the presence of these stereotypical differences; for example, Tannen (1995) asserted that females have linguistic styles that are different from men causing them to employ unique communication behaviors. Identifying and understanding the similarities and differences between males and females is important because the differences can extend into the academic learning environment (Chang, 2004).

Discussions regarding gender differences can be controversial. In 2005, Harvard President Larry Summers indicated that the lack of women in top science careers could be the result of "issues of intrinsic aptitude" (Jaschik, 2005, p. 1). Summers supported his assertion by stating that there were differences in the mean, standard deviation, and variability of scores between women and men on tests for overall IQ, mathematical ability, and scientific ability. He asserted that these differences explained the reason for the small available talent pool of women at the top. Afterward, his statements were highly

criticized; subsequently, Summers apologized saying “my remarks about variability went beyond what the research has established” (p. 2). Nevertheless, Summers’ statements caused many to ask, what does research say about the differences between males and females?

Gender Similarities

In response to the multiple schools of thought supporting gender differences, Hyde (2005) proposed the “gender similarities hypothesis” (p. 581) suggesting that the genders share tremendous similarities, in alignment with the liberal feminism ideology (Wood, 2013). After completing a review of the combined results of 46 scientific studies investigating psychological gender differences, Hyde concluded that men and women have most psychological characteristics in common.

Following Hyde’s (2005) seminal study concluding that there are more gender similarities than differences, there was renewed interest in meta-analytic studies of psychological gender differences. In 2015, Zell, Krizan, and Teeter (2015) collected the data from many of those studies, conducting a metasynthesis incorporating 106 meta-analyses and more than 12 million participants, in order to reevaluate Hyde’s findings, engaging in the most thorough study of gender differences in existence. After aggregating data from the meta-analyses, the researchers examined 386 areas of difference between males and females to determine the magnitude of difference. The researchers found that generally the size of the gender differences were small or very small, with 85% overlap between male and female distributions. Although most gender differences were small, moderate gender differences were found on peer attachment and interest in people vs. things scores, with women scoring higher than men. The overall research supported the gender similarities hypothesis; however, the authors recognized that small differences

between the genders existed and were important, not trivial, and encouraged continued research. They recognized that even the small individual differences could be important in dealing with everyday matters and might vary by context and increase in magnitude when considered with the totality of differences among all of the psychological domains (Zell et al., 2015). Moreover, the small gender differences in cognitive and social areas might directly relate to the teaching methods used in the business classroom.

Gender Differences

The cultural feminism ideology asserts that there are essential differences between men and women (Wood, 2013). When studying leadership, the differences between men and women can be observed in their leadership behaviors. Eagly and Johannesen-Schmidt (2001) conducted a study of 9,000 managers using the Multifactor Leadership Questionnaire to determine the frequency of transformational, transactional, and laissez-faire leadership behaviors demonstrated by men and women. They found that female managers scored higher than male managers did on individual consideration and rewarding follower performance. Male managers demonstrated a hands-off and uninvolved, leadership approach more than female managers. Male managers also focused on the followers' mistakes more than female managers did and waited longer, until problems were severe, before acting on them.

McKinsey & Company (2008), in *Women Matter 2* identified nine key leadership behaviors important for organizational success and aligned them with the research findings of Eagly and Johannesen-Schmidt's (2001) frequency analysis. McKinsey & Company found that although men and women both demonstrated all nine of the key leadership behaviors, they did so at varying levels. Of the nine leadership behaviors

important for organizational success, women exhibited people development, expectations and rewards, role model, inspiration, and participative decision-making more than men did; men exhibited control and corrective action and individualistic decision-making more than women did. Both men and women applied intellectual stimulation and efficient communication equally.

Yarrish, Zula, and Davis (2010) studied traditional undergraduate business students and found a statistically significant difference in the perceptions of male and female students' regarding the importance of various leadership skills. Female students, significantly more than male students, perceived that it was important for leaders to possess cognitive and inter/intrapersonal skills. Because the research indicates differences between the genders, especially in the area of leadership, the study of the possible differences in learning styles and learning experiences of female business students could make a worthwhile contribution to universities engaged in leadership education.

Learning Style Theory

The study of learning styles is wide-ranging; therefore, a wide variety of measurement instruments have been created to assess different dimensions of learning characteristics, preferences, and traits of learners (Bonham & Boylan, 1993). One accepted definition of learning styles is the “cognitive, affective, and physiological traits that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment” (Keefe, 1982, p. 44). In order to choose from the vast number of learning styles inventories, a researcher must identify which dimensions to assess and the type of information sought (Bonham & Boylan). As described in Chapter 1, Curry's (1983) onion model organized the multitude of learning style

inventories available according to the four layers of learning: cognitive personality, information processing, instructional and environmental preferences, and social interaction. Learning in the cognitive personality layer includes learning based on Jung's psychological types and stable personality traits and is commonly measured using the Meyers-Briggs Personality Type Indicator (Eagleton & Muller, 2011). Learning in the information processing layer involves the ways learners process information, often in a cycle of learning as originally described by Lewin. This layer is commonly measured using Kolb's Learning Styles Inventory. Learning in the instructional preferences layer encompasses the influence of the external teaching and learning environment and is commonly measured using Dunn, Dunn, and Price LSI. Learning in the social interaction layer involves the way learners interact with others during the learning process and is commonly measured using Reichmann and Grasha's Student Learning Style Scale (Cassidy, 2004). Because the construct of learning styles is a composite of several components and is therefore very complex, the current study did not attempt to examine all aspects of it at one time. The current study addressed the learning process identified in Curry's middle layer, information processing style, which addresses how students intellectually process and assimilate information.

Felder and Silverman (1988) described that students have unique and diverse ways of learning including, visualizing, listening, reflecting, acting, reasoning, memorizing, and creating. Teachers also teach in a variety of ways including lecture demonstration, discussion, application, and examination. Felder and Silverman asserted that student learning was influenced by student ability, preparation, and learning style compatibility with the teaching style. In order for college professors to be effective in

teaching, they need to know more than just the content for the course. Professors should also have an understanding of pedagogy, curriculum design, and student learning styles and preferences (Crawford et al., 2012). An understanding of both student and teacher learning styles and preferences may help the professor develop a course to match the objectives and instructional goals while incorporating the students' learning preferences. Student-centered teaching involves understanding student learning styles and adjusting the learning experiences to those that students find most valuable (Gilakjani, 2012).

Although the study of learning styles has existed for several decades, recent research by Pashler, McDaniel, Rohrer, and Bjork (2009) concluded that there was not enough scientific support for the meshing hypothesis, the idea that “a student will learn best if taught in a method deemed appropriate for the student’s learning style” (Gilakjani, 2012, p. 51). Therefore, the authors’ conclusion was that educators should not waste their resources using learning style inventories. To study the issue, the authors conducted a seminal study reviewing the literature in the field of learning styles; they found that most of the available studies did not use an experimental approach to prove the relationship between learning styles, matched teaching strategies, and increased student-learning outcomes, making it impossible to prove direct causation. Thus, although learning styles use is widely popular, evidence of its practical utility is lacking. Although the authors disagreed with the effectiveness of matching teaching strategies to student learning styles or learning aptitudes, they did not dispute the “existence of study preferences” (Pashler et al., p. 108); although, they did not recommend dedicating educational resources to accommodate student preferences. Gilakjani recognized the existence of diverse individual learning preferences and stated that “teaching methods that provide

preferential treatment to [only] one group in the classroom [are] likely to produce significantly sub-optimal results” (p. 51). Gilakjani concluded that teachers should strive to know their students in order to produce more motivated and attentive learners. Therefore, their research supported the idea of enhanced teaching effectiveness when appropriately addressing the learning preferences of the students through the use of varied teaching techniques.

Other scientific research has classified the meshing hypothesis as one of the most widespread neuromyths in education. A neuromyth is “a misconception about the brain and its functions” (Tardif, Doudin, & Meylan, 2015, p. 50). These often develop because of misinterpreted or misconstrued research findings or conclusions that cannot be proven with neuroscientific facts to support the relationship. However, the research does not discount modality preferences, explicitly stating that they are not a myth (Tardif et al.). Therefore, the critical mass of recent research demonstrates that aligning teaching strategies with learning styles is not an immediate guarantee for increased student achievement; however, aligning teaching strategies with student preferences may enhance the learning experience for all involved. “The purpose of using learning styles in universities is to find the best ways for both students to learn effectively and teachers to teach efficiently” (Gilakjani, 2012, p. 56). Undoubtedly, learning styles research has suffered from the criticism regarding the meshing hypothesis and the confusion regarding the wide variety of measurement instruments used to measure the construct; however:

Despite these obstacles, efforts to better define and utilize learning style theory is an area of growing research. A better knowledge and understanding of learning styles may become increasingly critical as classroom sizes increase and

technological advances continue to mold the types of students entering higher education. (Romanelli, Bird, & Ryan, 2009, p. 4)

Despite the grouping of studies that refute the successful application of learning style theory toward student learning outcomes, the other potential benefits of utilizing learning style theory are well-recognized and accepted. Best practices include increased student awareness of personal learning styles, faculty awareness of the diverse learning styles present within the classroom, and the use of enhanced teaching strategies to both accommodate and challenge students (Crawford et al., 2012; Romanelli et al., 2009). Knowing the learning styles of students can help educators teach information in relevant ways through the varied use of teaching strategies according to learning style, which can help learners assimilate information more easily (Brady, 2013). Additionally, numerous studies have indicated that an understanding of learning styles in the classroom *can* lead to increased student achievement (Cano-Garcia & Hughes, 2000; Gadzella et al., 2002). For example, Rochford (2004) created a variety of learning materials for a test preparation workshop, specifically associated with the learning styles of 150 remedial writing students preparing to take the ACT Writing Sample Assessment. Students in the experimental groups used the course learning materials corresponding to their main and secondary learning styles. The control group received lecture instruction and a supplemental handout. The results of the study showed that students who studied with material that matched their learning style scored significantly higher on the ACT Writing Sample Assessment.

Kolb Learning Styles Inventory

Kolb is a prominent learning styles researcher in Curry's middle layer dealing with information processing styles (Curry, 1983; Williamson and Watson, 2006b). Other researchers and measurement instruments in this layer include Biggs - Study Process Questionnaire; Tamir, Schiffman, Elstein, Molidor, and Krupa - Cognitive Preference Inventory; and Schmeck, Ribich, and Ramanaih - Inventory of Learning Processes (Cassidy, 2004; Curry). Because the Kolb Learning Styles Inventory (KLSI) was one of the most documented tools for measuring learning styles (Cano-Garcia & Hughes, 2000; Kayes, 2005), the researcher selected it for use in the current study. The KLSI 3.1 contains 12 sentence stems, each with four choice endings, soliciting 48 unique item responses. Respondents rank four endings for each sentence in order of how well each one describes their preference for learning, 1 (*least preferred*) to 4 (*most preferred*). The total of the ranked item numbers creates four subscale scores in the following categories: abstract conceptualization (AC), concrete experience (CE), active experimentation (AE), and reflective observation (RO). From those four scores, an AC-CE score and an AE-RO score are calculated (Kolb & Kolb, 2005b).

The AC subscale score measures a learner's preference for thinking and conceptualizing during the learning process. The CE subscale score measures a learner's preference for feeling and experiencing during the learning process. These two dimensions, AC and CE, describe opposite ends of a perception continuum that describes the way learners think about things. The AE subscale score measures a learner's preference for experimenting and doing. The RO subscale score measures a learner's preference for watching and reflecting. These two dimensions, AE and RO, describe

opposite ends of a processing continuum that describes the way learners prefer to do things. Based on the level of integration of the four learning modes, Kolb's model identified four learning styles: Divergers, Assimilators, Convergers, and Accommodators (Kolb, 1984).

Diverging (CE and RO) describes individuals who show a preference for learning through creating, generating new ideas, and imagining possibilities. *Assimilating* (RO and AC) describes individuals who like to learn by drawing on multiple sources of information, logic, and step-by-step organizing of information.

Converging (AC and AE) describes individuals who like to learn through solving practical problems, making decisions, and interacting with problems rather than necessarily with people. *Accommodating* (AE and CE) describes individuals who like to learn through taking actions, risks, and leadership roles. (Kayes, 2005, p. 250)

Kolb's learning theory recognizes that most people utilize all four constructs when learning; however, they are likely to prefer and rely on some of the modes more than the others. "Learning occurs when an individual utilizes one or more of the four modes to resolve a learning problem" (Kayes, 2005, p. 250). The KLSI was created as a self-assessment tool for students to identify individual learning styles and preferred learning modes (Kolb & Kolb, 2005b).

Kolb Learning Styles Inventory Psychometric Data

While there is substantial support for Kolb's instrument, the instrument has drawn some criticism from psychometric reviews showing reliability and validity issues. The earliest version of the instrument, LSI-1976, drew criticism for its poor reliability and

ipsative, rather than normative, scaling. Ipsative scales force high rankings on one dimension and lower rankings on another, as found in the 1-4, lowest to highest, ranking for each item on the KLSI. However, although revised versions of the tool still have ipsative scales, researchers have found that factor analysis can be used to effectively interpret ipsative data (Kayes, 2005). In addition, only the primary learning orientation scores are ipsative, the continuum scores are not. After the negative reviews, Kolb revised the tool in 1985 to include 12 items, rather than nine, to enhance reliability. The tool showed stronger internal consistency, but not necessarily stellar reliability scores (Kolb & Kolb, 2005b). Henson and Hwang (2002) found marginal levels of internal consistency and strong temporal stability for the 1985 version of the LSI, but encouraged continued revisions of the instrument. Other studies revealed that problems with poor construct validity, construct reliability, questionable reliability and stability still existed (Ruble & Stout, 1990, 1991, 1994). The tool was revised again in 1999 to include randomization of the four-column response sets so that sentence endings representing different learning constructs appeared in varying columns to further improve its psychometric properties (Kolb & Kolb).

The most recent update to the KLSI occurred in 2005; The KLSI 3.1 is the fourth revision of the instrument since its original development in 1976 (Kolb & Kolb, 2005b). Each revision has improved the psychometric properties of the instrument including internal reliability, validity, internal consistency, and test-retest reliability. Version 3.1 “includes new norms that are based on a larger, more diverse and representative sample of 6,977 LSI users” (p. 10). The KLSI 3.1 randomized version demonstrated good internal consistency reliability on most of the subscale scores as reported by the

following Cronbach's alpha coefficients: CE: .72, .67; RO: .67, .67; AC: .71, .74; AE: .52, .58, when used in two studies involving 726 business students. The KLSI 3.1 demonstrated varied levels of test-retest reliability, based on a five-week interval. The following Kappa coefficients were reported for each of the subscale scores: CE: .37, RO: .59, AC: .61, AE: .58. Overall, 53% of respondents identified with the same learning style upon retest among a study of 253 undergraduate and graduate business majors. "Despite the psychometric problems with the instrument, Kolb's experiential learning theory has widespread support, and further psychometric investigation of the instrument in various modified forms has continued" (Brew, 2002, p. 374). Overall, the KLSI remains one of the most widely used and documented tools for measuring learning styles (Cano-Garcia & Hughes, 2000; Kayes, 2005).

Learning Styles in the Business Classroom

Researchers have used the KLSI to measure learning styles in the business classroom. Loo's (2002) meta-analytic study of the learning style preferences of business majors as assessed by Kolb's Learning Styles Inventory revealed that most business students were assimilators, known for analytical learning. Giordano and Rochford's (2005) research revealed that more than 94% of the junior college business students in the study were analytic processors. These findings indicate that business students tend to be structured, analytical, sequential thinkers, which may be part of why they select to pursue business over other career pursuits. Teaching tactics deemed appropriate for analytic learners include sequential learning with clear instructions, including well-defined course objectives and deadlines. The analytical learning style is more compatible with traditional teaching approaches; however, business schools need an awareness of all the learning

styles represented in the classroom and the knowledge of the corresponding teaching approaches.

Gender Studies in Learning Styles

Research has shown that female students tend to have a wider range of learning styles and preferences for a greater variety of learning experiences than male students. Slater, Lujan, and DiCarlo (2007) found nonsignificant gender differences based on various sensory modality combinations, with females indicating a preference for more diverse instructional delivery methods than males. This finding was in alignment with Philbin et al. (1995) who used the Kolb Learning Style Inventory and found that men's learning styles predominantly fell into one dominant learning style category, while women's learning styles were equally represented across all four styles. Rochford and Mangino (2006) also found that female remedial students preferred to participate in a variety of learning experiences more than male remedial students did. However, in opposition to this finding, Wehrwein, Lujan, and DiCarlo (2007) found that among junior and senior physiology students, 87.5% of male students preferred multimodal learning through multiple methods of information presentation; 54.2% of female students preferred unimodal learning through a single method of instruction.

Numerous studies using the Kolb LSI have found differences in learning styles according to gender. Among psychology students, Heffler (2001) found that there were significant differences between male and female learning styles. Females scored significantly higher than males on the concrete experience (CE) learning mode, indicating a preference for experiential learning and relational activities including role-play, simulations, and feeling-based exercises. Males scored significantly higher than females

on the abstract-concrete (AC-CE) perception continuum indicating a preference for analytical learning, including the use of logic and rational thinking. Crawford et al. (2012) identified the learning styles of nearly 300 pharmacy students and 60 faculty members using the Pharmacists' Inventory of Learning Styles, adapted from the Kolb LSI. The combined gender analysis revealed that there were significant differences in learning styles according to gender. There was a significantly greater representation of women as assimilators and men as divergers. Philbin et al. (1995) also found significant gender differences in learning styles; however, their research differed in the learning style categorization of each gender. In their research, females were more often divergers and convergers, while males were predominantly assimilators. In 2010, researcher Ezekoka found that females were more often assimilators; whereas, men were more often convergers (as cited in Ibe, 2015). In contrast, Ibe found no significant differences in learning styles according to gender. Jones, Reichard, and Mokhtari (2003) found learning styles differences by academic discipline, but not by gender; however, they noted that "this finding is inconsistent with most learning style research, which has found learning style differences by gender" (p. 373).

Ways men learn. Severiens and Ten Dam (1994) conducted an analysis of multiple scientific studies, examining findings from studies using the Kolb LSI, and found that male students favored abstract conceptualization (AC) more than female students did. Jayamohan and Shivakumara's (2014) research supported that finding, discovering that male students took a deep approach to learning, formulated by conceptual understanding; whereas, female students took a strategic approach to learning, varying between approaches. Lie, Angelique, and Cheong's (2004) found that males

preferred deeper thinking strategies and were more achievement driven than females. In addition, Karayan, Martin, and Hulme (2014) found that male accounting students showed a greater preference for analytical thinking skills. Kulturel-Konak et al. (2011) found that male students preferred concrete, factual information as the means of content delivery and doing research to learn new concepts.

Although male students tend toward analytical thinking, researchers have also found that male students value the student-teacher relationship. Brassard (2004) found that interaction with teachers was more important to male students than to female students. Rochford and Mangino (2006) also found that collegial relations with instructors was important for male students who are less conforming than females and prefer to ask questions, create classroom dissonance, and openly state their learning preferences.

Ways women learn. Research over the years has revealed key differences in the way women learn compared to way men learn. Chang (2004) found that women worked hard to perform and achieve, with a much higher emphasis on tangible rewards and social recognition than men. Women were more aware of social expectations, achieving for others not just for themselves. Brassard (2004) found that women, more than men, felt interaction with other students was important to student learning. Giordano and Rochford (2005) found that female students prefer visual text, reading material, when learning new and complex concepts. Kulturel-Konak et al. (2011) found that female students preferred creative thinking materials and the brainstorming process as the means of content delivery and testing implications to learn new concepts. Karayan, et al. (2014) found the

women showed a greater preference for interpersonal skills. In addition, females scored significantly lower than males in conceptual problem-solving skills.

Experiential Learning Theory

Kolb's Experiential Learning Model

Researchers have widely used and accepted Kolb's LSI because of its theoretical foundation in Experiential Learning Theory (ELT) (Kolb & Kolb, 2005b). Experiential Learning Theory is based on the scholarly work of theorists John Dewey, Kurt Lewin, and Jean Piaget, to name a few. It is a holistic, multi-linear model of the learning process. The theory was established based on six common themes held by these scholars.

1. Learning is a process and for effective learning to occur, students must be engaged and receive feedback in that process.
2. Students must examine and test their own beliefs and ideas in order to learn and cultivate their thoughts.
3. In order to learn, students must deal with conflict, stretching them to consider opposing methods and views.
4. Learning is about the whole person, not just the mind.
5. The learner must be exposed to the external environment to learn.
6. Learning is not just about ideas being transmitted from one person to another; it is about new knowledge being created within the learner (Kolb & Kolb, 2005a).

According to ELT, the typical learning cycle involves four modes of learning, encompassing all areas of the brain. Learners engage with learning experiences in a continuous four-part cycle: 1) accumulate experiences, 2) reflect on the experiences, 3)

assimilate the reflections, and 4) test the implications; the testing results in a new experience and the continuation of the cycle. The experiential learning process involves creating a healthy, creative tension among the various modes of learning in order to construct knowledge. The ELT model includes two opposite ways learners grasp those experiences, concrete experience (CE) or abstract conceptualization (AC); it also includes two opposite ways learners are transformed by the learning experiences, reflective observation (RO) and active experimentation (AE). For learners' knowledge to be holistic and complete, they should experience all of the modes of learning, even though they demonstrate a predominant learning style preference. A 1991 comprehensive review of 81 ELT studies revealed support for the ELT in 62% of the studies (Kolb & Kolb, 2005a). More importantly, the ELT process is scientifically supported; Zull (2002) found that Kolb's learning cycle resembles the brain functioning process that takes place in the cerebral cortex, aligning the ELT with the learning process described in neuroscience research.

Experiential Learning in the Classroom

According to Kolb and Kolb (2005a), experiential learning is not a set of tools or specific activities, but a philosophy of education and learning. However, much of the literature about experiential learning includes project-based learning, group work, computer simulations, and other hand-on activities designed to do more than just transmit information. Researchers have documented the effectiveness of experiential learning in the university classroom. Bobbitt, Inks, Kemp, and Mayo (2000) investigated students' attitudes and perceptions toward participating in an integrated experiential learning project. The results of the study revealed that the students felt positively about the project

experience and favored it over traditional lecture-based instruction. Specifically, 75% of the students agreed or strongly agreed that the project's focus on students as active participants in the learning process motivated them to invest themselves in learning more than traditional methods that focus on the instructor as the deliverer of course content.

In fact, the use of more than one experiential learning exercise at a time has proven to be beneficial for learning facts and applying concepts. Hamer (2000) investigated the impact of multiple classroom-based experiential learning projects on student learning. To study this issue, the author involved 158 upper-level undergraduate business students enrolled in three marketing research courses at a large, private, urban university. The professor taught the fall course using mostly lectures with one experiential project. The professor taught the winter and spring courses using semi-structured classroom activities and an experiential project. All other aspects of the courses remained constant. The professor measured student learning at the end of each semester by calculating the percentage of correct answers on a multiple-choice final exam. Student performance in the courses with multiple experiential activities was significantly better than student performance in the lecture course.

Smith (2004) studied the use of an experiential learning project in a large university classroom. The author found statistically significant impacts of the project on the students' applied learning, skill development, career knowledge, and understanding of marketing concepts. Overall, all students gained from the experience; however, female students perceived the experience as more beneficial than the male students.

Women's Unique Experiences

Hunt and Song (2013) investigated the decision-factors used by male and female college students when selecting a business major. The findings of the research revealed that men and women evaluated the same decision-factors, in the same order, when deciding on a major; however, each gender placed a different weight on the importance of the factors. Males were significantly more concerned than females about career success and were more likely to pursue male-dominated quantitative majors like entrepreneurship, finance, economics, and management that would lead to financial and material success. Women were more concerned than men were about selecting a major that was an individual fit with their skills and interests; therefore, they were more likely to pursue the qualitative female-dominated major, human resource management. Male and female students weighed the factors equally for majors viewed as gender-neutral. Overall, all students felt that men had a significantly greater chance of success in all business majors and careers, except human resource management.

Farazmand and Green (2012) investigated the differences between male and female student learning outcomes using team-based applied projects in university courses. Results of the study for the male students revealed that they experienced more benefits through the applied project activity in comparison to females, as evidenced by the results on four of the six post-test survey questions. Males, significantly more than females, looked forward to working in teams again. Other researchers have examined the impact of experiential learning using team-based group projects and found similar results regarding the disparity between males and females. Ro and Choi (2011) found that female students rated their experiences in team projects lower than male students. A female student's perception of effective teamwork was a more significant predictor of her

attitude toward the project than for a male student. Kaenzig et al. (2006) and Kaenzig et al. (2007) found that female students expressed more dissatisfaction with teams than male students.

Research has shown that males and females differ in other ways including their level of confidence in their abilities, spatial ability, and creativity. Barbulescu and Bidwell (2012) found that female MBA graduates were not as confident as their male counterparts that finance companies would offer them a job, causing fewer females to apply for finance positions; those who did apply were offered jobs at the same rate as men. Schulze and Tomal (2006) found that female students felt that their viewpoints and questions were not as highly valued as those of their male peers, although the male students did not share that viewpoint. Sanchez and Wiley (2010) studied the impact of visualizations and animations on student interest and learning. The results of the study revealed that the animations produced higher learning among all students than text only or static illustrations. However, males significantly outperformed females in spatial ability and overall information recall. Female students were significantly more interested in and learned more from animations than the other methods. McIntyre, Hite, and Rickard (2003) investigated the differences between male and female students in the area of creativity. The findings of the study revealed only one significant difference between males and females in the area of creativity. Male students scored significantly higher on the elaboration component than female students.

Conclusion

Over the last three centuries, women have experienced dramatic advancements in educational and workplace opportunities; however, women have more progress to make

in both sectors. Women's role within the United States culture continues to evolve, especially in the workplace. In twenty-first century business literature, researchers have described women as having the characteristics necessary for providing organizational leadership solutions for the future. At the same time, business schools are competing to recruit and retain female students while battling an enrollment trend that has been in decline over the last decade. Therefore, the timing is right for business schools to study the learning needs of female business students. The results of this study provided business schools with information to understand the unique learning needs of female students and recommendations to prepare female students for the twenty-first century business world more effectively.

Summary

This review of literature focused on following the progression of women in both the workplace and in higher education as part of an overall assessment of the differences between men's and women's experiences in those environments. The review began with a study of the evolution of women's involvement in the workplace during the last three centuries, as they have moved from minor workplace participation to full inclusion in the American workplace. Subsequently, the researcher examined the literature regarding the evolution of women's participation in higher education during that same period, as they have moved from total exclusion to full participation in the American higher education system. Finally, the review of higher education included a look at the similarities and differences in the way that male and female students learn and engage in the learning environment. The overall review demonstrated that women have had unique experiences, challenges, and opportunities in the workplace and in higher education. Research has

shown that they have demonstrated differences that are worthy of continued examination in order to more effectively meet their needs and capitalize on the strengths they bring to those environments.

CHAPTER III

METHODOLOGY

Introduction

In order to examine differences between male and female business students, the researcher created a research design to examine student learning styles and learning experiences among traditional undergraduate business students. The current study identified students' learning styles, according to the widely recognized Kolb's Learning Style Inventory, and learning experiences in five main categories: overall satisfaction, student assertiveness, group experiences, business department environment, and attitudes toward professors. The examination of these elements provided thorough information, encompassing a variety of aspects, about student learners in the business programs at two small, private Midwestern universities.

The current study sought to answer the following research questions:

RQ1: What differences exist in the learning styles of traditional undergraduate male and female business students?

RQ2: What differences exist in the learning experiences of traditional undergraduate male and female business students?

RQ3: What differences exist between traditional undergraduate male and female business students' attitudes toward male professors vs. female professors?

The current study attempted to address the need for business schools to have a strong understanding of their student populations in order to more effectively teach to and meet the needs of female students in order to prepare them for the business world. In this chapter, the researcher provides an in-depth review of the current study's research methodology, including the research design, population and sample, data collection methods, analytical methods, and limitations.

Research Design

The research design describes the overall strategy employed by the researcher to answer the study's research questions; it identifies the specific structure and procedures used to gather and analyze the data (Leedy & Ormrod, 2013). The current study sought quantitative input using survey research, supplemented with qualitative input provided through open-ended questions and focus groups. Gathering quantitative data using a survey instrument was beneficial because it provided a large amount of standardized information from each respondent. The researcher was able to conduct statistical calculations using the survey data to gain a broad picture of student input (Salkind, 2012). The supplemental qualitative data gathering allowed for deeper exploration of the issue and solicited top of mind responses from the respondents in their own voice, providing additional understanding of the participants and their perceptions (Creswell, 2013).

To gather quantitative data, the researcher designed a 61-question survey instrument as shown in Appendix A. The survey was a combination of three previously used, statistically reliable and valid instruments. Overall, the instrument contained five parts: Part A - the Kolb Learning Style Inventory 3.1, Part B – the Learning Experiences Surveys, Part C – questions developed from Schein's Descriptive Index, Part D – open-

ended questions, and Part E – demographic questions. The combined survey instrument contained rank-order scales, Likert-type scales, and open-ended questions. Rank-order scales ask respondents to arrange items by placing them in order by priority. The scales provide ordinal data; however, answers from the rank-order questions in Part A of the survey were added together to create subscale scores, which provided interval data (Salkind, 2014). Likert-type scales are easy for respondents to understand, simply asking respondents to evaluate one statement at a time with a uniform set of responses. The researcher relied on the widely cited viewpoint that five-point Likert scales provide equal intervals between ratings, providing continuous, interval data, allowing for more powerful statistical calculations (McDaniel & Gates, 2010). The open-ended questions allowed the respondents to answer using their own terminology, without forced or limited response categories. These questions provided a rich array of information and increased the opportunity to discern the beliefs, motivations, and attitudes behind some of the fixed-alternative questions.

Using a standardized questionnaire allowed the researcher to gather consistent information about the learning styles and educational experiences of the sample population. The first set of data on the survey provided learning style information, the second set of data provided student perceptions of learning experiences while in the business department, the third set of data focused on student evaluations regarding the gender of the professor, the fourth set of data provided supplemental qualitative input, and the fifth set included demographic information. Each section provided a snapshot of the students' attitudes, behaviors, perceptions, and preferences at the time.

To answer research question one, the researcher prepared part A of the combined survey instrument, which contained the Kolb Learning Style Inventory 3.1 (KLSI 3.1), paper-based version. The KLSI 3.1 is a well-known and widely used learning style inventory; this is the fourth revision of the instrument since its original development in 1976 (Kolb & Kolb, 2005b). Each revision has improved the psychometric properties of the instrument including internal reliability and consistency, validity, and test-retest reliability. The newest revision demonstrated good internal consistency reliability on most of the subscale scores as reported by the following Cronbach's alpha coefficients: CE: .72, .67; RO: .67, .67; AC: .71, .74; AE: .52, .58, when used in two studies involving 726 business students. The KLSI 3.1 demonstrated varied levels of test-retest reliability, based on a five-week interval. The following Kappa coefficients were reported for each of the subscale scores: CE: .37, RO: .59, AC: .61, AE: .58.

The KLSI 3.1 contained 12 sentence stems, each with four choice endings. Students ranked the four endings for each sentence in order of how well each one described their learning. The KLSI 3.1 comprised page one of the researcher's survey instrument. To determine the students' learning styles, the researcher added the individual rankings together according to a formula provided in the KLSI 3.1 administration procedures manual to create four subscale scores for each student in the following categories: abstract conceptualization (AC), concrete experience (CE), active experimentation (AE), and reflective observation (RO). From those four scores, two continuum scores, perception (AC-CE), and processing (AE-RO), were calculated. Each subscale score was the sum of 12 ordinal rankings; therefore, the subscale scores provided interval data. The researcher graphed the AC-CE and AE-RO scores on each

survey using a learning-style type grid to classify each student's learning style. The overall learning style type was a discrete, categorical variable, identified by one of the following learning styles: accommodator, diverger, converger, or assimilator (Kolb & Kolb, 2005a).

To answer research question two, the researcher prepared part B of the combined survey instrument using questions from two surveys designed by Kaenzig et al. (2006) and Kaenzig et al. (2007) to study the impact of gender on the educational experiences of business majors. The researcher obtained approval from an original author of the survey for use in the current study. During the original researchers' study with this survey instrument, all scale reliabilities were above or near .70, the generally accepted minimum level. Although the surveys were unnamed in the original research, the researcher will refer to them as the Learning Experiences Surveys (LES). For research question two, the LES contained questions in four main categories: overall satisfaction, student assertiveness, group experiences, and business department environment. This section comprised pages two, three, and the top part of page four of the survey instrument. The satisfaction section contained four questions measured with a 5-point scale. The student assertiveness section contained seven questions measured with a 3-point scale. The group experiences section contained 15 questions measured with a 5-point scale. The business department environment section contained three questions measured with a 5-point scale. The researcher created subscale scores for each of the four sections by adding the ratings on each question within the subsections. The subscale scores provided continuous, interval data.

In order to answer research question three, the researcher developed 11 questions for Part C of the combined survey instrument regarding the differences between male professors and female professors. The content of the questions incorporated descriptive terms identified in Schein's Descriptive Index, a widely used index to measure the differences in male and female managers, in an approach similar to research by Tomkiewicz and Bass (2008). Using descriptive terms from an established instrument created a strong theoretical foundation for developing a series of 11 new statements for the survey instrument used in the current study. The researcher added the new questions to the last three questions on the original LES in order to increase the amount of input from the students regarding their attitudes toward male vs. female professors. Altogether, there were 14 individual statements measured with a 5-point scale in a section labeled attitudes toward professors. This section comprised the bottom part of page four of the survey instrument. The ratings from the questions within this subsection were added together to form a subscale score. The researcher created two additional subscales by dividing the 14 questions into two subscales, positive statements about male professors and positive statements about female professors. The subscale scores provided continuous, interval data.

To provide additional clarity to the research findings, the researcher gathered qualitative data by including three open-ended questions in Part D of the survey instrument. These questions were included on page five of the survey instrument. In addition, the researcher conducted four gender-specific focus groups. According to Salkind (2012), focus groups are beneficial because the group interaction generates insight into topics that might not come from one individual alone. The focus group

discussions allowed the researcher to gain insight into the participants' thinking patterns, decision-making principles, and reasoning. The qualitative discussion setting also allowed the researcher to probe for more details in response to specific topics and questions. The conversation style atmosphere provided the researcher with significant statements and participants' actual wording. The researcher incorporated the qualitative findings into the research report by conducting thematic analysis of the content of the open-ended questions and focus group transcripts, identifying key themes and highlighting important respondent information.

Finally, the researcher included three demographic questions in Part E of the survey instrument. The demographics necessary for screening participants and conducting statistical analyses included gender, current class status, and primary major. These questions were included at the bottom of page five of the survey instrument.

Population and Sample

The population for the current study consisted of junior (3rd year) and senior (4th year) traditional undergraduate business students at two small, private, Midwestern universities during the fall of 2015. The students qualified to participate must have declared one of the following business majors: Accounting, Business Administration, Business Information Systems, Business Psychology, Economics/Finance, International Business, Marketing, Organizational Leadership, or Sports Management. Additionally, the survey was restricted to juniors and seniors within those majors to ensure that the students had enough experience in business courses to respond adequately to the questions. At University A, the population consisted of 99 students: 74 males and 25

females; at University B, the population consisted of 197 students: 115 males and 82 females.

The paper-based surveys were distributed during the fall semester of 2015 in business courses at both small, private Midwestern universities. The selected upper-division courses had large enrollments consisting of junior and senior business majors. At University A, students in Strategic Management, Organizational Leadership, and Sports Management Senior Seminar were the primary participants in the survey research. At University B, students in two sections of Business Law and Business Policy and Strategy were the primary participants in the survey research.

The sample in the current study was comprised of the group of students who completed the survey instrument. The researcher entered the data from all of the completed surveys into Excel; surveys from respondents that did not meet the population parameters, class status and major, were eliminated from the final data set. The response rate was 54% of the population at University A and 61% of the population at University B. The researcher formulated conclusions for this study from the input of 176 students who met the parameters, 30.7% or 54 students from University A and 69.3% or 122 students from University B. Of the 176 students, 61.9% or 109 were male and 38.1% or 67 were female. In addition, of the 176 students, 48.3% or 85 were juniors and 51.7% or 91 were seniors. The sample was comprised of students in the following majors: 5.9% or 28 Accounting, 39.2% or 69 Business Administration, 2.3% or four Business Information Systems, 1.1% or two Business Psychology, 6.3% or 11 Economics/Finance, 1.7% or three International Business, 11.4% or 20 Marketing, 5.6% or seven Organizational Leadership, 10.2% or 18 Sports Management, and 8% or 14 unspecified.

The population for the focus groups also included all junior and senior business majors. The sample for the focus groups was comprised of the group of students who accepted the invitation to participate. At University A, the all-female focus group was comprised of three participants; the all-male focus group was comprised of four participants. At University B, the all-female focus group was comprised of seven participants; the all-male focus group was comprised of eight participants.

Data Collection

Professors at both universities administered the survey instrument during the fall 2015 semester to business students in seven upper-division business classes. Each survey packet contained a cover page, a consent form, and the survey instrument, shown in Appendix A. The cover page included the purpose of the research, a description of the consent form, the approximate length of the survey, and a brief description of each part of the survey instrument. The description included instructions on the proper way to record answers to each type of question. The consent form included information regarding the nature of the project, the procedures, the risks and benefits, the respondent's rights, and confidentiality procedures. After reading and signing the consent form, shown in Appendix B, respondents detached it from the survey packet before beginning the survey. The survey administrator collected the consent forms while the students completed the surveys, keeping them separate from the students' survey responses to ensure anonymity. Students were allowed approximately 30 minutes to complete the assessment.

To recruit gender-specific focus group participants, an email invitation was sent to junior and senior business students, according to gender, inviting them to participate. Students that accepted the invitation were confirmed to attend. To compensate them for

their time, the researcher provided dinner and \$15 per person. Prior to participating in the focus group, the researcher made students aware of the purpose of the research and asked them to sign a consent form, shown in Appendix B.

The researcher conducted four gender-specific focus groups, one all-male group, and one all-female group at each university. The researcher worked together with a research assistant to construct a moderator guide, shown in Appendix C, organized with questions addressing each research question. The moderator guide provided consistency in the information gathering process for every focus group. Each focus group discussion lasted approximately two hours and was audio recorded. The research assistant served as the moderator for the groups conducted at University A; the researcher served as the moderator for the groups conducted at University B. The researcher was present at all four focus group sessions.

Analytical Methods

The researcher used various statistical methods to analyze the data collected for the current study, including both parametric and non-parametric statistics. Descriptive statistics were useful for organizing and describing the characteristics of the sample data set. The non-parametric statistic, Chi-square, was used to compare differences among categorical data, including gender and learning styles. Parametric statistics, including *t*-tests and ANOVAs, were used to compare differences between groups when the data involved numerical subscale scores, providing continuous interval data (Salkind, 2014).

Analysis of the quantitative data for research question one involved looking for differences between genders and learning styles. The researcher conducted basic non-parametric testing by summarizing the frequencies of the four learning styles in a

descriptive table and analyzing the data using Chi-square analysis to look for differences between the genders. Chi-square is a common nonparametric test used to analyze frequency distributions to determine if the distribution of data within the categories matches the expected amounts and identify significant differences (Salkind, 2014). The researcher used parametric testing by calculating four subscale scores: abstract conceptualization (AC), concrete experience (CE), active experimentation (AE), and reflective observation (RO); and two continuum scores: processing continuum, measured by AC-CE and perception continuum, measured by RO-AE, for each respondent. The researcher analyzed the numerical data with six independent samples *t*-tests to look for differences between the genders. The researcher used *t*-tests for independent samples because the subscales provided interval data and *t*-tests for independent samples can identify significant differences between the means of two unrelated groups (Salkind, 2014).

Analysis of the data for research question two involved looking for differences in student learning experiences between genders and learning styles. First, the researcher divided the LES into content areas and calculated subscale scores for student learning experiences including satisfaction, student assertiveness, group experiences, and business department environment. The researcher then conducted a 2 x 4 Factorial ANOVA with gender and learning styles as the two independent variables for each of the subscale scores which acted as dependent variables. This analysis tested the main effects of gender, the main effects of learning style, and the interaction effects on each of the subscale scores. The use of a Factorial ANOVA was appropriate because the researcher was testing for differences in the means between more than two groups using more than

one independent variable. Once the researcher identified differences between the genders in the group experiences subscale score, the data from the each of the individual questions within the subscale section was analyzed using 15 independent samples *t*-tests to find the specific areas of difference between the two groups. Because students evaluated the group experiences questions using a 5-point Likert-type scale, the researcher relied on the widely cited viewpoint that five-point Likert scales provide equal intervals between ratings, providing continuous, interval data (McDaniel & Gates, 2010). Therefore, the researcher used *t*-tests for independent samples to examine differences between genders because each question provided interval data, and *t*-tests for independent samples can identify significant differences between the means of two unrelated groups (Salkind, 2014).

Analysis of the data for research question three involved looking for differences between genders and their attitudes toward male vs. female professors. The researcher conducted a 2 x 4 between-subjects Factorial ANOVA with student attitudes toward professors as the dependent variable and gender and learning styles as the two independent variables. This analysis tested the main effects of gender, the main effects of learning style, and the interaction effects on the students' attitudes toward professors. The use of a Factorial ANOVA was appropriate because the researcher was testing for differences in the means between more than two groups using more than one independent variable. Once the researcher identified differences between the genders in the *attitudes towards professors* subscale score, data from two subscales, positive statements about male professors and positive statements about female professors, was analyzed using two independent samples *t*-tests to find the specific areas of difference between the two

groups. The researcher used *t*-tests for independent samples to examine differences between genders because *t*-tests for independent samples can identify significant differences between the means of two unrelated groups (Salkind, 2014).

The focus groups and open-ended questions provided qualitative data to supplement the quantitative data and more fully answer all of the research questions. The addition of the qualitative component added a more thorough understanding of both genders regarding their preferred learning styles, perceptions of the learning experience, and attitudes toward male professors vs. female professors. Analysis of the qualitative data included content analyses of the focus group notes and open-ended text to identify consistencies among significant statements, descriptions, and experiences of the respondents according to gender. The qualitative data was integrated with the quantitative data by reporting the quantitative results supported by the themes and quotes generated from the qualitative portion of the study.

Limitations

Although the present study was unique and added to the body of literature concerning learning styles and learning experiences of traditional undergraduate business students, the researcher also identified limitations to the study. First, because the researcher only conducted the study at two small, private Midwestern universities, the results and recommendations may not be generalizable to all business schools. Second, the current study only involved traditional undergraduate business students and did not address undergraduate students in nontraditional, adult business programs. Third, the data collection period was limited to the fall semester; therefore, students at University A could not answer a set of computer simulation questions available on the original LES

instrument because the department only offered the computer simulation experience during a capstone course, spring of their senior year. Therefore, the researcher eliminated the computer simulation set of student learning experiences questions from the original survey instrument. Fourth, the researcher altered the original LES instrument by adding more questions to gather additional information on the attitudes toward professors subscale score; therefore, the reliability coefficients of the original instrument may not apply to this study. Fifth, as a follow-up to finding significance in overall subscale scores, the researcher conducted multiple *t*-tests to identify specific areas of gender differences; running multiple *t*-tests can increase the level of Type I error. Finally, eleven of the 176 respondents did not correctly complete Part A of the survey, the KLSI 3.1; therefore, the researcher could not assign a learning style to those students. Because learning style categories were a critical part of the overall statistical analyses for every research question, the researcher was unable to use those surveys for some parts of the final analyses.

Summary

For a thorough study of the topic, the researcher conducted a quantitative study, with supplemental qualitative research. According to Leedy and Ormond (2013), use of both types of data adds the strengths of both methods of research while minimizing the weaknesses of any one kind of data. Quantitative data allowed for statistical calculations and numerical precision; qualitative data provided a more in-depth understanding of the participants and the situation. The results of the data collection and analyses are reported in Chapter IV, and the researcher explores conclusions and implications while offering recommendations for business schools.

CHAPTER IV

FINDINGS AND CONCLUSIONS

Introduction

The current study investigated the differences between male and female traditional undergraduate business students at two small, private Midwestern universities. In this final chapter, the researcher attempted to provide answers to the study's research questions by revealing the findings and analysis that resulted from the data collection. Then, based on the study's findings, the researcher drew conclusions and addressed the impact of the study, including changes that might be appropriate for business schools. Finally, the researcher proposed recommendations for further research.

Recruiting and retaining female students has become more difficult in recent years, as established in the literature review. The timing was right for studying the potential differences between the genders in business schools that are faced with the challenge of creating appealing learning environments for female students. The data collected for this research study revealed similarities and differences in learning styles, learning experiences, and attitudes toward professors between male and female business students. The findings of this study yielded information for traditional undergraduate business school leadership as they attempt to teach and train female students to succeed in the classroom and the workplace.

Research Questions

The central purpose of this study was to investigate differences in the learning styles and learning experiences between male and female traditional undergraduate business students in order to recommend strategies for business schools that address the unique learning needs of female students. With that purpose in mind, the following research questions guided the study:

RQ1: What differences exist in the learning styles of traditional undergraduate male and female business students?

RQ2: What differences exist in the learning experiences of traditional undergraduate male and female business students?

RQ3: What differences exist between traditional undergraduate male and female business students' attitudes toward male professors vs. female professors?

Research Methods

To answer the study's research questions, the researcher utilized a newly-developed 61-question survey instrument assembled from three previously used instruments, as shown in Appendix A. To answer research question one, the researcher analyzed student data from Part A of the survey, which contained the Kolb Learning Style Inventory (KLSI 3.1) paper-based version. The results on the KLSI 3.1 produced both categorical and numerical data, which the researcher used to compare the differences between males and females. The researcher employed both Chi-square analysis and *t*-tests to examine differences between genders. To determine significance, the researcher used the commonly accepted significance level of $p < .05$.

To answer research question two, the researcher analyzed student data from Part B of the survey using questions from the Learning Experiences Survey (LES). The researcher created numerical subscale scores for each of the sections on the LES: student satisfaction, student assertiveness, group experiences, and business department environment. The researcher used both gender and learning style as independent variables when looking for differences in the dependent variable, learning experiences; therefore, the researcher used a 2 x 4 between-subjects Factorial ANOVA. When the researcher identified gender differences in the overall subscale score, the researcher assumed equal intervals on the Likert-type scaled questions and used *t*-tests to examine where the specific differences arose. To determine significance, the researcher used the commonly accepted significance level of $p < .05$.

To answer research question three, the researcher analyzed student data from Part C of the survey, which contained questions that explored students' attitudes toward the gender of professors, using three questions from the LES survey and 11 additional questions that incorporated terms from Schein's Descriptive Index. The researcher used both gender and learning styles as independent variables when looking for differences in the dependent variable, attitudes toward professors; therefore, the researcher used a 2 x 4 between-subjects Factorial ANOVA. When the researcher discovered differences between the genders in the overall subscale score, the researcher analyzed two subscale scores, positive statements about male professors and positive statements about female professors, using *t*-tests to examine where the differences arose. To determine significance, the researcher used the commonly accepted significance level of $p < .05$.

Sample Representativeness

The overall population of available and qualified participants at both universities was comprised of 296 students, 63.9% male and 36.1% female. The student populations in each of the majors were: Accounting, 18.9%; Business Administration, 39%; Business Psychology, 1%; Economics/Finance, 6.2%; International Business, 4.1%; Management Information Systems, 3%; Marketing, 13.4%; Organizational Leadership, 3.4%, and Sports Management, 11%. From this overall population of students, the researcher gathered data from a representative sample of students.

The 176 sample participants in this study included both male, 61.9%, and female, 38.1%, junior, 48.3%, and senior, 51.7%, traditional undergraduate business students from two small, private Midwestern universities. The sample participants represented nine different business majors: Accounting, 15.9%; Business Administration, 39.2%; Business Psychology, 1.1%; Economics/Finance, 6.3%; International Business, 1.7%; Management Information Systems, 2.3%; Marketing, 11.4%; Organizational Leadership, 4%; Sports Management, 10.2%; and unspecified primary business major, 8%. Therefore, as illustrated in Table 4, the sample of 176 students was comprised of a representative cross-section of the overall student populations of the business departments involved in the study.

Table 4

Demographics of Study Participants Compared to Business Department Population

	Current Study Sample Participants (n=176)	Business Department Populations (N=296)
Gender		
Male	61.9%	63.9%
Female	38.1%	36.1%
Major		
Accounting ^{ab}	15.9%	18.9%
Business Administration ^{ab}	39.1%	39%
Business Psychology ^a	1.1%	1%
Economics/Finance ^b	6.3%	6.2%
International Business ^b	1.7%	4.1%
Management Information Systems ^b	2.3%	3%
Marketing ^{ab}	11.4%	13.4%
Organizational Leadership ^a	4%	3.4%
Sports Management ^a	10.2%	11%
Unspecified primary business major	8%	

Note. The percentages above are based on totals from University A and University B.

Note. ^a = major offered at University A, ^b = major offered at University B, ^{ab} = major offered at both University A and B.

Findings

The current study's findings provided insight about current traditional undergraduate business students' learning styles, learning experiences, and attitudes toward male professors vs. female professors. The researcher identified key areas of difference between genders, with a focus on the unique learning needs of female students.

Research Question 1

Research question one sought to discover what differences existed in the learning styles of traditional undergraduate male and female business students. To answer this question, the researcher investigated the differences between males and females and their learning styles using the KLSI 3.1, paper-based instrument. The KLSI 3.1 contained 12 sentence stems, each with four unique choice endings to the stem statement. For each stem, students ranked the four endings in order of how well each one described their learning (4 = *the way you best learn*, 1 = *the way you least like to learn*). The results of the KLSI 3.1 placed each student into one of the following learning style categories: accommodator, diverger, converger, or assimilator.

The results, as shown in Table 5, indicated that there was no significant difference between gender and learning style, $\chi^2(3, N = 164) = .27, p = .97$. The number of students of both genders selecting each learning style did not differ significantly from the expected number for each style. 22.8% of males and 25.4% of females were accommodators; 26.7% of males and 23.8% of females were divergers; 14.9% of males and 15.9% of females were convergers; and 35.6% of males and 34.9% of females were assimilators.

Table 5

Crosstabulation of Learning Style and Gender

Learning Style	Gender		χ^2
	Male	Female	
Accommodating	23	16	.27
Diverging	27	15	
Converging	15	10	
Assimilating	36	22	
Total	101	63	

In order to employ a higher level of statistical analysis when examining differences in the learning styles of students between genders, the researcher conducted *t*-tests using the numerical data provided by the KLSI 3.1 subscale and continuum scores: abstract conceptualization (AC), concrete experience (CE), active experimentation (AE), and reflective observation (RO), perception (AC-CE), and processing (AE-RO). The results, as shown in Table 6, indicated that there were no significant differences between males and females in any of the subscale or continuum scores.

Table 6

Kolb LSI Subscale Scores by Gender

Subscale Score	Gender		<i>t</i>	<i>df</i>
	Male	Female		
CE Total	24.33 (6.18)	23.68 (5.80)	.67	162
RO Total	30.76 (6.41)	31.17 (6.94)	-.39	162
AC Total	30.30 (6.57)	29.75 (7.52)	.62	162
AE Total	34.63 (5.99)	35.49 (6.05)	-.89	162
AC-CE	5.97 (11.17)	6.06 (11.59)	.05	162
AE-RO	3.87 (10.78)	4.32 (11.06)	-.26	162

Note. Standard deviations appear in parentheses below the means.

- Male subscale scores for CE ($M = 24.33$, $SD = 6.18$) did not differ significantly from female subscale scores ($M = 23.68$, $SD = 5.80$), $t(162) = .67$, $p = .51$.
- Male subscale scores for RO ($M = 30.76$, $SD = 6.41$) did not differ significantly from female subscale scores ($M = 31.17$, $SD = 6.94$), $t(162) = -.39$, $p = .70$.
- Male subscale scores for AC ($M = 30.30$, $SD = 6.57$) did not differ significantly from female subscale scores ($M = 29.75$, $SD = 7.52$), $t(162) = .49$, $p = .62$.

- Male subscale scores for AE ($M = 34.63$, $SD = 5.99$) did not differ significantly from female subscale scores ($M = 35.49$, $SD = 6.05$), $t(162) = -.89$, $p = .38$.
- Male subscale scores for the perception continuum, as measured by the difference between the AC and CE subscale scores, ($M = 5.97$, $SD = 11.17$) did not differ significantly from female subscale scores ($M = 6.06$, $SD = 11.59$), $t(162) = -.05$, $p = .96$.
- Male subscale scores for the processing continuum, as measured by the difference between the AE and RO subscale scores, ($M = 3.87$, $SD = 10.78$) did not differ significantly from female subscale scores ($M = 4.32$, $SD = 11.06$), $t(162) = -.26$, $p = .80$.

The open-ended question associated with answering research question one was, “How do you learn most effectively?” The researcher listed all the open-ended responses in a Microsoft Excel spreadsheet and conducted a thematic analysis of the responses. After examining the wide array of responses, the researcher categorized each respondent’s input into one of two categories: the respondent listed 1) a single learning method, or 2) multiple learning methods. After analyzing the results by gender, there was no significant difference between males and females regarding their preferences for single or multiple methods of learning. Both genders demonstrated a strong preference for multiple learning methods; 70.6% of males and 82.1% of females indicated a preference for a variety of learning methods.

During the focus group, students were provided with a typed description of each of Kolb’s four learning style types and asked to select the one they felt best represented their preferred method of learning. Among every group, both male and female, a variety

of learning styles were represented; a dominant learning style did not emerge for either gender. As students shared how they learned best, it became clear to the researcher that there was not one best, preferred, or most common method of learning among all students. However, a unifying theme among all the focus groups was the students learned best from applied, real-world examples and projects.

Summary of Findings: Research Question 1.

In summary, gender did not influence the learning styles of traditional undergraduate business students. In fact, the learning styles of the students were distributed somewhat evenly throughout the four types, and consistently between the genders, with the largest percentage of both male and female business students identifying as assimilators. When asked in the open-ended questions how they learn most effectively, students of both genders indicated a strong preference for multiple learning methods. When asked in the focus groups, there was no common method of learning among students, multiple learning styles and methods were mentioned.

Research Question 2

Research question two sought to discover what differences existed in the learning experiences of traditional undergraduate male and female business students. To answer this question, the researcher investigated the differences between males and females and their learning experiences in the traditional undergraduate business classroom using questions from two previously designed surveys by Kaenzig et al. (2006) and Kaenzig et al. (2007), which were unnamed in the original studies, but the researcher has referred to them as the Learning Experiences Surveys (LES). The survey questions were divided into four main categories of learning experiences: overall satisfaction, student assertiveness,

group experiences, and business department environment. Students answered a series of Likert-type scaled-response questions in each category, providing numerical data.

Satisfaction. In order to investigate the differences between males and females and their satisfaction with the traditional undergraduate business classroom, the researcher conducted a 2 x 4 between-subjects Factorial ANOVA with student satisfaction as the dependent variable and gender and learning style (accommodator/diverger/converger/assimilator) as the independent variables.

The results, as shown in Tables 7 and 8, indicated that there was not a significant main effect of learning style, $F(3, 156) = 1.84, p = .14$, on student satisfaction levels. Students in each of the four learning styles, accommodators ($M = 16.23, SD = 4.16$), divergers ($M = 16.43, SD = 3.05$), convergers ($M = 17.40, SD = 1.89$), and assimilators ($M = 15.67, SD = 3.57$), did not report significantly different levels of satisfaction. There was also no significant main effect of gender, $F(1, 156) = .00, p = .99$, on student satisfaction levels; males ($M = 16.31, SD = 3.42$) and females ($M = 16.19, SD = 3.45$) did not report significantly different satisfaction levels. However, there was a significant interaction effect of gender and learning style, $F(3, 156) = 3.85, p = .01$, on student satisfaction levels. To further investigate the interaction effects, the researcher conducted a simple effects post hoc analysis. See Figure 1 for a diagram of the interaction effect between gender and learning style on overall student satisfaction totals.

Table 7

Learning Style x Gender Analysis of Variance in Satisfaction Rating Scores

Source	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>
(A) Learning Style	60.82	3	20.27	1.84
(B) Gender	.002	1	.002	.00
A x B (interaction)	127.56	3	42.52	3.85*
Total	45277.00	164		

* $p \leq .01$.

Table 8

Satisfaction Scores for Learning Style Groups by Gender

Student Satisfaction Rating	Learning Style				Total
	Accommodator	Diverger	Converger	Assimilator	
Males	15.04	17.11	17.40	16.06	16.31
	(4.96)	(2.16)	(1.99)	(3.29)	(3.42)
Females	17.94	15.20	17.40	15.05	16.19
	(1.61)	(4.02)	(1.84)	(3.99)	(3.45)
Total	16.23	16.43	17.40	15.67	16.26
	(4.16)	(3.05)	(1.89)	(3.57)	(3.42)

Note. Standard deviations appear in parentheses below the means.

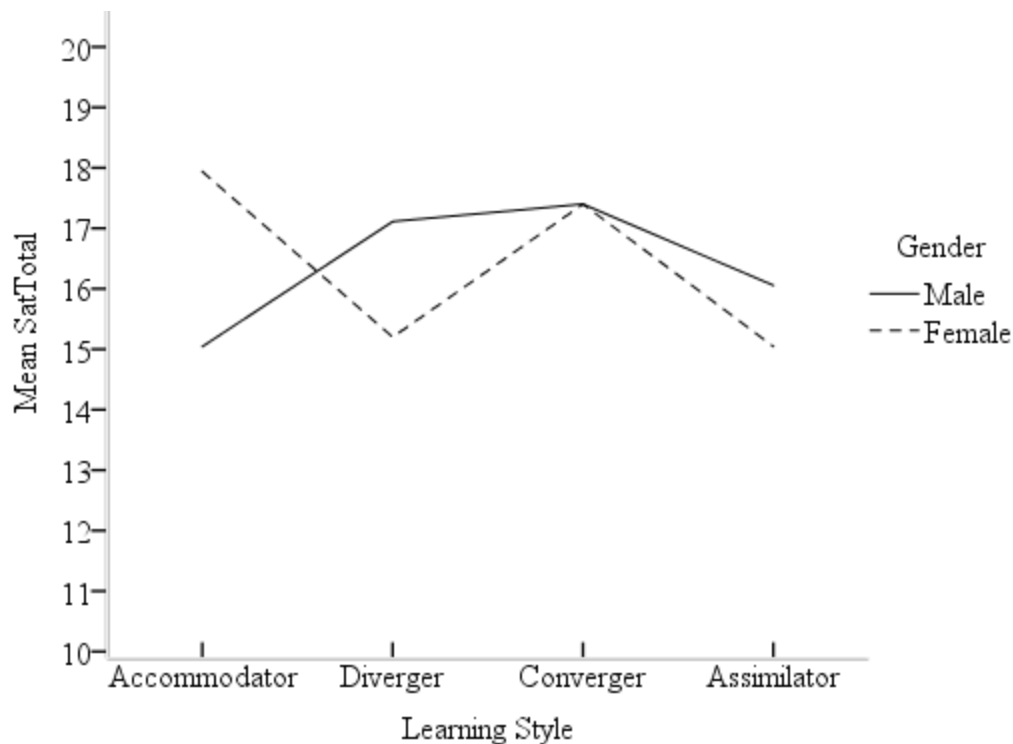


Figure 1. Plot of the intersection from 2 x 4 between-subjects Factorial ANOVA.

Note: This figure illustrates a statistically significant interaction effect between gender and learning style on overall student satisfaction totals. Because the two lines depicting the simple main effects were not parallel, but intersected one another, an interaction effect was apparent.

The presence of a statistically significant interaction effect between gender and learning styles on the satisfaction scores indicated that the combination of gender with learning style needed further investigation. The combination of those two variables produced eight groups: male accommodators, female accommodators, male divergers, female divergers, male convergers, female convergers, male assimilators, and female assimilators. A simple effects post hoc analysis indicated a significant difference between two groups; female accommodators ($M = 17.94$, $SD = 1.61$) were significantly more satisfied than male accommodators ($M = 15.04$, $SD = 4.96$), $p = .02$.

Student Assertiveness. In order to investigate the differences between males and females and their level of assertiveness in the traditional undergraduate business classroom, the researcher conducted a 2 x 4 between-subjects Factorial ANOVA with student assertiveness as the dependent variable and gender and learning style (accommodator/diverger/converger/assimilator) as the independent variables.

The results, as shown in Tables 9 and 10, indicated that there was not a significant main effect of learning style, $F(3, 156) = 2.15, p = .10$, on student assertiveness levels. Students in each of the four learning styles, accommodators ($M = 13.49, SD = 2.13$), divergers ($M = 12.98, SD = 2.19$), convergers ($M = 14.72, SD = 3.45$), and assimilators ($M = 13.26, SD = 2.63$), did not report significantly different levels of assertiveness. There was also no main effect of gender, $F(1, 156) = .32, p = .57$, on student assertiveness; males ($M = 13.54, SD = 2.66$) and females ($M = 13.33, SD = 2.51$) did not report significantly different levels of assertiveness. Additionally, there was no significant interaction effect of gender and learning style, $F(3, 156) = 2.02, p = .11$, on student assertiveness.

Table 9

Learning Style x Gender Analysis of Variance in Student Assertiveness Rating Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
(A) Learning Style	41.49	3	13.83	2.15
(B) Gender	2.05	1	2.05	.32
A x B (interaction)	39.11	3	13.04	2.02
Total	30826.00	164		

Table 10

Student Assertiveness Scores for Learning Style Groups by Gender

Student Assertiveness Rating	Learning Style				Total
	Accommodator	Diverger	Converger	Assimilator	
Males	13.91	12.44	15.00	13.53	13.54
	(2.07)	(2.14)	(3.78)	(2.55)	(2.66)
Females	12.87	13.93	14.30	12.82	13.33
	(2.13)	(2.02)	(3.02)	(2.75)	(2.51)
Total	13.49	12.98	14.72	13.26	13.46
	(2.13)	(2.19)	(3.45)	(2.63)	(2.60)

Note. Standard deviations appear in parentheses below the means.

Group Experiences. In order to investigate the differences between males and females and their perceptions regarding group experiences in the traditional undergraduate business classroom, the researcher conducted a 2 x 4 between-subjects Factorial ANOVA with group experiences as the dependent variable and gender and learning style (accommodator/diverger/converger/assimilator) as the independent variables.

The results, as shown in Tables 11 and 12, indicated that there was not a significant main effect of learning style, $F(3, 152) = 2.44, p = .07$, on students' experiences in group assignments. However, there was a significant main effect of gender, $F(1, 152) = 16.29, p = .001$, on students' experiences regarding group work; males ($M = 47.63, SD = 5.32$) and females ($M = 50.98, SD = 5.79$) had significantly different ratings for group experiences in their business classes. There was no significant

interaction effect of gender and learning style, $F(3, 152) = 1.33, p = .27$, on students' experiences in group assignments.

Table 11

Learning Style x Gender Analysis of Variance in Group Experiences Rating Scores

Source	SS	df	MS	F
(A) Learning Style	216.11	3	72.04	2.44
(B) Gender	480.94	1	480.94	16.29*
A x B (interaction)	117.87	3	39.29	1.33
Total	387899.00	160		

* $p \leq .001$.

Table 12

Group Experiences Scores for Learning Style Groups by Gender

Group Experiences Rating	Learning Style				Total
	Accommodator	Diverger	Converger	Assimilator	
Males	48.70	46.85	47.71	47.49	47.63
	(4.16)	(5.70)	(5.86)	(5.58)	(5.32)
Females	51.75	49.29	55.00	49.62	50.98
	(5.42)	(6.27)	(5.10)	(5.35)	(5.79)
Total	49.95	47.68	50.75	48.29	48.91
	(4.89)	(5.94)	(6.56)	(5.54)	(5.72)

Note. Standard deviations appear in parentheses below the means.

To identify the specific areas of difference between the genders regarding their perceptions about group experiences, the researcher analyzed the data from each of the individual questions in the group experiences section of the survey using 15 independent samples *t*-tests, the same analysis conducted by the original researchers. The results, as shown in Table 13, identified several areas of distinction between the genders.

Table 13

Group Experiences Subscale Scores by Gender

Subscale Score	Gender		<i>t</i>	<i>df</i>
	Male	Female		
I have been taken advantage of by other group members.	2.28 (1.09)	2.97 (1.00)	-4.14**	169
I do a lot of the organizing and getting people together to work on group projects.	3.36 (.83)	3.75 (1.03)	-2.75*	169
I often end up being the group secretary and do much of the writing and finalizing of the project.	2.79 (.98)	3.60 (1.03)	-5.13**	169
I have been pressured by group members who have been slacking to turn in favorable evaluations for them.	2.14 (1.17)	2.43 (1.30)	-1.51	169
I prefer doing projects by myself over working with a group.	3.51 (1.12)	3.80 (1.21)	-1.60	169
I am usually more satisfied with the outcome of a group project than with a paper I wrote on my own.	2.53 (.98)	2.28 (.84)	1.72	169
I don't like being dependent on others for grades.	4.03 (1.04)	4.31 (.92)	-1.79	169

I am often selected/volunteer as the project manager of the group.	3.25 (.95)	3.49 (1.08)	-1.51	169
I feel comfortable truthfully evaluating and reporting my group members' performance.	3.96 (1.00)	3.85 (1.00)	.73	169
I turn in poor evaluations for group members with poor performance.	3.35 (1.20)	3.83 (1.10)	-2.63*	169
All group members usually pitch in and do equal amounts of work on group projects.	3.25 (.92)	2.69 (1.12)	3.51**	169
I end up doing more than my fair share on group projects.	3.10 (.86)	3.54 (.92)	-3.12*	169
I feel responsible for my group members' grades.	3.34 (1.10)	3.29 (1.21)	.26	169
I feel guilty when I do less than my share of the work even when the project turns out well.	3.91 (1.19)	4.08 (1.04)	-.96	169
I have gotten a lower grade than I deserved on a group project.	2.69 (.99)	2.68 (.95)	.08	169

* $p \leq .01$; ** $p \leq .001$.

Note. Standard deviations appear in parentheses below the means.

The results on six of the statements identified statistically significant differences between male and female responses.

- Female students reported they had been taken advantage of by group members ($M = 2.97$, $SD = 1.00$) significantly more than male students did ($M = 2.28$, $SD = 1.09$), $t(169) = -4.14$, $p = .001$.

- Female students reported that they do a lot of the organizing and getting people together to work on group projects ($M = 3.75$, $SD = 1.03$) significantly more than male students did ($M = 3.36$, $SD = .83$), $t(169) = -2.75$, $p = .007$.
- Female students reported that they often end up being the group secretary and do much of the writing and finalizing of the project ($M = 3.60$, $SD = 1.03$) significantly more than male students did ($M = 2.79$, $SD = .98$), $t(169) = -5.13$, $p = .001$.
- Female students reported that they turn in poor evaluations for group members with poor performance ($M = 3.83$, $SD = 1.10$) significantly more than male students did ($M = 3.35$, $SD = 1.20$), $t(169) = -2.63$, $p = .01$.
- Female students reported that they end up doing more than their fair share on group projects ($M = 3.54$, $SD = .92$) significantly more than male students did ($M = 3.10$, $SD = .86$), $t(169) = -3.12$, $p = .002$.
- Female students reported that group members usually pitch in and do equal amounts of work on projects ($M = 2.69$, $SD = 1.12$) significantly less than male students did ($M = 3.25$, $SD = .92$), $t(169) = .351$, $p = .001$.

Business Department Environment. In order to investigate the differences between males and females and their perceptions about the business department environment, the researcher conducted a 2 x 4 between-subjects Factorial ANOVA with student ratings of business department environment as the dependent variable and gender and learning style (accommodator/diverger/converger/assimilator) as the independent variables.

The results, shown in Tables 14 and 15, indicated that there was not a statistically significant main effect of learning style, $F(3, 156) = 2.59, p = .06$, on student evaluations of the business department environment. Students in each of the four learning styles, accommodators ($M = 5.90, SD = 1.80$), divergers ($M = 6.90, SD = 2.36$), convergers ($M = 5.84, SD = 2.04$), and assimilators ($M = 6.67, SD = 2.07$), did not report significantly different ratings of the overall business department environment. There was also no main effect of gender, $F(1, 156) = 1.01, p = .32$, on ratings of the overall business department environment; males ($M = 6.31, SD = 2.02$) and females ($M = 6.60, SD = 2.25$) did not report significantly different ratings of the overall business department environment. In addition, there was no significant interaction effect of gender and learning style, $F(3, 156) = .42, p = .74$, on ratings of the overall business department environment.

Table 14

Learning Style x Gender Analysis of Variance in Business Department Environment Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
(A) Learning Style	33.89	3	11.30	2.59
(B) Gender	4.41	1	4.41	1.01
A x B (interaction)	5.48	3	1.83	.74
Total	7485.00	164		

Table 15

Business Department Environment Scores for Learning Style Groups by Gender

Business Department Environment Rating	Learning Style				Total
	Accommodator	Diverger	Converger	Assimilator	
Males	5.70	6.59	5.80	6.69	6.31
	(1.82)	(1.99)	(1.82)	(2.18)	(2.02)
Females	6.19	7.47	5.90	6.64	6.60
	(1.80)	(2.85)	(2.42)	(1.94)	(2.25)
Total	5.90	6.90	5.84	6.67	6.42
	(1.80)	(2.34)	(2.04)	(2.07)	(2.11)

Note. Standard deviations appear in parentheses below the means.

The open-ended question associated with answering research question two was “Describe your overall learning experience in the classes in the business department.” The researcher listed all the open-ended responses in a Microsoft Excel spreadsheet and conducted a thematic analysis of the responses. After examining the responses, the researcher categorized each respondent’s input into one of three categories: 1) positive learning environment, 2) mixed experience – both positive and negative learning environment, or 3) negative learning environment. When analyzing the codes by gender, there was no significant difference between male and female responses. The analysis showed that most students had a positive learning experience in the business department; specifically, 81% of males and 78% of females described their learning experience as positive.

The researcher examined the focus group audio recordings and detailed notes to identify categories of information related to each research question. In response to research question two, the researcher identified one main theme related to the learning experiences of female business students. Female students described a “love/hate relationship” with group projects. They liked the brainstorming that occurs in groups and the relational aspects of getting to know and working together with others, but they did not like the uneven distribution of work and unbalanced levels of contribution. These results were consistent with the quantitative findings from the survey.

Summary of Findings: Research Question 2

In summary, learning style was not a factor in influencing student perceptions of learning experiences among traditional undergraduate business students. On the other hand, gender did play a significant role in influencing some, but not all, of the learning experiences of traditional undergraduate business students. Gender did not significantly influence the level of overall satisfaction, the level of student assertiveness, or perceptions regarding the business department. However, gender did significantly affect the students’ perceptions regarding group experiences, with female students feeling as if they were more often taken advantage of, tasked with organizing and finalizing the work, and doing more than their fair share in group projects than male students. The negative feelings about group experiences were further confirmed in the female focus groups.

Research Question 3

Research question three sought to discover what differences existed between traditional undergraduate male and female business students’ attitudes toward male professors vs. female professors. In order to investigate the differences between male

students and female students and their attitudes toward male professors vs. female professors in the traditional undergraduate business classroom, the researcher incorporated terms from Schein's Descriptive Index (SDI) into each question. To analyze the results, the researcher conducted a 2 x 4 between-subjects Factorial ANOVA with attitude toward the professor as the dependent variable and gender and learning style (accommodator/diverger/converger/assimilator) as the independent variables.

The results, shown in Tables 16 and 17, indicated that there was not a significant main effect of learning style, $F(3, 156) = .76, p = .52$, on students' attitudes toward male vs. female professors. However, there was a significant main effect of gender, $F(1, 156) = 6.21, p = .01$, on students' attitudes toward male vs. female professors; male students ($M = 37.51, SD = 7.19$) rated male professors significantly higher than female students did ($M = 34.71, SD = 8.35$). There was no significant interaction effect of gender and learning style, $F(1, 156) = .72, p = .54$, on students' attitudes toward male vs. female professors.

Table 16

Learning Style x Gender Analysis of Variance in Attitude Toward Professors Scores

Source	SS	df	MS	F
(A) Learning Style	134.00	3	44.67	.76
(B) Gender	367.27	1	367.27	6.21*
A x B (interaction)	128.23	3	42.74	.72
Total	227556.00	164		

* $p \leq .01$.

Table 17

Attitude Toward Professors Scores for Learning Style Groups by Gender

Attitude Toward Professors Rating	Learning Style				Total
	Accommodator	Diverger	Converger	Assimilator	
Males	37.61	38.00	39.60	36.22	37.51
	(6.39)	(6.29)	(6.19)	(8.58)	(7.19)
Females	35.38	36.73	32.70	33.77	34.71
	(8.29)	(7.60)	(8.25)	(9.11)	(8.35)
Total	36.69	37.55	36.84	35.29	36.44
	(7.21)	(6.73)	(7.73)	(8.79)	(7.75)

Note. Standard deviations appear in parentheses below the means.

To identify the areas of difference between the genders regarding their attitudes toward professors, the researcher analyzed the data by dividing the overall attitudes toward professors subscale score into two separate subscales. Responses for questions 2, 3, 4, 6, 8, 10, 12, and 14 in the attitudes toward professors section of the survey formed a subscale score for positive statements about female professors. Responses for questions 5, 7, 9, 11, and 13 of that section formed a subscale score for positive statements about male professors. The researcher analyzed the numerical subscale data with two independent samples *t*-tests to look for differences between the genders. The results, shown in Table 18, indicated that there was not a significant difference between males' and females' attitudes toward female professors; however, there was a significant difference between males' and females' attitudes toward male professors.

Table 18

Attitude Toward Professors Scores by Gender

Subscale Score	Gender		<i>t</i>	<i>df</i>
	Male	Female		
Positive Statements about Male Professors	13.17 (3.40)	11.82 (3.97)	2.39*	174
Positive Statements about Female Professors	20.10 (4.54)	19.21 (5.68)	1.15	174

* $p \leq .05$.

Note. Standard deviations appear in parentheses below the means.

- Male student subscale scores for positive statements about female professors ($M = 20.10$, $SD = 4.54$) did not differ significantly from female student subscale scores ($M = 19.21$, $SD = 5.68$), $t(174) = 1.15$, $p = .25$.
- Male student subscale scores for positive statements about male professors ($M = 13.17$, $SD = 3.40$) were significantly higher than female student subscale scores ($M = 11.82$, $SD = 3.97$), $t(174) = 2.39$, $p = .02$.

The open-ended question associated with answering research question three was “How does the gender of the professor affect your learning in the business classroom?” The researcher listed all the open-ended responses in a Microsoft Excel spreadsheet and conducted a thematic analysis of the responses. After examining the responses, the researcher categorized each respondent’s input into one of three categories: 1) gender of the professor does not affect learning, 2) positive responses about the impact of female professors, or 3) positive responses about the impact of male professors. The analysis of

responses showed no significant difference between male students (86%) and female students (75%) who indicated that the gender of the professor did not affect their learning. Of those who indicated that gender did make a difference in their learning, .03% of males and .03% of females responded with positive input regarding male professors, which was not significantly different. However, 6.4% of males compared with 21% of females responded with positive input regarding female professors, which indicated a statistically significant difference. In their own words, the female students stated that female professors were more receptive, relational, engaging, understanding, and sociable, making female students feel more comfortable. One female student stated that it was “encouraging to see a business woman in a classroom setting.”

The researcher examined the focus group audio recordings and detailed notes to identify categories of information related to each research question. In response to research question three, the researcher identified two main themes regarding the unique needs of female students concerning the gender of business professors. First, female students consistently expressed the need for female role models in business schools. They wanted to see women who have been successful in business, which played an influential role in the decision for female students to pursue business majors. For example, one female student said,

Coming into the business department, I wasn't sure, because all the people I saw around me at orientation were guys, so I was wondering if I was even in the right place for myself. Then I ended up talking with [a female business professor,] she was one of the first people I met and that was what really sealed it for me because I knew that she has done this, she knows, she's been successful and I wanted to be

like that. So having a female role model really, really has helped me in my decision [to become a business major].

Another female student said, “If [the business professors] were all male, I would feel less likely to succeed because I wouldn’t feel like I had a role model.” One final quote that summarized the overall female student point of view was, “When I think of business administration, I think of a man, usually. Most of the examples I’ve seen and read about are with men. It is harder to picture myself in a role if I can’t see a woman doing it.”

Second, female students felt that having a personal connection to the professor was beneficial to the learning experience. Moreover, the female students expressed greater levels of comfort relating to, being open with, asking questions of, and visiting the offices of female professors. Overall, female students described female professors as sensitive, patient, emotional, and nurturing.

Summary of Findings: Research Question 3

In summary, learning style did not play a significant role in influencing students’ attitudes toward male vs. female professors. However, gender did significantly influence some of the students’ attitudes toward male vs. female professors. Specifically, on the survey, male students, significantly more than female students, rated male professors more positively. In the open-ended responses, female students, significantly more often than male students, made positive statements about the impact of female professors on their learning in the business classroom. In the focus groups, female students expressed higher levels of personal comfort with female professors and conveyed the value of female business professionals as role models and mentors.

Conclusions

The purpose of this study was to investigate differences in the learning styles and learning experiences between male and female traditional undergraduate business students in order to recommend strategies for business schools that address the unique learning needs of female students. Overall, the results of the current study revealed that some significant differences do exist between male and female business students in the traditional undergraduate classroom.

Learning Styles

This study found that there were no significant differences between male and female business students with respect to learning styles, in agreement with other learning styles studies (Ibe, 2015; Jones et al., 2003). However, this finding was inconsistent with studies that have identified significant differences between gender and learning styles (Crawford et al., 2012; Heffler, 2001). Furthermore, the current study's findings revealed that both male and female students' learning styles were somewhat evenly distributed among all four styles. However, those findings were not consistent with Philbin et al. (1995) who found that only women's learning styles were evenly scattered across all types, with men's learning styles more clustered among fewer learning style types.

The current study's findings revealed that most male and female business students were assimilators. This finding supported Loo's (2002) meta-analysis conclusion that most business majors were assimilators, attributed to their analytical thinking abilities. However, Kolb (1984) found in research among managers reporting their undergraduate majors that most undergraduate business majors were accommodators. Comparing learning styles by an overall major category, like business, can be difficult because

business programs offer many different types of majors. In the current study, University A and University B only offered three of the same majors within their business departments: Accounting, Business Administration, and Marketing. Each University had three unique majors housed in the business department. University A offered Business Psychology, Organizational Leadership, and Sports Management; University B offered Economics/Finance, International Business, and Management Information Systems. All nine of the majors offered by the two departments were considered business majors for this study.

Learning Experiences

This study found that learning style did not significantly influence the learning experiences of traditional undergraduate business students. However, gender was a significant influencer on some of their learning experiences. Gender did not significantly influence the level of overall satisfaction, the level of student assertiveness, or perceptions regarding the business department; however, gender did significantly influence the student's perceptions regarding group experiences. Female students, significantly more often than male students, rated the group project experience negatively. This finding supported other studies that found females were more dissatisfied with group experiences than males (Kaenzig et al., 2006; Kaenzig et al., 2007; Ro & Choi, 2011).

Attitudes Toward Professors

This study found that learning style was not a significant influencer on students' attitudes toward male vs. female professors; however, gender was a significant influencer on students' attitudes toward male vs. female professors. Male students, significantly

more than female students, rated male professors more positively, indicating that the male students tended to maintain a positive bias toward male professors. These results are inconsistent with Tomkiewicz and Bass (2008) who found that business students perceived female professors as possessing more favorable attributes than male professors. However, reporting findings similar to the current study, Basow et al. (2006) found that male students chose male professors as favorites more often than they selected female professors.

The qualitative findings revealed that female students rated female professors more positively and expressed more comfort in developing relationships with them. The female students conveyed a need to see female business professors as role models; seeing female business professors motivated them to major in business and helped them visualize the possibility of success in the business world. These results are consistent with Davis and Geyfman's (2015) findings that at AACSB schools, a greater representation of female faculty directly correlated with higher numbers of female students, especially at private institutions, "indicating that female students were potentially influenced by the presence of female faculty in the classroom" (p. 86).

The findings of the overall study, consistent with the literature on the subject, identified both gender similarities and gender differences in the learning needs of business students. Focusing on the areas of difference will allow business schools to further examine the issues surrounding the dissimilarities and take appropriate action, thereby improving the educational experience of both genders.

Implications and Recommendations

If business schools are to sustain and increase enrollment of female students, a dominant population among college students, they must be able to recruit and retain them by creating an appealing and conducive learning environment for women. After analyzing the input of current female business students regarding their learning styles, learning experiences, and attitudes toward professors, the researcher developed recommendations for business schools.

First, business schools and faculty should recognize that all types of learners are present in the business classroom. As has been suggested by previous researchers, business professors should use methods and strategies to fit all four learning style types, encouraging every student to stretch and grow in the way they learn to experience the complete learning cycle (Kolb, 1984; Loo, 2002). As part of the recruitment process, introductory level classes should not be solely lecture-based, but full of multiple teaching methods; these classes should be viewed as recruiting opportunities, created with an appeal to female students. Second, because female students expressed greater negativity about their experiences in group projects, faculty in business departments should carefully examine group member roles and responsibilities, the importance of peer evaluations, and overall group dynamics when assigning group projects. Closer oversight and professor involvement in group dynamics including careful description and designation of roles, weighted and substantive group evaluations, training in group management, weekly agendas, and intermittent progress reports may mitigate the negative feelings about uneven distribution of work and unbalanced levels of contribution, felt particularly by the female students.

Finally, because female students expressed positive feelings about connecting with female professors and seeing them as role models in the business school, business schools should strive to maintain a gender-balanced business faculty by placing an emphasis on hiring additional female faculty members. This balance may be especially helpful in the recruiting process; prospective female students should meet with or be introduced to female faculty members during campus visits to provide an initial connection. In addition, a gender-balanced faculty could potentially be beneficial for the male students, who in this study rated male professors more positively than female students did, indicating that the male students tended to maintain a positive bias toward the male professors. Increasing the number of female faculty may contribute to correcting the subtle male bias that continues to exist in business schools. As mentioned in Symons (2015), learning from a diverse set of both male and female professors could contribute to students gaining a more diverse perspective during the university experience, necessary for both male and female students entering the business world.

To build on the findings and conclusions of this research, additional research could be conducted. Further research among a more diverse group of business schools, including non-traditional undergraduate, graduate, larger private, and public institutions across the United States to increase the sample size and diversity of participants would contribute to the generalizability of the study. In addition, a greater focus on demographic and classification variables including majors and ethnicity could expand the reach of the study. The three areas of the study: 1) learning styles, 2) learning experiences, and 3) attitudes toward professors, could be researched individually in greater depth. In the area of learning styles, different learning styles instruments could be used to investigate the

additional layers of learning, as outlined in Curry's (1983) onion model. In the area of learning experiences, group experiences could be researched in further depth using a multi-item scaled questionnaire instrument to validate specific areas of difference in group experiences. In the area of attitudes toward professors, the research instrument could be expanded to include all 92 items from Schein's Descriptive Index for a more thorough study of the topic.

Leaders of business schools are challenged with increasing enrollment while also adequately preparing students for success in the business world. The findings and conclusions of this study will provide business school leadership with valuable information for recruiting and retaining female college students and recommendations for creating appealing learning environments for women.

REFERENCES

- Accreditation Council for Business Schools and Programs. (2014). *Standards and criteria for demonstrating excellence* (Revision J). Retrieved from http://c.ymcdn.com/sites/www.acbsp.org/resource/collection/EB5F486D-441E-4156-9991-00D6C3A44ED1/ACBSP_Standards_and_Criteria_-_Bacc-Grad.pdf
- American Association of University Professors. (2005). *The annual report on the economic status of the profession 2004-05: Inequities persist for women and non-tenure-track faculty*. Retrieved from <http://www.aaup.org/file/2004-05-Economic-Status-Report.pdf>
- Association to Advance Collegiate Schools of Business. (2009). *Deploying professionally qualified faculty: An interpretation of AACSB standards*. Retrieved from <http://www.aacsb.edu/~media/AACSB/Publications/white-papers/wp-deploying-pq-faculty.ashx>
- Association to Advance Collegiate Schools of Business. (2014). *Business school data guide 2014*. Retrieved from <http://www.aacsb.edu/-/media/aacsb/publications/data-trends-booklet/2014.ashx?la=en>
- Association to Advance Collegiate Schools of Business. (2015). *Business school data guide 2015*. Retrieved from <http://www.aacsb.edu/-/media/aacsb/publications/data-trends-booklet/2015.ashx?la=en>

- Bacon, P. L. (2015). *He's sarcastic and she's caring: Students' stereotypes of the typical male and female professor*. Poster presented at the annual meeting of the Society for Personality and Social Psychology, Long Beach, CA.
- Ball, J. A. (2012). The gender in undergraduate business programs in the United States. *Journal of Education*, 87(5), 260-265.
<http://dx.doi.org/10.1080/08832323.2011.617792>
- Ball, L. C., Cribbie, R. A., & Steele, J. R. (2013). Beyond gender differences: Using tests of equivalence to evaluate gender similarities. *Psychology of Women Quarterly*, 37(2), 147-154. <http://dx.doi.org/10.1177/0361684313480483>
- Barbulescu, R., & Bidwell, M. (2012). Do women choose different jobs from men? Mechanisms of application segregation in the market for managerial workers. *Organization Science*, 24(3), 737-756. <http://dx.doi.org/10.1287/orsc.1120.0757>
- Basow, S. A. (2000). Best and worst professors: Gender patterns in students' choices. *Sex Roles*, 43(5/6), 407-417.
- Basow, S. A., Phelan, J. E., & Capotosto, L. (2006). Gender patterns in college students' choices of their best and worst professors. *Psychology of Women Quarterly*, 30(1), 25-35. <http://dx.doi.org/10.1111/j.1471-6402.2006.00259.x>
- Bellucci, A., Borisov, A., & Zazzaro, A. (2010). Does gender matter in bank-firm relationships? Evidence from small business lending. *Journal of Banking and Finance*, 34(12), 2968-2984. <http://dx.doi.org/10.1016/j.jbankfin.2010.07.008>
- Benard, S., & Correll, S. J. (2010). Normative discrimination and the motherhood penalty. *Gender and Society*, 24(5), 616-646.
<http://dx.doi.org/10.1177/0891243210383142>

- Benko, C., & Pelster, B. (2013, September). How women decide. *Harvard Business Review*, 91(9), 78-84.
- Berry, P., & Franks, T. J. (2010). Women in the world of corporate business: Looking at the glass ceiling. *Contemporary Issues in Education Research*, 3(2), 1-9.
<http://dx.doi.org/10.19030/cier.v3i2.171>
- Biernat, M., Tocci, M. J., & Williams, J. C. (2012). The language of performance evaluations: Gender-based shifts in content and consistency of judgment. *Social Psychological and Personality Science*, 3(2), 186-192.
<http://dx.doi.org/10.1177/1948550611415693>
- Bobbitt, L. M., Inks, S. A., Kemp, K. J., & Mayo, D. T. (2000). Integrating marketing courses to enhance team-based experiential learning. *Journal of Marketing Education*, 22(1), 15-24. <http://dx.doi.org/10.1177/0273475300221003>
- Bonham, B. S., & Boylan, H. R. (1993). A new look at learning styles. *Research in Developmental Education*, 10(4), 1-4.
- Bosse, D. A., & Taylor, P. L. III (2012). The second glass ceiling impedes women entrepreneurs. *Journal of Applied Management and Entrepreneurship*, 17(1), 52-68.
- Brady, C. L. (2013). Understanding learning styles: Providing the optimal learning experience. *International Journal of Childbirth Education*, 28(2), 16-19.
- Brassard, C. (2004). Are learning patterns different on Mars and Venus? *Centre for Development of Teaching and Learning [CDTL Brief]*, 7(1), 5-6.
- Brew, C. R. (2002). Kolb's learning style instrument: Sensitive to gender. *Educational and Psychological Measurement*, 62(2), 373-390.

- Cano-Garcia, F., & Hughes, E. H. (2000). Learning and thinking styles: An analysis of their interrelationship and influence on academic achievement. *Educational Psychology, 20*(4), 413-430. <http://dx.doi.org/10.1080/01443410020016653>
- Carter, N. M., & Silva, C. (2010, March). Women in management. *Harvard Business Review, 88*(3), 19-21.
- Cassidy, S. (2004). Learning styles: An overview of theories, models, and measures. *Educational Psychology, 24*(4), 419-444.
<http://dx.doi.org/10.1080/0144341042000228834>
- Catalyst. (2011). *The bottom line: Corporate performance and women's representation on boards (2004 – 2008)*. New York, NY: Catalyst. Retrieved from http://www.catalyst.org/system/files/The_Bottom_Line_Corporate_Performance_and_Womens_Representation_on_Boards.pdf
- Catalyst. (2016). *Women CEOs of the S&P 500*. New York, NY: Catalyst. Retrieved from <http://www.catalyst.org/knowledge/women-ceos-sp-500>
- Center for Women's Business Research. (2009). *The economic impact of women-owned businesses in the United States*. McLean, VA: Center for Women's Business Research. Retrieved from <https://www.nwbc.gov/sites/default/files/economicimpactstu.pdf>
- Chang, W. C. (2004). Learning goals and styles by gender – A study of NUS students. *Centre for Development of Teaching and Learning [CDTL Brief], 7*(1), 4-5.
- Closing the gap. (2011, Nov 26). *The Economist*, 3-5.

- Correll, S. J., Benard, S., & Paik, I. (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology*, 112(5), 1297-1338.
<http://dx.doi.org/10.1086/511799>
- Crawford, S. K., Alhreish, S. K., & Popovich, N. G. (2012). Comparison of learning styles of pharmacy students and faculty members. *American Journal of Pharmaceutical Education*, 76(10), 1-6. <http://dx.doi.org/10.5688/ajpe7610192>
- Credit Suisse. (2014). *The CS gender 3000: Women in senior management*. Retrieved from <https://publications.credit-suisse.com/tasks/render/file/index.cfm?fileid=8128F3C0-99BC-22E6-838E2A5B1E4366DF>
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Curry, L. (1983). *An organization of learning styles theory and constructs*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec. Retrieved from <http://www.eric.ed.gov.proxy.olivet.edu/contentdelivery/servlet/ERICServlet?accno=ED235185>
- Davis, L. M., & Geyfman, V. (2015). The glass door remains closed: Another look at gender inequity in undergraduate business schools. *Journal of Education for Business*, 90(2), 81-88. <http://dx.doi.org/10.1080/08832323.2014.980715>
- Discovery Education. (n.d.). *Women of the Century*. Retrieved from <http://school.discoveryeducation.com/schooladventures/womenofthecentury/decadebydecade/1990s.html>

- Dunn, R. S., & Dunn, K. J. (1979). Learning styles/teaching styles: Should they . . . can they . . . be matched? *Educational Leadership*, 36(4), 238-244.
- Eagan, M. K., Stolzenberg, E. B., Berdan Lozano, J., Aragon, M. C., Suchard, M. R., & Hurtado, S. (2014). *Undergraduate teaching faculty: The 2013-2014 HERI faculty survey*. Los Angeles, CA: Higher Education Research Institute, UCLA. Retrieved from <http://heri.ucla.edu/monographs/HERI-FAC2014-monograph.pdf>
- Eagleton, S., & Muller, A. (2011). Development of a model for whole brain learning in physiology. *Advances in Physiology Education*, 35(4), 421-426.
<http://dx.doi.org/10.1152/advan.00007.2011>
- Eagly, A. H., & Johannesen-Schmidt, M. C. (2001). The leadership styles of women and men. *Journal of Social Issues*, 57(4), 781-797. <http://dx.doi.org/10.1111/0022-4537.00241>
- Eisenstein, H. (2010). Feminism seduced: Globalisation and the uses of gender. *Australian Feminist Studies*, 25(66), 413-431.
<http://dx.doi.org/10.1080/08164649.2010.525210>
- Farazmand, F. A., & Green, R. D. (2012). Differences between and influences on male and female students' applied project learning outcomes. *Academy of Educational Leadership Journal*, 16(2), 93-103.
- Felder, R. M., & Silverman, L. K. (1988). Learning and teaching styles in engineering education. *Engineering Education*, 78(7), 674-681.
- Flynn, P. M., Cavanagh, K. V., & Bilimoria, D. (2015, Mar/Apr). Closing the gender gap. *BizEd*. [AACSB International]. Retrieved from <http://www.bizedmagazine.com/archives/2015/2/features/closing-the-gender-gap>

- Freeman, C. E. (2004). *Trends in Educational Equality of Girls & Women: 2004* (NCES 2005-016). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office. Retrieved from <http://nces.ed.gov/pubs2005/2005016.pdf>
- Gadzella, B. M., Stephens, R., & Baloglu, M. (2002). Prediction of educational psychology course grades by age and learning style scores. *College Student Journal*, 36(1), 62-69.
- Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational research: Competencies for analysis and application* (10th ed.). Boston, MA: Pearson.
- Gilakjani, A. P. (2012). A match or mismatch between learning styles of the learners and teaching styles of the teachers. *International Journal of Modern Education and Computer Science*, 4(11), 51-60. <http://dx.doi.org/10.5815/ijmecs.2012.11.05>
- Giordano, J., & Rochford, R. A. (2005). Understanding business majors' learning styles. *The Community College Enterprise*, 11(2), 21-39.
- Godwyn, M., & Stoddard, D. (2011). *Minority women entrepreneurs: How outsiders can lead to better business practices*. Stanford, CA: Stanford Business Books.
- Goldin, C. (2006). The quiet revolution that transformed women's employment, education, and family. *American Economic Review*, 96(2), 1-21. <http://dx.doi.org/10.1257/jep.20.4.133>
- Goldin, C., Katz, L. F., & Kuziemko, I. (2006). The homecoming of American college women: The reversal of the college gender gap. *Journal of Economic Perspectives*, 20(4), 133-156. <http://dx.doi.org/10.1257/jep.20.4.133>

- Grasha, A. F. (1996). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Pittsburgh, PA: Alliance Publishers.
- Gray, J. G. (1992). *Men are from Mars, women are from Venus*. New York, NY: HarperCollins Publishers.
- Green, E. A. (1979). *Mary Lyon and Mount Holyoke: Opening the gates*. Hanover, NH: University Press of New England.
- Grob, L. M., Meyers, R. A., & Schuh, R. (1997). Powerful/powerless language use in group interactions: Sex differences or similarities? *Communication Quarterly*, 45(3), 282-303. <http://dx.doi.org/10.1080/01463379709370066>
- Hall, R., & Sandler, B. (1982). The classroom climate: A chilly one for women? *Project on the Status and Education of Women: Association of American Colleges*. Washington, DC: National Association for Women in Education.
- Hamer, L. O. (2000). The additive effects of semistructured classroom activities on student learning: An application of classroom-based experiential learning techniques. *Journal of Marketing Education*, 22(1), 25-34. <http://dx.doi.org/10.1177/0273475300221004>
- Havens, R. A. (2013). Womenomics and the new American workforce majority. *The Journal of Biblical Integration in Business*, 16(1), 7-28.
- Heffler, B. (2001). Individual learning style and the learning style inventory. *Educational Studies*, 27(3), 307-316. <http://dx.doi.org/10.1080/03055690120076583>
- Henson, R. K., & Hwang, D. (2002). Variability and prediction of measurement error in Kolb's Learning Style Inventory scores: A reliability generalization study. *Educational and Psychological Measurement*, 62(4), 712-727.

- Herring, C. (2009). Does diversity pay?: Race, gender, and the business case for diversity. *American Sociological Review*, 74(2), 208-224.
<http://dx.doi.org/10.1177/000312240907400203>
- Hodges, H. (1982). Madison Prep – Alternatives through learning styles. In J. W. Keefe (Ed.), *Student learning styles and brain behavior* (pp. 28-32). Reston, VA: National Association of Secondary School Principals.
- Hoff, J. (1991). *Law, gender, and injustice: A legal history of U.S. women*. New York, NY: New York University Press.
- Hom, P. W., Roberson, L., & Ellis, A. D. (2008). Challenging conventional wisdom about who quits: Revelations from corporate America. *Journal of Applied Psychology*, 93(1), 1-34. <http://dx.doi.org/10.1037/0021-9010.93.1.1>
- Hunt, G., & Song, F. (2013). Gender and specialty in business management education. *Canadian Journal of Higher Education*, 43(1), 129-145.
- Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, 6(6), 581-592. <http://dx.doi.org/10.1037/0003-066X.60.6.581>
- Hyde, J. S. (2007). New directions in the study of gender similarities and differences. *Current Directions in Psychological Science*, 16(5), 259-263.
<http://dx.doi.org/10.1111/j.1467-8721.2007.00516.x>
- Ibarra, H., Ely, R., & Kolb, D. (2013, September). Women rising: The unseen barriers. *Harvard Business Review*, 91(9), 60-67.
- Ibe, H. N. (2015). Effects of learning styles on the performance of senior secondary school biology students. *African Research Review*, 9(1), 214-227.
<http://dx.doi.org/10.4314/afrrev.v9il.17>

- Institute for Women's Policy Research. (2016). *The gender wage gap by occupation 2015 and by race and ethnicity*. Retrieved from <http://www.iwpr.org/initiatives/pay-equity-and-discrimination>
- Institute of Leadership and Management. (2011). *Ambition and gender at work*. Institute of Leadership and Management: London, England.
- Jaschik, S. (2005, February 18). What Larry Summers said. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/news/2005/02/18/summers2_18
- Jayamohan, P. S., & Shivakumara, J. (2014). A comparative study to assess the learning styles and approaches among male and female students of selected colleges in Mangalore. *Asian Journal of Nursing Education and Research*, 4(3), 365-369.
- Jones, C., Reichard, C., & Mokhtari, K. (2003). Are students' learning styles discipline specific? *Community College Journal of Research and Practice*, 27(5), 363-375. <http://dx.doi.org/10.1080/10668920390128988>
- Kaenzig, R., Anderson, S., Hyatt, E., & Griffin, L. (2006). Gender differences in students' perceptions of group learning experiences. *Academy of Educational Leadership Journal*, 10(1), 119-127.
- Kaenzig, R., Hyatt, E., & Anderson, S. (2007). Gender differences in college of business educational experiences. *Journal of Education for Business*, 83(2), 95-100. <http://dx.doi.org/10.3200/JOEB.83.2.95-100>
- Karayan, J. E., Martin, R. M., & Hulme, R. (2014). Gender, listening, and learning: Enhancing educational environments through cognitive awareness. *International Journal of Business, Humanities, and Technology*, 4(3), 33-38.

- Kayes, D. C. (2005). Internal validity and reliability of Kolb's Learning Style Inventory version 3 (1999). *Journal of Business and Psychology*, 20(2), 249-257.
<http://dx.doi.org/10.1007/s10869-005-8262-4>
- Keefe, J. W. (1982) Assessing student learning styles: An overview. In J. W. Keefe (Ed.), *Student learning styles and brain behavior* (pp. 43-53). Reston, VA: National Association of Secondary School Principals.
- Kennedy, J. A., & Kray, L. J. (2014). Who is willing to sacrifice ethical values for money and social status? Gender differences in reactions to ethical compromises. *Social Psychological & Personality Science*, 5(1), 52-59.
- King, E. B., Botsford, W., Hebl, M. R., Kazama, S., Dawson, J. F., & Perkins, A. (2010). Benevolent sexism at work: Gender differences in the distribution of challenging developmental experiences. *Journal of Management*. Online publication.
<http://dx.doi.org/10.1177/0149206310365902>
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Kolb, A. Y., & Kolb, D. A. (2005a). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education*, 4(2), 193-212.
- Kolb, A. Y., & Kolb, D. A. (2005b). *The Kolb Learning Style Inventory, Version 3.1: 2005 technical specifications*. Boston, MA: Hay Group, Hay Resources Direct.

- Kulturel-Konak, S., D'Allegro, M. L., & Dickinson, S. (2011). Review of gender differences in learning styles: Suggestions for STEM education. *Contemporary Issues in Education Research*, 4(3), 9-18.
<http://dx.doi.org/10.19030/cier.v4i3.4116>
- Kwolek-Folland, A. (2002). *Incorporating women: A history of women and business in the United States*. New York, NY: Palgrave.
- Law & Higher Education. (2011). *Statutes and treaties: Morrill Acts*. Retrieved from <http://lawhighereducation.org/90-morrill-acts.html>
- Leedy, P. D., & Ormrod, J. E. (2013). *Practical research: Planning and design* (10th ed.). Boston, MA: Pearson.
- Leonore Annenberg Institute for Civics. (n.d). *Women's rights timeline*. Retrieved from <http://www.annenbergclassroom.org/Files/Documents/Timelines/WomensRightstimeline.pdf>
- Lie, L. Y., Angelique, L., & Cheong, E. (2004). How do male and female students approach learning at NUS? *Centre for Development of Teaching and Learning [CDTL Brief]*, 7(1), 1-3.
- Loo, R. (2002). A meta-analytic examination of Kolb's learning style preferences among business majors. *Journal of Education for Business*, 77(5), 252-256.
<http://dx.doi.org/10.1080/08832320209599673>
- Maccoby, E. E., & Jacklin, C. N. (1974). *The psychology of sex differences*. Stanford, CA: Stanford University Press.

- Macrae, C. N., & Bodenhausen, G. V. (2000). Social cognition: Thinking categorically about others. *Annual Review Psychology*, 51(1), 93-120.
<http://dx.doi.org/10.1146/annurev.psych.51.1.93>
- Marshall, C. (1991). Teachers' learning styles: How they affect student learning. *Clearing House*, 64(4), 225-227.
<http://dx.doi.org/10.1080/00098655.1991.9955852>
- McDaniel, C., Jr., & Gates, R. (2010). *Marketing research* (8th ed.). Hoboken, NJ: John Wiley & Sons.
- McIntyre, F. S., Hite, R. E., & Rickard, M. K. (2003). Individual characteristics and creativity in the marketing classroom: Exploratory insights. *Journal of Marketing Education*, 25(2), 143-149. <http://dx.doi.org/10.1177/0273475303254014>
- McKinney, A. P. (2013). What lies ahead: Emerging trends in diversity pipeline among new entrants in the workforce. *Journal of Business Diversity*, 13(1/2), 83-95.
- McKinsey & Company. (2007). *Women matter: Gender diversity, a corporate performance driver*. Retrieved from http://www.mckinsey.com/features/women_matter
- McKinsey & Company. (2008). *Women matter 2: Female leadership, a competitive edge for the future*. Retrieved from http://www.mckinsey.com/features/women_matter
- McKinsey & Company. (2010). *Women at the top of corporations: Making it happen*. Retrieved from http://www.mckinsey.com/features/women_matter
- McKinsey & Company. (2011). *Unlocking the full potential of women in the U.S. economy*. Retrieved from http://www.mckinsey.com/features/women_matter

- McKinsey & Company. (2013). *Gender diversity in top management: Moving corporate culture, moving boundaries*. Retrieved from http://www.mckinsey.com/features/women_matter
- McKinsey & Company. (2015a). *Diversity matters*. Retrieved from <https://web.duke.edu/equity/toolkit/documents/DiversityMatters.pdf>
- McKinsey & Company. (2015b). *Women in the workplace*. Retrieved from <http://womenintheworkplace.com/>
- McKinsey Global Institute. (2016). *The power of parity: Advancing women's equality in the United States* [Executive Briefing]. Retrieved from <http://www.mckinsey.com/global-themes/employment-and-growth/the-power-of-parity-advancing-womens-equality-in-the-united-states>
- Meltzer, A. L., & McNulty, J. K. (2011). Contrast effects of stereotypes: “Nurturing” male professors are evaluated more positively than “nurturing” female professors. *The Journal of Men's Studies*, 19(1), 57-64. <http://dx.doi.org/10.3149/jms.1901.57>
- Milazzo, V. L. (2015, March). Break on through to the other side. *USA Today*, 143(2838), 70-71.
- Moses, C. G. (2012). What's in a name? On writing the history of feminism. *Feminist Studies*, 38(3), 757-779.
- Muravyev, A., Talavera, O., & Schafer, D. (2009). Entrepreneurs' gender and financial constraints: Evidence from international data. *Journal of Comparative Economics*, 37(2), 270-286. <http://dx.doi.org/10.1016/j.jce.2008.12.001>

- Nash, M. A., & Romero, L. S. (2012). "Citizenship for the college girl": Challenges and opportunities in higher education for women in the United States in the 1930s. *Teachers College Record*, 114(2), 1-35.
- O'Banion, T. (2010). Focus on learning: The core mission of higher education. In T O'Banion & C. Wilson (Eds.), *Focus on learning: A learning college reader* (pp. 1-12). Chandler, AZ: League for Innovation in the Community College. Retrieved from http://www.jsu.edu/redballoon/docs/1O_Banion-Focus_on_Learning_Final.pdf
- Orhan, M., & Scott, D. (2001). Why women enter into entrepreneurship: An explanatory model. *Women in Management Review*, 15(5), 232-247.
<http://dx.doi.org/10.1108/09649420110395719>
- Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2009). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105-119.
<http://dx.doi.org/10.1111/j.1539-6053.2009.01038.x>
- Philbin, M., Meier, E., Huffman, S., & Boverie, P. (1995). A survey of gender and learning styles. *Sex Roles*, 32(7/8), 485-494.
<http://dx.doi.org/10.1007/BF01544184>
- Ro, H., & Choi, Y. (2011). Student team project: Gender differences in team project experience and attitudes toward team-based work. *Journal of Teaching in Travel & Tourism*, 11(2), 149-163. <http://dx.doi.org/10.1080/15313220.2011.575022>
- Robson, C. (2011). *Real world research* (3rd ed.). Chichester, England: Wiley.
- Rochford, R. A. (2004). Improving academic performance and retention among remedial students. *The Community College Enterprise*, 10(2), 23-36.

- Rochford, R. A., & Mangino, C. (2006). Are you teaching the way your students learn? *Radical Pedagogy*, 8(1), 1-13.
- Romanelli, F., Bird, E., & Ryan, M. (2009). Learning styles: A review of theory, application, and best practices. *American Journal of Pharmaceutical Education*, 73(1), 1-5. <http://dx.doi.org/10.5688/aj730109>
- Ruble, T. L., & Stout, D. E. (1990). Reliability, construct validity, and response-set bias of the revised Learning Style Inventory. *Educational and Psychological Measurement*, 50(1), 619-629.
- Ruble, T. L., & Stout, D. E. (1991). Reliability, classification stability, and response-set bias of alternate forms of the Learning Style Inventory. *Educational and Psychological Measurement*, 51(2), 481-489.
- Ruble, T. L., & Stout, D. E. (1994). *A critical assessment of Kolb's Learning Style Inventory*. (ED377221)
- Rudolph, F. (1962). *The American college and university: A history*. New York, NY: Alfred A Knopf.
- Rury, J., & Harper, G. (1986). The trouble with coeducation: Mann and women at Antioch, 1853-1860. *History of Education Quarterly*, 26(4), 481-502. <http://dx.doi.org/10.2307/369009>
- Salkind, N. J. (2012). *Exploring research* (8th ed.). Boston, MA: Pearson.
- Salkind, N. J. (2014). *Statistics for people who (think they) hate statistics* (5th ed.). Thousand Oaks, CA: Sage.

- Sanchez, C. A., & Wiley, J. (2010). Sex differences in science learning: Closing the gap through animations. *Learning and Individual Differences*, 20(3), 271-275.
<http://dx.doi.org/10.1016/j.lindif.2010.01.003>
- Sandler, B. R., Silverberg, L. A., & Hall, R. M. (1996). *The chilly classroom climate: A guide to improve the education of women*. Washington, DC: National Association for Women in Education.
- Schulze, E., & Tomal, A. (2006). The chilly classroom: Beyond gender. *College Teaching*, 54(3), 263-270. <http://dx.doi.org/10.3200/ctch.54.3.263-270>
- Severiens, S. E., & Ten Dam, G. T. (1994). Gender differences in learning styles: A narrative review and quantitative meta-analysis. *Higher Education*, 27(4), 487-501. <http://dx.doi.org/10.1007/BF01384906>
- Sharpe, R. (2000, November 20). As leaders, women rule. *Business Week*, 75-84.
- Sheal, P. (1989). *How to develop and present staff training courses*. New York, NY: Nichols Publishing.
- Silva, C., Carter, N. M., & Beninger, A. (2012). *Good intentions, imperfect execution? Women get fewer of the "hot jobs" needed to advance*. New York, NY: Catalyst.
- Silverstein, M. J., & Sayre, K. (2009, September). The female economy. *Harvard Business Review*, 87(9), 46-53.
- Sinclair, L., & Kunda, Z. (2000). Motivated stereotyping of women: She's fine if she praised me but incompetent if she criticized me. *Personality and Social Psychology Bulletin*, 26(11), 1329-1342.
<http://dx.doi.org/10.1177/0146167200263002>

- Slater, J. A., Lujan, H. L., & DiCarlo, S. E. (2007). Does gender influence learning style preferences of first-year medical students? *Advances in Physiology Education*, 31(4), 336-342. <http://dx.doi.org/10.1152/advan.00010.2007>
- Smith, K. H. (2004). Implementing the “Marketing You” project in large sections of principles of marketing. *Journal of Marketing Education*, 26(2), 123-136. <http://dx.doi.org/10.1177/0273475304265542>
- Solomon, B. M. (1985). *In the company of educated women: A history of women and higher education in America*. New Haven, CT: Yale University Press.
- Spence, L. D. (2001, Nov./Dec.). The case against teaching. *Change*, 11-19. <http://dx.doi.org/10.1080/00091380109601822>
- Sprague, J., & Massoni, K. (2005). Student evaluations and gendered expectations: What we can’t count can hurt us. *Sex Roles*, 53(11/12), 779-793. <http://dx.doi.org/10.1007/s11199-005-8292-4>
- Strickland, D. (2011). *The liberating truth: How Jesus empowers women*. Oxford, England: Monarch Books.
- Stone, P. (2013). “Opting out”: Challenging stereotypes and creating real options for women in the professions. *Gender & Work: Challenging Conventional Wisdom*, Research Symposium, Harvard Business School. Retrieved from <http://www.hbs.edu/faculty/conferences/2013-w50-research-symposium/Documents/stone.pdf>

- Stump, G. S., Hilpert, J. C., Husman, J., Chung, W., & Kim, W. (2011). Collaborative learning in engineering students: Gender and achievement. *Journal of Engineering Education*, 100(3), 475-497. <http://dx.doi.org/10.1002/j.2168-9830.2011.tb00023.x>
- Symons, L. (2015). 20-first 2015: Global gender balance scorecard: Focus on business schools. Retrieved from http://20-first.com/wp-content/uploads/20first_Businessschools6.pdf
- Tannen, D. (1995, September/October). The power of talk: Who gets heard and why. *Harvard Business Review*, 75(5), 138-148.
- Tardif, E., Doudin, P., & Meylan, N. (2015). Neuromyths among teachers and student teachers. *Mind, Brain, and Education*, 9(1), 50-59.
<http://dx.doi.org/10.1111/mbe.12070>
- The 1890 Land-Grant Universities. (n.d.). *History: The Morrill Acts of 1862 and 1890*. Retrieved from <http://www.1890universities.org/history>
- Thelin, J. R. (2011). *A history of American higher education* (2nd ed.). Baltimore, MD: The Johns Hopkins University Press.
- Tomkiewicz, J., & Bass, K. (2008). Differences between male students' and female students' perception of professors. *College Student Journal*, 42(2), 422-430.
- Toossi, M. (2002). A century of change: The U.S. labor force, 1950-2050. *Monthly Labor Review*, 125(5), 15-28.
- Tulshyan, R. (2010, March 2). Top 10 college majors for women. *Forbes*. Retrieved from http://www.forbes.com/2010/08/10/most-popular-college-degrees-for-women-forbes-woman-leadership-education_slide.html

- U.S. Bureau of Labor Statistics. (2015a). *Labor force statistics from the current population survey: CPS table 11*. Retrieved from <http://www.bls.gov/cps/cpsaat11.pdf>
- U.S. Bureau of Labor Statistics. (2015b). *Women in the labor force: A databook* (BLS Reports, Report 1059). Retrieved from <http://www.bls.gov/opub/reports/womens-databook/archive/women-in-the-labor-force-a-databook-2015.pdf>
- U.S. Department of Education, National Center for Education Statistics. (2002a). *The condition of education 2002*. Retrieved from <http://nces.ed.gov/pubs2002/2002025.pdf>
- U.S. Department of Education, National Center for Education Statistics. (2002b). *Profile of undergraduates in postsecondary institutions: 1999-2000* (NCES 2002-168). Retrieved from <http://nces.ed.gov/pubs2002/2002168.pdf>
- U.S. Department of Education, National Center for Education Statistics. (2014). *Web tables – Profile of undergraduate students: 2011-12* (NCES 2015-167). Retrieved from <http://nces.ed.gov/pubs2015/2015167.pdf>
- U.S. Department of Education, National Center for Education Statistics. (2015a). *Digest of Education Statistics* (Table 325.25). Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_325.25.asp
- U.S. Department of Education, National Center for Education Statistics. (2015b). *Digest of Education Statistics* (Table 318.10). Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_318.10.asp

- U.S. Department of Education, National Center for Education Statistics. (2015c). *Digest of Education Statistics* (Table 315.10). Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_315.10.asp
- U.S. Department of Education, National Center for Education Statistics. (2016a). *The condition of education: Undergraduate degree fields*. Retrieved from http://nces.ed.gov/programs/coe/indicator_cta.asp
- U.S. Department of Education, National Center for Education Statistics. (2016b). *The condition of education: Undergraduate enrollment*. Retrieved from http://nces.ed.gov/programs/coe/indicator_cha.asp
- U.S. Department of Labor. (n.d.). *Our history: An overview 1920-2012* (Women's Bureau). Retrieved from http://www.dol.gov/wb/info_about_wb/interwb.htm
- U.S. History. (n.d.). *57c. The Equal Rights Amendment*. Retrieved from <http://www.ushistory.org/us/57c.asp>
- U.S. Senate. (n.d.). *Senate history: 1964-present*. Retrieved from http://www.senate.gov/artandhistory/history/minute/year_of_the_woman.htm
- Warner, J. (2014). *Fact sheet: The women's leadership gap. Women's leadership by the numbers*. Retrieved from <https://www.americanprogress.org/issues/women/report/2014/03/07/85457/fact-sheet-the-womens-leadership-gap/>
- We did it. (2010, January 2). Special Report on Women and Work. *The Economist*, 7.

- Wehrwein, E. A., Lujan, H. L., & DiCarlo, S. E. (2007). Gender differences in learning styles preferences among undergraduate physiology students. *Advances in Physiology Education*, 31(2), 153-157.
<http://dx.doi.org/10.1152/advan.00060.2006>.
- Wells, S. J. (2001, June) A female executive is hard to find. *HR Magazine*, 46(6), 40-49.
- Williamson, M. F., & Watson, R. L. (2006a). Learning styles research: Understanding how teaching should be impacted by the way learners learn. *Christian Education Journal*, 3(1), 27-42.
- Williamson, M. F., & Watson, R. L. (2006b). Learning styles research: Understanding how teaching should be impacted by the way learners learn, part II: Understanding how learners prefer to receive information. *Christian Education Journal*, 3(2), 343-361.
- Williamson, M. F., & Watson, R. L. (2007). Learning styles research: Understanding how teaching should be impacted by the way learners learn, part III: Understanding how learners' personality styles impact learning. *Christian Education Journal*, 4(1), 62-77.
- Women in the workforce: Female power. (2010, January 2). *The Economist*, 49.
- Wood, J. T. (2013). *Gendered lives: Communication, gender, and culture*. Boston, MA: Wadsworth Cengage Learning.
- Woody, T. (1929). *A history of women's education in the United States* (Vols. 1-2). New York, NY: Octagon Books, Inc.

- Wooldridge, B. (1995). Increasing the effectiveness of university/college instruction: Integrating the results of learning style research into course design and delivery. In R. R. Sims & S. J. Sims (Eds.), *The importance of learning styles: Understanding the implications for learning, course design, and education* (pp. 49-67). Westport, CT: Greenwood Press.
- Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, 330(6004), 686-688. <http://dx.doi.org/10.1126/science.1193147>
- Yarrish, K. K., Zula, K., & Davis, E. (2010). An exploration of differences of leadership perceptions related to a student's gender with the College of Business at a small liberal arts institution. *American Journal of Business Education*, 3(11), 69-75. <http://dx.doi.org/10.19030/ajbe.v3i11.64>
- Zell, E., Krizan, Z., & Teeter, S. R. (2015). Evaluating gender similarities and differences using metasynthesis. *American Psychologist*, 70(1), 10-20. <http://dx.doi.org/10.1037/a0038208>
- Zenger, J., & Folkman, J. (2012). A study in leadership: Women do it better than men. Retrieved from <http://www.zengerfolkman.com/media/articles/ZFCo.WP.WomenBetterThanMen.033012.pdf>
- Zlomek, E. (2013, March 22). Fewer women are choosing college business programs. *Bloomberg Businessweek*. Retrieved from <http://www.bloomberg.com/bw/articles/2013-03-22/fewer-women-choosing-college-business-programs>

Zull, J. E. (2002). *The art of changing the brain: Enriching the practice of teaching by exploring the biology of learning*. Sterling, VA: Stylus Publishing.

Appendix A
Survey Instrument

Survey Instrument

PART A – KOLB LEARNING STYLE INVENTORY (KLSI 3.1)

*Content not included due to the propriety rights of the company.

PART B - LEARNING EXPERIENCES SURVEY (LES)

Satisfaction with Educational Experience

The following questions deal with your experiences in the business department.

Indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Overall, I am satisfied with the instructors I have had in the business department.					
2. I have received quality instruction in the business department.					
3. I feel that my education has prepared me for a successful business career.					
4. I feel that my business degree is valuable compared to degrees from other colleges.					

Student Assertiveness

The following questions deal with your level of assertiveness in your business classes.

How likely are you to do the following?

	Not at all likely	Somewhat likely	Very likely
1. Speak out in class			
2. Participate in discussion			
3. Challenge the professor's viewpoints			
4. Ask questions in class			
5. Visit the professor in his or her office			
6. Ask the professor for outside help			
7. Ask the professor to change a grade			

Group Experiences and Assignments

The following questions deal with your experiences relating to group projects in your business classes. Please indicate how often each of the following things occur or have occurred.

	Never	Rarely	Sometimes	Often	Always
1. I have been taken advantage of by group members.					
2. I do a lot of the organizing and getting people together to work on group projects.					
3. I often end up being the group secretary and do much of the writing and finalizing of the project.					
4. I have been pressured by group members who have been slacking to turn in favorable evaluations for them.					
5. I prefer doing projects by myself over working with a group.					
6. I am usually more satisfied with the outcome of a group project than with a paper I wrote on my own.					
7. I don't like being dependent on others for grades.					
8. I am often selected/volunteer as the project manager of the group.					
9. I feel comfortable truthfully evaluating and reporting my group members' performance.					
10. I turn in poor evaluations for group members with poor performance.					
11. All group members usually pitch in and do equal amounts of work on group projects.					
12. I end up doing more than my fair share on group projects.					
13. I feel responsible for my group members' grades.					
14. I feel guilty when I do less than my share of the work even when the project turns out well.					
15. I have gotten a lower grade than I deserved on a group project.					

Business Department Environment

Indicate your level of agreement with the each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I feel the environment in the business department is too competitive for my tastes.					
2. The atmosphere in the business department stresses me out.					
3. I have never felt personally discouraged in the department of business. (Reverse-scored)					

PART C – ATTITUDES TOWARD PROFESSORS

The following questions deal with your experiences relating to the professors of your business classes. Indicate your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I have a favorite professor who stands out in my mind.					
2. Female professors are easier to work with than male professors.					
3. Female professors foster a more competitive environment in the classroom than male professors.					
4. Female professors are more consistent than male professors.					
5. Male professors have greater leadership ability than female professors.					
6. Female professors are more intelligent than male professors.					
7. Male professors are more well-informed than female professors.					
8. Female professors have greater analytical ability than male professors.					
9. Male professors are more decisive than female professors.					
10. Female professors are more skilled in business matters than male professors.					
11. Male professors are more direct than female professors.					
12. Female professors are more self-confident than male professors.					
13. Male professors are more logical than female professors.					
14. Female professors are more flexible than male professors.					

PART D – OPEN-ENDED QUESTIONS

1. How do you learn most effectively?

2. Describe your overall learning experience in the classes in the business department.

3. How does the gender of the professor affect your learning in the business classroom?

PART E – DEMOGRAPHICS

Clearly circle each answer that correctly describes you:

1. **What is your gender? (Circle one)**
a. Male
b. Female
2. **What is your current status? (Circle one)**
a. Freshman
b. Sophomore
c. Junior
d. Senior
3. **What is your primary major? (Circle one)**

a. Accounting	f. Marketing
b. Business Administration	g. Organizational Leadership
c. Business Psychology	h. Sports Management
d. Economics/Finance	i. Other: _____
e. International Business	(Please indicate major)

Appendix B
Consent Forms

INFORMED CONSENT DOCUMENT (Focus Group)

Project Title: Examining the Differences in College Student Learning Styles and Learning Experiences in the Business Classroom

You are being asked to participate in a research project conducted through Olivet Nazarene University. The University requires that you give your signed agreement to participate in this project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign on the last page of this form in the presence of the person who explained the project to you.

1. Nature and Purpose of the Project:

The purpose of the Examining the Differences in College Student Learning Styles and Learning Experiences in the Business Classroom research study is to investigate differences in the learning styles and learning experiences among traditional undergraduate business students in order to recommend strategies for business schools that address the unique learning needs of students.

2. Explanation of Procedures:

Students will participate in a focus group session to discuss student learning preferences, perceptions of the learning experience, perceptions of male and female professors, and overall experiences in the School of Business.

3. Discomfort and Risks:

The risks associated with participating in this research are minimal. Focus group participation is not connected in any way to a course or course grade. Focus group participation is voluntary and all information shared will remain anonymous.

4. Benefits:

Increased knowledge among business schools about student learning styles, preferences, and experiences. Adjusting teaching strategies and learning activities in the classroom to match individual learning preferences may contribute to improvements in student achievement.

5. Confidentiality:

Participant confidentiality will be maintained through the following procedures:

- Names and specific personal identifiers will not be included in the summary findings.
- All data and recordings will be securely stored in multiple protected locations.

6. Refusal/Withdrawal:

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Signature of Participant

Date

Witness

Date

INFORMED CONSENT DOCUMENT (Survey)

Project Title: Examining the Differences in College Student Learning Styles and Learning Experiences in the Business Classroom

You are being asked to participate in a research project conducted through Olivet Nazarene University. The University requires that you give your signed agreement to participate in this project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign on the last page of this form in the presence of the person who explained the project to you.

1. Nature and Purpose of the Project:

The purpose of the Examining the Differences in College Student Learning Styles and Learning Experiences in the Business Classroom research study is to investigate differences in the learning styles and learning experiences among traditional undergraduate business students in order to recommend strategies for business schools that address the unique learning needs of students.

2. Explanation of Procedures:

Students will complete a questionnaire. The results will identify each learner's preferred learning style, perception of the learning experience, and perception of male and female professors.

3. Discomfort and Risks:

The risks associated with participating in this research are minimal. Survey participation is not connected in any way to a course or course grade. Survey participation is voluntary and all information shared will remain anonymous.

4. Benefits:

Increased knowledge among business schools about student learning styles, preferences, and experiences. Adjusting teaching strategies and learning activities in the classroom to match individual learning preferences may contribute to improvements in student achievement.

5. Confidentiality:

Participant confidentiality will be maintained through the following procedures:

- Names and specific personal identifiers will not be included in the summary findings.
- All documents and data will be securely stored in multiple protected locations.

6. Refusal/Withdrawal:

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Signature of Participant

Date

Witness

Date

Appendix C

Focus Group Moderator Guide

Focus Group Moderator Guide

Preamble

Thank you again for coming to the focus group! Tonight we will encourage open and honest communication. Please be respectful of everyone here tonight, do not talk over each other and please leave room for everyone to share. Due to time constraints I will be nudging us along. Please know that I am not trying to be rude, but am trying to keep the conversation going and I want to be respectful of everyone's time as I know we only have two hours. Tonight we will be talking about your learning and experiences in your business classes. We look forward to what you have to say.

We will be using a voice recorder during our focus group. These devices are for us to be able to look back and better understand everything that was said tonight. We will also be taking notes to help us to gather all the information that we will be talking about tonight.

Let us Begin

1. Thanks & welcome
2. Nature of the focus group
3. There are no right or wrong answers-all about finding out what people think
4. Audio & video recording-explain
5. Colleagues viewing
6. Going to be talking about your learning and experiences in your business classes
7. Questions or concerns

Intro & Warm-up

Go around the room and have each participant introduce themselves...

1. First name
2. What year are you in school
3. What is your major
4. What is something unique about you?

*Why did you pick business?

PART A - Learning Styles:

1. How do you learn the best?
2. How do you study?
3. How helpful are active learning experiences (e.g. in-class projects) to your learning?
4. How helpful are real-world experiences (e.g. client projects) to your learning?
5. How helpful are observation experiences (e.g. videos, lectures) to your learning?
6. How helpful are analyzing situations (e.g. case studies) to your learning?
7. How helpful are thinking situations (e.g. quizzes) to your learning?
8. How helpful are reflective experiences (e.g. reflection papers, journals) to your learning?
9. How helpful is working with others to your learning?
10. How helpful are your feelings to your learning?
11. What methods/experiences are the most helpful to you when you learn?

12. Is it helpful if your professors uses multiple teaching styles or to stick to one style?
13. **VOTE:** Do you prefer experience-based learning and people-oriented activities that include role-play and feeling-based exercises? –OR- do you prefer abstract-concrete dimension indicating an analytical approach to learning including the use of logic and rational thinking?
14. Do you work for the tangible reward and social recognition -OR- to achieve mastery of the subject, regardless of tangible reward?
15. Do you find yourself searching for personal connections to the material, to make it more relevant?
16. Do you achieve for yourself or more for other people?
17. Is interaction with other students important in your learning?
18. Do you prefer visuals when learning something new and complex?

Worksheet

- Circle which learning style best describes you...
 - Diverging: describes individuals who show a preference for learning through creating, generating new ideas, and imagining possibilities
 - Assimilating: describes individuals who like to learn by drawing on multiple sources of information, logic, and step by step organizations of information
 - Converging: Describes individuals who like to learn through solving practical problems, making decisions, and interacting with problems rather than necessarily with people
 - Accommodating: describes individuals who like to learn through taking actions, risks, and leadership roles

Teaching style

1. Is your learning affected by the teaching style of the professor?
2. Do you have to reteach yourself or study harder if the teacher's teaching style doesn't match your learning style?
3. In order for a college professor to be effective in teaching, do they need to know more than just the content for the course?
4. Have you ever had a professor that changed their learning style to better fit a classes/students learning style? If so did it make a difference?

PART B - Learning Experiences:

1. Describe your experiences working in group projects.
 - a. Would you rather work in a group or individually? Explain.
 - b. Do you learn more working in a group or individually? Explain.
 - c. Do you learn more through group work or through classroom learning? Explain.
 - d. Based on your experience in groups, how well was the work balanced among teammates?
 - e. What encourages your active participation in a group?
 - f. Do you have a preference for the composition of the group? (Do you prefer groups of all females, all males, or a mix?) Explain.

- g. Do certain genders tend to take on certain roles in the group (e.g. project manager, secretary), or is the role assigned to the “best fit?”
 - h. Do you feel that your viewpoints and questions are valued by the opposite gender? Do you think that the opposite gender would agree or disagree with you?
 - i. Do you feel like you do all the work in group projects?
 - j. Do you get excited to be apart of group projects because it means that you get to slack off and still get a good grade?
2. How assertive are you when it comes to your learning?
- a. What things are you comfortable doing in order to increase your learning?
 - i. Speaking up in class
 - ii. Participating in the discussion
 - iii. Challenging the professor
 - iv. Asking questions in class
 - v. Visiting the professor in his/her office
 - vi. Asking the professor for outside help
 - vii. Challenging a grade
 - b. Do you ever feel like you will be looked down upon if you ask a question in class?
 - c. Do you ever feel like your professor holds your gender to a higher standard?
3. How do you feel about your selection of a major in the School of Business?
- a. Do you feel like you can be successful in the business world?
 - i. Male? Female?
 - b. Are you satisfied with the instructors in the School of Business?
 - c. What do you think about the level of instruction you’ve received?
 - d. Describe the atmosphere of the School of Business.

-BREAK-

PART C - Attitude Toward Professors:

- 1. In what ways does the gender of the professor impact the classroom experience?
- 2. Do you prefer a male or female professor? Why?
- 3. What differences have you experienced between male and female professors?
- 4. What adjectives would you use to describe female professors? What are some of their strengths?
- 5. What adjectives would you use to describe male professors? What are some of their strengths?
- 6. Do you think certain genders of professors work better with certain genders of students?
 - a. Do you prefer to have a male or female professor?
- 7. How important is it to you that you receive instruction from professors of both genders?
- 8. Do you look at your professors as the expert –OR- more a teacher or coach?

Describe (characteristics) what you think of when you think of a male professor? Female professor?

Female Professors/Male Professors:

1. Do you have higher expectations for a female professor or a male professor?

Relationships with Professors:

1. Do you think that it is important to have collegial relationships with professors?
2. If you form relationships with your professors do you perform better as a student?
3. Do the personal relationships you have build with your professors ever make you uncomfortable?

Part D – Implications for Business Schools (gender-specific questions)

1. In what ways do you feel like your learning needs are different from the female/male students?
2. Is the School of Business meeting the learning needs of female/male students? If so, in what ways? If not, why not?
3. Are there things the School of Business can do to better prepare female/male students for careers in business?

Closing

1. Thank you for your time!
2. Does anyone have any questions for me?
3. Any last minute comments?
4. If you leave and wish that you would have said something feel free to shoot me an email or give me a call.