

Spring 5-2018

The Impact of the 120/150-hour Rule on Candidates to Sit for the Certified Public Accountant (CPA) Exam: A Study on Women

Aubrey Sanders
University of Southern Mississippi

Follow this and additional works at: https://aquila.usm.edu/honors_theses



Part of the [Accounting Commons](#)

Recommended Citation

Sanders, Aubrey, "The Impact of the 120/150-hour Rule on Candidates to Sit for the Certified Public Accountant (CPA) Exam: A Study on Women" (2018). *Honors Theses*. 551.
https://aquila.usm.edu/honors_theses/551

This Honors College Thesis is brought to you for free and open access by the Honors College at The Aquila Digital Community. It has been accepted for inclusion in Honors Theses by an authorized administrator of The Aquila Digital Community. For more information, please contact Joshua.Cromwell@usm.edu.

The University of Southern Mississippi

The Impact of the 120/150-hour Rule on Candidates to Sit for the
Certified Public Accountant (CPA) Exam: A Study on Women

by

Aubrey Sanders

A Thesis
Submitted to the Honors College of
The University of Southern Mississippi
in Partial Fulfilment
of the Requirements for the Degree of
Bachelor of Science in Business Administration
in the School of Accountancy

August 2018

Approved by

Mary M. Anderson, DBA., Thesis Advisor
Associate Professor of Accounting

Gwen Pate, Ph. D., Director
School of Accountancy

Dr. Ellen Weinauer, Ph. D., Dean
Honors College

ABSTRACT

To become a Certified Public Accountant (CPA), one must first qualify to take the exam and consequently, earn the licensure. While the information on the CPA exam tests the candidates on uniform information, the education eligibility requirements to both sit for and earn licensure vary among the U.S. states and jurisdictions. Currently, thirty-nine of the fifty-four U.S. jurisdictions – including Mississippi – have adopted what has become known as the 120/150 educational credit hour rule. This rule allows candidates to begin taking the exam upon earning 120 credit hours, which is equivalent to a bachelor's degree; however, candidates may not earn licensure until after earning 150 credit hours, or a master's degree, have been completed. The other fifteen jurisdictions do not allow candidates to sit for the exam until the 150 credit hours have been earned, qualifying them for licensure upon passing each of the exam's four sections.

This study analyses the impact of the 120/150-hour education requirement on the intentions of candidates to pursue CPA certification. In addition, it focuses on how this education constraint impacts their career intentions. To understand such impacts, a survey is administered to undergraduate accounting students at the University of Southern Mississippi. A Chi-squared test evaluates the following: relationships between genders, education level intentions, and certification intentions. The study gives evidence that the respondents are split among agreeing, disagreeing, or being undecided regarding whether or not a fifth year of education is necessary to *sit* for the exam. On the other hand, 42.5% of respondents believe a fifth year of education is necessary to *pass* the exam (20% in disagreement and 37.5% undecided). The results from this study support the need for further research to most accurately conclude on the impact of the Uniform Certified Public Accountant exam's non-uniform education requirements.

ACKNOWLEDGEMENTS

I would like to thank my thesis advisor, Dr. Mary Anderson, for her dedication to seeing this project through to its finish. Without her willingness to guide and support me in the middle of this study, this project would not be in the completed state it is.

I would also like to thank Dr. Anderson and Dr. Paula Parker for their willingness to allow me to administer my survey to their classes. Thank you both for taking time out of your schedules to coordinate the data collection with me.

I must also thank Paula Mathis, who tirelessly committed her time to advising me and ensuring I had the resources to successfully complete this project. Your care for your students is commendable and unparalleled, and your dedication to your students' prosperity does not go unnoticed. I cannot thank you enough.

The first two years of college are just as challenging as the last two, and I owe much gratitude to Stacey Ready for equipping me with the necessary resources to succeed during the Foundations program within the Honors College.

I would also like to thank Dr. Ellen Weinauer for giving me the opportunity to not only develop my research skills through the Honors College curriculum and its resources, but also for the opportunity to cultivate myself into the young professional I am today. The efforts of the Honors College and its staff have prepared me to begin the next steps in my academic career as I pursue a Master of Professional Accountancy.

TABLE OF CONTENTS

List of Tables.....	viii
I. Introduction.....	1
II. Literature Review.....	3
The 120/150-Hour Rule.....	3
Success on the CPA Exam.....	5
Education.....	6
Women in the Accounting Profession.....	7
III. Methodology.....	8
Participants.....	9
Research Instrument.....	9
Quantitative Measurement.....	10
IV. Results.....	10
V. Discussion.....	13
Question 4.....	13
Question 6.....	13
CPA Exam Education Eligibility – Questions 5, 9, 10.....	15
Question 11.....	18
VI. Conclusion.....	19
References.....	20
Appendices.....	22

LIST OF TABLES

Table 1: Descriptive Statistics of Survey Questions by Gender

Table 2: Survey Questions

Table 3: Survey Responses by Gender

Table 4: Survey Question 4, Chi-Squared Test

Table 5: Survey Question 6, Chi-Squared Test

Table 6: Survey Question 5, Chi-Squared Test

Table 7: Survey Question 9, Chi-Squared Test

Table 8: Survey Question 10, Chi-Squared Test

Table 9: Survey Question 11, Chi-Squared Test

INTRODUCTION

The accounting profession is one of the few professional paths in the United States that requires a licensed certification in order to practice certain elements of the field. In order to practice the attest function, that is, rendering professional opinions on the financial aspects of a company as the result of performing an audit of the company, accountants must have the Certified Public Accountant (hereinafter referred to as CPA) designation. The CPA examination was first established in law in New York State on April 17, 1896 (Flesher, et al., 1996). The earliest administration of the Uniform Certified Public Accountant Examination (hereinafter referred to as CPA Exam) dates back to 1917 when it was officially implemented by the agency which evolved into the American Institute of Certified Public Accountants (hereinafter referred to as AICPA) (Granados, 2016). By 1952 all states had adopted use of the Uniform Certified Public Accountant Examination; that is, the same exam served all the states (Flesher, et al., 1996). In order to take the CPA in the early years, a candidate did not have to meet any educational requirements. Eventually, an educational requirement was instituted in order to *sit* for the exam. The educational requirement in order to take the exam and to obtain licensure, as regulated by each state/territory, focused on a 120-hour requirement. Thus, candidates had to pursue higher education and obtain a bachelor's degree. Passing the exam permitted a candidate to become "certified." Additionally, an experience requirement was also mandated in order to become "licensed." A professional must satisfy both education and experience requirements in order to begin practicing and using the CPA designation.

The new education requirement created the 150-hour rule. Candidates were then charged with additional coursework to meet the new eligibility education requirements. This change became effective in the majority of jurisdictions and in place for the May 2000 examination (Brahmasrene & Whitten, 2001).

As there is no national licensure process, state boards of public accountancy in each of the 50 U.S. states and 4 jurisdictions issue CPA licenses. The examination is the only requirement that is uniform and consistent throughout all of the U.S. jurisdictions, as specific education and experience requirements are determined individually by each of the jurisdictions. The education requirement variation among jurisdictions has given rise to much debate, as more and more states are adopting the 120-hour requirement to *sit* for the examination, while the 150-hour requirement holds as the requirement for *licensure* (AICPA).

As the result of numerous attestation scandals regarding accounting irregularities near the end of the last century and the beginning of the current century, Congress passed the Sarbanes-Oxley Act of 2002. This Act served to require much more regulation and oversight of the attest function of the accounting profession. This policy change resulted in a higher demand for certified public accountants. However, with the implementation of higher education requirements in order to take the exam, research indicates this led to a reduction in the number of candidates sitting for the exam in the early 2000s (Allen & Woodland, 2006). The number of candidates taking the exam has fluctuated annually since that time.

Historically, females have been underrepresented in the accounting profession. Current research continues to report that women remain underrepresented. Moreover, CPA's were generally middle-class white males. Today the CPA workforce is evenly divided by gender for new hires (Catalyst, 2013); however, in public accounting, only about 21% of partners for firms are women (Lee, 2012). Evidence suggests this underrepresentation is due to a possible discouraging effect the 150-hour requirement has had on women (Bierstaker et al., 2005). Additionally, women accountants, on average, earn 38% less than men in equal positions (Georgetown University, 2018). One reason women are paid less than men is because they usually work fewer hours, with women making up 80% of accountants working part-time

(Catalyst, 2013). Pursuing a fifth year of education corresponding to the additional 30 credit hours needed to sit for the exam in some jurisdictions and licensure in all instances may be too costly for women due to their underpaid, unequal salaries (Bierstaker et al., 2005). The perception of a fifth year of education remains as an unnecessary, additional opportunity cost among women (Abels, 2004).

As American society continues to diversify – encouraging growth and equality in all facets of the population – it is important for the accounting profession to echo that progress. The goal of this study is to provide insight into a demographic undervalued in the workforce, along with contributing valuable evidence to the conversation of how the CPA exam’s education requirements affect candidates’ intentions to pursue their CPA certifications.

LITERATURE REVIEW

Brahmasrene and Whitten, in their 2000 study, gave evidence that the passing rates for all four exam parts of first-time candidates, typically reporting near 10%, reduced significantly to approximately 2.23% for the May 2000 exam and 1.76% for the November exam 2000 after the education requirement to take the CPA Exam was increased (Brahmasrene & Whitten, 2001). This began a stream of research concerning the effect of the 150-hour requirement implementation. Little research exists on the different educational hours’ effect on taking the exam versus qualifying for licensure. This section presents the literature used as a basis for determining success on the CPA exam and studies on women in the accounting profession.

The 120/150-Hour Rule

Currently, thirty-nine of the fifty-four U.S. state and jurisdictional boards have adopted the 120/150-hour educational/licensure requirement: 120 hours necessary to sit for the exam and 150 hours for licensure. As the American Institute of Certified Public Accountants (hereinafter referred to as AICPA) states, implementation of the education requirements of the CPA Exam is

for students “to obtain the required body of knowledge and to develop the skills and abilities needed to be successful CPAs” (AICPA, 2017). The AICPA’s purpose does not mention whether their intention of implementing the additional credit hours is meant to increase the passing rate of the exam. Some researchers argue that the adoption of the 120/150-hour rule in some jurisdictions is a signal that those authorities recognize the trade-off between taking an additional 30 hours of coursework in order to sit for the exam versus studying for the exam with undergraduate accounting knowledge (Grant, et al., 2002).

As with most uniform professional and standardized testing, the market place provides preparation materials in the form of unstructured and structured review courses. These are available from numerous suppliers for preparing for the CPA Exam. The trade-offs that researchers, such as Grant, et al. (2002), refer to are examined through factors such as, scholastic aptitude and CPA exam review courses. Both scholastic aptitude and the review courses are found to be more efficient inputs to the exam’s passing rates than additional education to higher education (Grant, et al., 2002). The importance of these studies in recognizing the costs and benefits of the 150-hour rule is also evidence in this research, which focuses primarily on providing evidence to policy makers debating the additional education requirement. This is significant as Allen and Woodland’s 2006 study also supported the new education requirement negatively affects the intentions of students to sit for the CPA exam.

Allen and Woodland (2006) examined the relationship between the number of students graduating in accounting and the number of candidates sitting for the CPA exam. The authors gave evidence of a 36% decrease in the number of candidates taking the exam after the 150-hour requirement implementation. One of the most significant findings in the authors’ study is the 31.5% decrease in candidate pass rates following the increased educational requirement (Allen & Woodland, 2006). This decrease was evidenced in additional studies in 2006 (Carpenter and

Stephenson, 2006). Also, Bierstaker et al. (2005) determined women had a lesser intention than men to pursue the CPA exam and concluded the 150-hour requirement might have a negative impact on the career intentions of women in accounting.

At the current time, as a result of the impact that the 150-hour educational requirement has had on one's ability to *sit* for the CPA Exam, states' boards are exploring changing and/or dichotomizing requirements for certification versus licensure. Allowing a 120-hour requirement to take the exam but awarding licensure only with the 150-hour requirement is one consideration. This change could improve the number of female candidates sitting for the exam. Coe (2016) concluded that students were more likely to sit for the CPA exam if eligible at 120 credit hours as opposed to waiting until 150 credit hours have been completed.

As noted, the CPA Exam's administrators vary in their opinions regarding the education requirement. A study conducted in North and South Dakota examined 125 CPAs, of which 62% were employed in public accounting. The study reported 45.6% of respondents supportive of 150 credit hours as the minimum requirement, while 44.8% were in support of 120 credit hours (Demagalhaes & Wilde, 2013). While the samples' responses were split nearly 50% to 50%, over 95% of the respondents agreed the educational requirements should be uniform across the nation to take the exam. In addition, approximately 88% of respondents agreed the education requirements should be equal to both sit and earn licensure, regardless of the number of hours (i.e., 120 credit hours versus 150 credit hours). While Demagalhaes and Wilde's study (2013) has a limited scope to North and South Dakota, generalization allows insight into the divide amongst professionals in the accounting profession.

Success on the CPA Exam

There is much debate in research findings regarding the various factors determining a candidate's success on the CPA exam. The factors influencing CPA Exam performance include

high school class size and rank, undergraduate grade point average (UGPA), age participating in CPA exam review, and the number of hours spent studying (Ashbaugh & Thompson, 1993; Zook and Bremser, 1982). Brahmasrene and Whitten (2001) suggest just four of eleven variables tested –UGPA, age, related work experience, and gender – significantly influenced a candidate’s likelihood of passing the exam. These authors noted the importance of further research on the gender difference due to possible gender-biased questions on the CPA exam. On the other hand, Walstead and Robson (1997) comment on the inaccuracy of the “biased items” argument in their research on gender differences. They gave evidence that differences remained even when “biased” questions were removed on multiple-choice tests; therefore, they deducted gender differences were not a sole result of gender-biased questions. These authors posited that other factors affecting gender differences on exam success include, but are not limited to cognitive differences, instructional effects, test format, and socialization (Walsted & Robson, 1997).

Education

As previously mentioned, the Brahmasrene and Whitten (2001) study gave evidence of the input factors which improved candidates’ potential for success in passing the CPA exam were undergraduate grade point average (UGPA), age, gender, and work experience. Additionally, a recent study provided evidence that the educational institutions that candidates attended more significantly influenced passing rates than completing a degree of higher education (Haen et al., 2013). The five institutions examined in this study were chosen from two categories. The first included colleges that offer only four-year programs in accounting (i.e., bachelor’s degree), while the second category contains colleges that offer both bachelor’s and master’s degrees programs in accounting. The study also found obtaining education beyond a bachelor’s degree (i.e., 150 hours) was a poor predictor of future exam passing rates (Haen et al., 2013). These factors are significant findings added to the research of the CPA exam’s

educational requirements. Currently, findings seemingly support the position that the 150-hour requirement for licensure does not necessarily evidence enough benefit to outweigh the financial and time costs associated with an additional 30 hours of education.

Women in the Accounting Profession

Bierstaker, et al. (2005) surveyed 600 students concerning intentions of pursuing CPA certification following their accounting education. The author hypothesized the lack of women represented in the public accounting profession could be due to the gender pay gap. Findings gave evidence that a pay gap may not compensate for the fifth year of education required for CPA certification (Bierstaker et al., 2005). However, the 150-hour requirement showed a potentially negative effect on female students, with 38.6% of the female sample intending to pursue the CPA compared to 43.7% of men (Bierstaker et al., 2005).

In addition, Bierstaker et al. (2005) investigated the effects the 150-hour credit requirement for the [CPA] exam might have on the career intentions of women and minorities. The study determined women had a lesser intention than men to pursue the CPA exam and concluded the 150-hour requirement might have a negative impact on the career intentions of women in accounting. This is significant as it reflects the underrepresentation and continued negative impact of women modelled within the accounting profession. The authors recognize the limitation of the study focusing only on the perceptions, rather than the reality, of the potential effect(s) the 150-hour requirement could have on women. Moreover, the study does not consider the effects of candidates now having the ability to sit for the exam without higher education after graduating from a four-year program, as few jurisdictions were adopting the 120/150-hour rule in 2005.

Coe (2016) hypothesized that the expense of preparing for the CPA exam does not have a negative effect on the intention of individuals, particularly women, to sit for the CPA exam. In

keeping with the Theory of Reasoned Action, the attitude people have toward the 150-hour requirement is not negatively affected by their having to pay for additional coursework. The author indicates that further research on the intended behaviour versus actual behaviour of individuals, specifically women, to sit for the exam should be conducted to understand the recent decline in candidates overall and the lack of representation of women within the pool of those candidates.

The objective of this study is to explore the relationship between gender, educational level intentions (i.e., undergraduate and graduate), and intentions to pursue the CPA designation. In addition, it focuses on the effects that the 120/150-hour rule for CPA examination (and certification) will have, or has already had, on women's career intentions. Given the limited, prior research and nature of the changing requirements for accounting certification, it is difficult to determine what the potential impacts on women's career intentions could be. In turn, this would negatively impact the career intentions of female candidates in accounting. On the other hand, the change to the 120/150-hour requirement could improve the number of female candidates sitting for the exam, which is in accordance with Coe's (2016) research. He concluded that students were more likely to sit for the CPA exam if eligible at 120 credit hours as opposed to waiting until 150 credit hours have been completed (Coe, 2016, p. 18). Consequentially, the adjusted requirement to sit for the exam would positively impact women's career intentions in accounting.

METHODOLOGY

This study focuses on the effects of the variation in education requirements for qualifying to sit for the exam on gender and educational level. As of April 2018, the National Association of State Boards of Accountancy (NASBA) reports that 39 of the 55 U.S. jurisdictions have adopted the 120/150-hour requirement for CPA exam eligibility, one of which is Mississippi

(Appendix B). To determine the impact of the 120/150-hour CPA exam requirement, a survey was administered to undergraduate accounting students at the University of Southern Mississippi in April 2018. The impact of this education requirement will be examined through the survey results as a comparison to the intended educational levels and certification intentions of women. Therefore, choosing to evaluate the demographics and opinions of undergraduate accounting students is the most appropriate sample for this study. This will ensure the focus of the group remains on students' *intentions* regarding the 120/150-hour requirement rather than the association with passing rates.

Participants. The goal of this research is to provide insight into the female demographic of accounting, as it is typically undervalued and underrepresented long-term in the workforce. The research aims to contribute valuable discussion and results to the conversation regarding the effect of the CPA exam's education requirements on students' intentions to pursue CPA certifications. Due to the accounting firms recruiting undergraduate students increasingly earlier than tradition, students' career intentions, especially those planning to pursue graduate degrees, are typically determined well before attending any higher education. Therefore, undergraduate accounting students are the main focus of this study. Moreover, the sample contained all genders to enable comparative research among women and all other genders.

Research Instrument. Primary data collection was used in this study. A survey was administered to examine the association between the 120/150-hour requirement and two intentions among undergraduate accounting female students. The first intention regarding the influence of the 120/150-hour requirement on female students to sit for the CPA exam while the other focuses on the intended career path of females in the study. The participants completed the survey at the conclusion of classes in accounting. The survey collected demographic information, along with information regarding the following: participants' awareness of the variance in the

CPA exam education requirements across the states; their intentions for continuing accounting professionally upon graduating with bachelor's degrees; their plans on pursuing higher education; and ultimately, their opinions on the CPA exam's education requirements. Survey is presented in Appendix B.

On completion of drafting the survey, it was submitted and reviewed by the Institutional Review Board (IRB) at the University of Southern Mississippi, as required before collecting any data on human subjects. The data is kept completely anonymous throughout the entire process; therefore, there is virtually no harm potential for students participating in the survey. A notice of consent, anonymity, and voluntary participation was provided to participants to solidify the integrity of this data collection.

Quantitative Measurement. A Chi-squared test is used to analyse the results among the responses. To analyse the relationships between genders, education level intentions, and certification intentions as determined by the survey and demographic variables collected with the survey Pearson's chi-squared analysis is an appropriate statistical method. Comparing significant differences between categorical variables when a small number of samples are investigated is troublesome. As a non-parametric method, with no assumptions being made, Chi-squared analysis alleviates small sample concerns without adjustments. The method is common and useful for count data. To compute the chi-square statistic, the formula $\chi^2 = \sum(\text{Observed} - \text{Expected})^2 / \text{Expected}$, is used, measuring the difference between *expected* counts and *observed* counts. Critical point demonstrating significant differences between the groups for the study is 0.05.

RESULTS

The resulting data set from the survey includes 40 usable responses from two upper-level accounting classes at the University of Southern Mississippi. Of the 40 respondents, 19 (47.5%)

are female and 21 (52.5%) are male. Table 1 presents mean, median, and mode for the eleven informational questions on the survey as answered from 1 to 5 on the Likert Scale. Accordingly, 1 equals Strongly Disagree and 5 equals Strongly Agree.

TABLE 1												
Descriptive Statistics of Survey Questions by Gender												
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	
FEMALE												
N = 19												
MEAN	3.68	3.68	1.58	4.63	4.63	4.16	3.89	4.32	3.16	2.79	3.11	
MEDIAN	4	5	1	5	5	5	4	5	3	3	3	
MODE	5	5	1	5	5	5	5	5	3	3	4	
MALE												
N = 21												
MEAN	3.57	3.81	1.95	4.57	4.33	4.14	3.82	4.24	3.43	2.57	3.29	
MEDIAN	4	4	2	5	5	5	4	4	3	3	3	
MODE	4	5	1	5	5	5	4	5	4	3		

As shown in Table 1, there is very little difference in mean, median, and mode between genders on the eleven survey questions. To aid in interpretation, survey questions are included in Table 2 below.

To further analyse survey responses, Likert scale numbers were converted to Yes/No responses. “Agree” categories were Yes responses; “Disagree” categories were No responses; “Neutral” and “Unable to Rate” categories were Undecided responses. Table 3 provides these conversions by gender.

Table 2												
Survey Questions												
Q1	I plan to continue my education after receiving a baccalaureate degree through attending a graduate program.											
Q2	I plan to pursue <i>either</i> an MBA (Master of Business Administration) or MPA (Master of Accountancy).											
Q3	I plan to pursue a master's degree <i>other than</i> an MBA or MPA.											
Q4	After graduating, I plan to continue in the professional field of accounting as a career.											
Q5	I was aware the education requirements for the CPA Exam vary by state <i>prior</i> to this survey.											
Q6	I plan to sit for the CPA Exam.											
Q7	It is an incentive to me to begin sitting for the CPA Exam <i>while</i> I am pursuing my graduate degree.											
Q8	I am more likely to sit for the CPA Exam in a state that has adopted the 120/150-hour requirement.											
Q9	A fifth year of education (i.e., master's degree) is necessary to <i>sit</i> for the CPA Exam.											
Q10	A fifth year of education (i.e., master's degree) is necessary to <i>pass</i> the CPA Exam.											
Q11	Credit hour requirements should be an examination eligibility constraint.											

Table 3												
Survey Responses by Gender												
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
MALES												
Yes		5	3	13	1	2	2	2	1	7	10	5
No		13	12	0	20	18	14	9	12	7	4	10
Undecided		3	6	8	0	1	5	10	8	7	7	6
Total		21	21	21	21	21	21	21	21	21	21	21
FEMALES												
Yes		5	6	16	1	1	2	4	1	6	7	7
No		12	12	1	18	16	15	11	13	7	4	7
Undecided		2	1	2	0	2	2	4	5	6	8	5
Total		19	19	19	19	19	19	19	19	19	19	19

Chi-squared results are included in the Discussion section below. Following the format of discussing the more relevant questions, the author integrates the Chi-Square results within the discussions.

DISCUSSION

Q4: After graduating, I plan to continue in the professional field of accounting as a career.

For Question 4, survey responses reflect relatively parallel opinions from both male and female participants. Table 3 illustrates the comparison of the two genders' responses. Only two participants reflected positive intentions to continue their careers in the field of accounting after graduating. The two responses were one participant from each gender. This is surprising as the sample was drawn from students majoring in accounting classes. With career options other than public accounting being the assumption from this result, these results indicate that 2% of accounting majors will pursue a career in public accounting. The p-value of .942094 indicates there is no significant difference between male and female responses as shown in Table 4.

Table 4		
Survey Question 4		
Chi-Square Data		
Observed (Expected)		
	Agree	Disagree
Male	1 (1.05)	20 (19.95)
Female	1 (.95)	18 (18.05)
Results		
The chi-square statistic is 0.0053. The <i>p</i> -value is .942094. The result is <i>not</i> significant at $p < .05$.		

Q6: I plan to sit for the CPA Exam.

From Table 3, four participants responded with intentions of planning to sit for the CPA exam; therefore, these results give evidence that of a small percentage of students majoring in accounting that not all plan to sit for the CPA exam. As the CPA certificate is only necessary in

performing the attest function in accounting, a responsibility exclusive to public accountants, there is evidence that a majority of students intend to develop careers in other diverse areas of accounting. The p-value of .542467 indicates there is no significant difference between male and female responses as shown in Table 5.

While the majority of students were not aware of the examination’s education requirements varying by jurisdiction prior to the administration of the survey, 21.1% of females and 9.6% of males agreed that the ability to sit for the CPA exam while pursuing graduate degrees was an incentive (Table 3). An even smaller percentage reported they were more likely to sit for the exam in a state that had adopted the 120/150-hour rule. The participants as a whole had a strongly negative opinion regarding the CPA exam and its education requirements.

Table 5			
Survey Question 6			
Chi-Square Data			
Observed (Expected)			
	Agree	Disagree	Undecided
Male	2 (2.10)	14 (15.22)	5 (3.68)
Female	2 (1.90)	15 (13.78)	2 (3.32)
Results			
The chi-square statistic is 1.2233. The <i>p</i> -value is .542467 The result is <i>not</i> significant at <i>p</i> < .05.			

CPA Exam Educational Eligibility

Q5: I was aware the education requirements for the CPA exam vary by state *prior* to this survey.

Q9: A fifth year of education is necessary to SIT for the CPA Exam.

Q10: A fifth year of education is necessary to PASS the CPA Exam.

Three targeted questions (Questions 5, 9, and 10) were asked of the respondents to evaluate opinions regarding the CPA exam education requirements objectively from their individualistic career intentions, which are recorded in Table 3. These questions considered the viewpoints of students majoring in accounting regardless of their intentions to pursue CPA certification. Of all responses to Q9, 35% respondents do not feel that a fifth year of education is necessary to **sit** for the CPA exam. This breaks down further in that 33.3% of males and 36.8% of females do not feel that a fifth year of accounting education is necessary to sit for the exam. The p-value of .97337 indicates there is no significant difference between male and female responses as shown in Table 7.

Additionally, the responses to Q10 are compelling. For this statement, 20% of the respondents do not feel that a fifth year of education is necessary to **pass** the CPA exam. This breaks down further in that 19.1% of males and 21.1% of females do not feel that a fifth year of accounting education is necessary to pass the exam. What is of relevance in understanding these percentages is that on Q9, 32.5% of the respondents were “Undecided” on the statement; on Q10, 42.9% of respondents were “Undecided” on the statement. Some explanation of these results can be taken from the results in Table 3. The p-value of .779844 indicates there is no significant difference between male and female responses as shown in Table 8.

In consideration of the female to male ratio in this survey, it is *unexpected* the results are split evenly between the two genders because males create a slight majority of the study. It is *expected*, however, that most respondents as a whole would agree the 150-hour education requirement is unnecessary to sit for the exam. This supports Abels' 2004 findings that raise concern about, specifically female, candidates' perceptions regarding the benefit of an additional year of education after receiving a baccalaureate degree.

Interestingly, the respondents had much different opinions on the necessary education requirements to pass the exam versus to sit for the exam. 42.3% of students reported completing 150 hours is necessary to pass the exam, of which 41.2% were female and 58.8 were male (Table 3). It may be assumed approximately 35% of the students do not feel as though they could give an adequate opinion on this question, as their neutral responses reflect a possible lack of understanding of the amount of knowledge required to pass the exam.

It must be reiterated that the AICPA's purpose in implementing the 150-hour education requirement on the CPA exam constraints does not indicate any positive or negative influence in increasing the passing rates (AICPA, 2007). The approximate 20% of students who do not believe 150 hours of education is necessary to pass the exam are consistent with Grant et al.'s (2002) assumption in their research. Grant et al. notes the trade-off between an additional 30 hours' worth of coursework versus studying for the exam with undergraduate accounting knowledge must have been recognized as many jurisdictions began implementing the 120/150-hour rule soon after the AICPA's 150-hour requirement ruling at the turn of the century. With the technology and resources available nearly over 15 years later, it is interesting such few students believe passing the exam is unlikely without 30 additional hours of education.

Table 6 Survey Question 5 Chi-Square Data Observed (Expected)			
	Agree	Disagree	Undecided
Male	2 (1.58)	18 (17.85)	1 (1.58)
Female	1 (1.42)	16 (16.15)	2 (1.42)
Results			
The chi-square statistic is 0.686. The p -value is .709628. The result is <i>not</i> significant at $p < .05$.			

Table 7 Survey Question 9 Chi Square Data Observed (Expected)			
	Agree	Disagree	Undecided
Male	7 (6.82)	7 (7.35)	7 (6.82)
Female	6 (6.18)	7 (6.65)	6 (6.18)
Results			
The chi-square statistic is 0.054. The p -value is .97337. The result is <i>not</i> significant at $p < .05$			

Table 8 Survey Question 10 Chi Square Data Observed (Expected)			
	Agree	Disagree	Undecided
Male	10 (8.93)	4 (4.20)	7 (7.88)
Female	7 (8.07)	4 (3.80)	8 (7.12)
Results			
The chi-square statistic is 0.4973. The p -value is .779844. The result is <i>not</i> significant at $p < .05$.			

Q11: Credit hour requirements should be an examination eligibility constraint.

The final question surveyed among this sample captures the essence of this study as it evaluates the students' opinions on whether or not credit hours should be a CPA examination eligibility constraint. Combined, 42.2% of respondents did not agree that credit hours should be an exam constraint, 41.2% of which were female (Table 3). Nearly 25% of the respondents gave neutral responses that possibly represents an acknowledgement of their ignorance to the importance or unimportance of credit hours as an examination eligibility constraint. Although the final three questions were to be answered objectively from the individuals' career intentions, neutral responses may also reflect the majority of students in this survey who are not considering pursuing CPA credentials (Table 4). The p-value of .651879 indicates there is no significant difference between male and female responses as shown in Table 9.

Table 9			
Survey Question 11			
Chi Square Data			
Observed (Expected)			
	Agree	Disagree	Undecided
Male	5 (6.30)	10 (8.93)	6 (5.78)
Female	7 (5.70)	7 (8.07)	5 (5.22)
Results			
The chi-square statistic is 0.8558. The <i>p</i> -value is .651879. The result is <i>not</i> significant at <i>p</i> < .05.			

CONCLUSION

Many candidates preparing for the CPA exam are part of a generation that has never experienced life without technology in every facet of their lives. Technology now provides opportunities for all candidates, especially women, to have access to more readily available information regarding careers in accounting that could affect the results much differently compared to the 2005 study. Furthermore, technology allows for more cost-efficient review sessions and materials and the ability to connect with CPA candidates from around the world. This factor, among other qualities of the millennial generation, will conclude results accurate for this technology age, but less accurately comparable to previous studies.

This study is potentially limited due to the sample size of the 40 undergraduate respondents. In addition, as young undergraduates their knowledge regarding the CPA exam, the implications of certification within the accounting profession, and the respondents' uncertainty in their intentions after graduating with bachelor's degrees are not fully formed. Many of the individuals in this study are second and third year accounting students who may not have considered the next steps in their careers until this survey was administered. Another limitation to this study will be the inability to correlate the results to the overall population of women. The limited scope of this study results in a data set that will possibly indirectly represent the consensus of the general population.

REFERENCES

- Abels, P. B. (2004). The 150-Hour Requirement and Its Effect on Student Enrollment. *The CPA Journal*, 75(2), 56-58.
- Allen, A., & Woodland, A. M. (2006). The 150-Hour Requirement and the Number of CPA Exam Candidates, Pass Rates, and the Number Passing. *Issues in Accounting Education*, 21(3), 173-193.
- American Institute of Certified Public Accountants (AICPA). The Uniform CPA Examination: Purpose and Structure. Available at:
<http://www.aicpa.org/becomeacpa/cpaexam/examoverview/purposeandstructure/Pages/default.aspx>
- American Institute of Certified Public Accountants (AICPA). (2017). 150-Hour Requirement for Obtaining a CPA License. Available at:
<http://www.aicpa.org/becomeacpa/licensure/requirements/Pages/default.aspx>
- Ashbaugh, D. L., & Thompson, A. F. (1993). Factors Distinguishing Exceptional Performance on the Uniform CPA Exam. *Journal of Education for Business*, 68(6), 334–337.
- Bierstaker, J. L., Howe, M. A., & Seol, I. (2005). The Effects of the 150-Credit-Hour Requirement for the Certified Public Accountant (CPA) Exam on the Career Intentions of Women and Minorities. *Journal of Education for Business*, 81(2), 99-104.
- Brahmasrene, T., & Whitten, D. (2001). Assessing Success on the Uniform CPA Exam: A Logit Approach. *Journal of Education for Business*, 77(1), 45-50.
- Catalyst. (2013). Women in Accounting. Retrieved on June 18, 2018 from
<http://www.catalyst.org/knowledge/women-accounting>
- Carpenter, C. G., & Stephenson, E. F. (2006). The 150-Hour Rule as a Barrier to Entering Public Accountancy. *Journal of Labor Research*, 27(1), 115-126.

- Coe, M. (2016). Factors that Influence a Student's Intention to Sit for the CPA Exam. *The CPA Journal*, 86(8), 18-20.
- Demagalhaes, R., & Wilde, H. (2013). Practitioners' Views of the Education and Experience Requirements for CPA Licensure: A Survey Study of CPAs in the Dakotas. *Journal of Accounting and Finance*, 13(6), 168-177.
- Flesher, D.L., Previts, G.J. & Flesher, T.K. (1996). Profiling the New Industrial Professionals: The First CPAs of 1896–97. *Business & Economic History*, 25.
- Georgetown University Center on Education and the Workforce. (2018). Women Can't Win: Despite Making Educational Gains and Pursuing High-Wage Majors, Women Still Earn Less than Men. *McCourt School of Public Policy Center on Education and the Workforce*, 57.
- Granados, A. (2016). What It Was Like to Take the 1917 CPA Exam. Available at: <https://www.journalofaccountancy.com/newsletters/2016/jun/1917-cpa-exam.html>
- Grant, C., Ciccotello, C. S., & Dickie, M. (2002). Barriers to Professional Entry: How Effective Is the 150-Hour Rule? *Journal of Accounting and Public Policy*, 21(1), 71-93.
- Haen, J., Vandenberg, A., Janes, L., & Conlon, K. (2013). Does the Path to Completion of 150 Credit Hours Affect CPA Exam Pass Rates? *The Accounting Educators' Journal*, 23, 113-126.
- Lee, D. (2012). When will the profession change? *Accounting Today*.26 (2).
- Walsted, W. B., & Robson, D. (1997). Differential item functioning and male–female differences on multiple-choice tests in economics. *Journal of Economic Education*, 28(2), 155–172.
- Zook, D. R., & Bremser, A. G. (1982, April 24). A correlation between the characteristics of candidates and performance on the Uniform CPA Examination. *Delta Pi Epsilon Journal*, April, 45–52.

APPENDIX

APPENDIX A

IRB Letter of Approval



INSTITUTIONAL REVIEW BOARD

118 College Drive #5147 | Hattiesburg, MS 39406-0001

Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 18050101

PROJECT TITLE: The Impact of the 120/150 Rule on Candidates to Sit for the Uniform Certified Public Accountant Examination (CPA Exam): A Study on Women

PROJECT TYPE: Honor's Thesis Project

RESEARCHER(S): Aubrey Sanders

COLLEGE/DIVISION: College of Business

DEPARTMENT: Accounting

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Expedited Review Approval

PERIOD OF APPROVAL: 05/01/2018 to 04/30/2019

Lawrence A. Hosman, Ph.D.

Institutional Review Board

APPENDIX B

Survey Information and Consent

This is a study designed for individuals who are 18 and older. If you are in fact not yet 18 years or older, please do not participate in this survey.

The following survey is designed to aid the researcher's understanding of you and your career plans after the undergraduate program. The purpose of the survey is to understand your attitudes regarding the Uniform Certified Public Accounting Examination and its recent education eligibility revisions. Please answer each question honestly and to the best of your ability.

This is a voluntary survey; therefore, you may decide to withdraw at any time.

The survey you are about to participate in has received approval from the Institutional Review Board (IRB) of the Office of Research Integrity at The University of Southern Mississippi and is in compliance with standards for the protection of human research subjects. If you wish to contact the IRB, you may do so by phone at (601) 266-5997 or by e-mail at IRB@usm.edu.

Any further questions regarding the survey can be answered through contacting Aubrey Sanders, Primary Researcher, at aubrey.sanders@usm.edu or Dr. Mary Anderson, Honors Thesis Advisor, at mary.anderson@usm.edu.

NOTICE: Your consent is given through your answering the following survey. Your responses are and will remain strictly anonymous and will be kept highly secure. This study requires summarized data; therefore, no individual responder can be identified.

Your participation is greatly appreciated.

Background Information

The American Institute of Certified Public Accountants (AICPA) requires the completion of 150-credit hours (i.e., graduate degree) to earn a Certified Public Accountant (CPA) license; however, some of the 55 U.S. jurisdictions have adopted the 120/150-hour requirement. This education requirement allows CPA candidates to *sit* for the Uniform Certified Public Accountant Examination (CPA Exam) upon the completion of 120-credit hours (i.e., an undergraduate degree) but still requires 150-hours to be completed to qualify for a CPA *license*.

The states that have **NOT** adopted the 120/150-credit hour requirement and only allow candidates to sit for the exam after completing 150-hours are the following: Illinois, Indiana, Kansas, Missouri, Nebraska, Nevada, North Dakota, Ohio, Oklahoma, Oregon, Puerto Rico, South Dakota, Texas, Washington, and Wyoming (as of April 2018).

Source: National Association of State Boards of Accountancy (NASBA).

Please rate the statements below on the following scale:

1 – Strongly Disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly Agree

Q1: I plan to continue my education after receiving a baccalaureate degree through attending a graduate program.	1	2	3	4	5	Unable to Rate
Q2: I plan to pursue <i>either</i> an MBA (Master of Business Administration) or MPA (Master of Professional Accountancy).	1	2	3	4	5	Unable to Rate
Q3: I plan to pursue a master's degree <i>other than</i> an MBA (Master of Business Administration) or MPA (Master of Professional Accountancy).	1	2	3	4	5	Unable to Rate
Q4: After graduating, I plan to continue in the professional field of accounting as a career.	1	2	3	4	5	Unable to Rate
Q5: I was aware the education requirements for the CPA exam vary by state <i>prior</i> to this survey.	1	2	3	4	5	Unable to Rate
Q6: I plan to sit for the CPA exam.	1	2	3	4	5	Unable to Rate
Q7: It is an incentive to me to begin sitting for the CPA exam <i>while</i> I am pursuing my graduate degree.	1	2	3	4	5	Unable to Rate
Q8: I am more likely to sit for the CPA exam in a state that has adopted the 120/150-hour requirement.	1	2	3	4	5	Unable to Rate
Q9: A fifth year of education (i.e., master's degree) is necessary to <i>sit</i> for the CPA exam.	1	2	3	4	5	Unable to Rate
Q10: A fifth year of education (i.e., master's degree) is necessary to <i>pass</i> the CPA exam.	1	2	3	4	5	Unable to Rate
Q11: Credit hour requirements should be an examination eligibility constraint.	1	2	3	4	5	Unable to Rate

Q12: Please indicate your gender:

- Male
- Female
- Other _____

By completing this form, I am verifying I am over 18 and consent to participation in the survey.

Thank you for your participation.

APPENDIX C

The Uniform Certified Public Accounting (CPA) Examination Education and Licensure Eligibility Requirements by State, as of April 2018					
U.S. Jurisdiction	Hours Required To Sit	Hours Required For Licensure	U.S. Jurisdiction	Hours Required To Sit	Hours Required For Licensure
Alabama	120	150	Nebraska	150	150
Alaska	120	150	Nevada	150	150
Arizona	120	150	New Hampshire	120	150
Arkansas	120	150	New Jersey	120	150
California	120	150	New Mexico	120	150
Colorado	120	150	New York	120	150
Connecticut	120	150	North Carolina	120	150
Delaware	120	150	North Dakota	150	150
District of Columbia	120	150	N. Mariana Islands	<i>Not accepting applicants</i>	
Florida	120	150	Ohio	150	150
Georgia	120	150	Oklahoma	150	150
Guam	120	150	Oregon	150	150
Hawaii	120	150	Pennsylvania	120	150
Idaho	120	150	Puerto Rico	150	150
Illinois	150	150	Rhode Island	120	150
Indiana	150	150	South Carolina	120	150
Iowa	120	150	South Dakota	150	150
Kansas	150	150	Tennessee	120	150
Kentucky	120	150	Texas	150	150
Louisiana	120	150	Utah	120	150
Maine	120	150	Vermont	120	150
Maryland	120	150	Virgin Islands	120	150
Massachusetts	120	150	Virginia	120	150
Michigan	120	150	Washington	150	150
Minnesota	120	150	West Virginia	120	150
Mississippi	120	150	Wisconsin	120	150
Missouri	150	150	Wyoming	150	150
Montana	120	150			

Source: National Association of State Boards of Accountancy (www.nasba.org)