

Does Timing Impact Candidate Success on the CPA Exam?

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The CPA license is generally agreed to be a primary factor for a successful career in public accounting. Accounting educators are constantly looking for methods to increase their students' success rates on the CPA Exam. The current study examined whether first-time candidates taking the CPA Exam within one year of graduation from college achieved comparable results as with first-time candidates taking the CPA Exam more than one year after graduation. Results show that first-time CPA Exam candidates who took the CPA Exam within one year of graduation achieved higher overall pass rates and higher average exam scores than first-time CPA Exam candidates who took the exam more than one year after graduation.

INTRODUCTION

The Certified Public Accountant (CPA) designation is one of the most recognized professional credentials in business. The CPA license is generally agreed to be a primary factor for a successful career in public accounting. In the United States, a CPA is licensed by a state board of accountancy, with each state having their own licensing requirements. To become a licensed CPA, candidates must first pass the Uniform Certified Public Accountant Examination (CPA Exam). Public accounting firms often recruit for entry level positions that require students to be CPA Exam eligible upon graduation. Colleges and universities often publicize high pass rates on the CPA Exam as evidence of having a quality accounting program and are often used to attract prospective students.

Accounting educators are constantly looking for methods to increase their students' success rates on the CPA Exam. Curriculum decisions in accounting programs are often made with a focus on the CPA Exam. Numerous research studies have examined CPA Exam success rates and attempted to identify factors that increase CPA Exam performance. Prior studies have examined the effect upon CPA Exam scores of several variables, such as whether students obtained a graduate degree, whether students were engaged in a CPA review course, various faculty-specific characteristics, and various university characteristics. This study seeks to add to that literature by examining whether the time frame in which students sit for the CPA Exam has an impact on their success.

Using the CPA Exam as a post-curriculum assessment, the current study examined whether first-time candidates taking the CPA Exam within one year of graduation from college achieved comparable results as with first-time candidates taking the CPA Exam more than one year after graduation. Results show that first-time CPA Exam candidates who took the CPA Exam within one year of graduation achieved higher

overall pass rates and higher average exam scores than first-time CPA Exam candidates who took the exam more than one year after graduation. These results suggest that taking the CPA Exam as early as possible after college graduation can increase a candidate's success rate. Accounting educators can play a significant role by encouraging students to take the CPA Exam as soon as possible and by working with them to develop a plan during their undergraduate program for taking the CPA Exam, preferably a plan that encourages students to sit for the CPA Exam during their graduate accounting program.

BACKGROUND AND LITERATURE REVIEW

The CPA Exam is developed, maintained and scored by the American Institute of Certified Public Accountants (AICPA). The CPA Exam is administered at Prometric test centers in partnership with the National Association of State Boards of Accountancy (NASBA). The CPA Exam consists of four sections: Auditing and Attestation (AUD), Business Environment and Concepts (BEC), Financial Accounting and Reporting (FAR) and Regulation (REG). Candidates must pass all four sections within 18 months, earning a minimum score of 75 on each section. After passing all four sections of the CPA Exam, individuals must meet the work experience requirement determined by the licensing state board and the 150 credit hours of education requirement. Currently, the U.S. Virgin Islands is the only U.S. jurisdiction that does not require at least 150 credit hours of education for licensure (AICPA, 2018).

CPA Exam performance is often used as a post-curriculum assessment tool for accounting programs. Marts et al. (1988) conducted one of the first studies that used the CPA Exam as a post-curriculum assessment of the efficacy of accounting programs. Using CPA Exam results, Marts et al. (1988) compared candidates from AACSB-accredited accounting programs, candidates from non-AACSB accredited programs, and candidates from programs that were AACSB-accredited in business only. Many factors impact the success of candidates on the CPA Exam. In recent years, numerous research studies have attempted to identify quantitative or qualitative factors that lead to increased CPA Exam performance. The following paragraphs review some of these studies.

Bline et al. (2016) examined whether accounting faculty characteristics impacted CPA Exam performance. They investigated a number of faculty-specific factors to determine their impact on CPA Exam performance. Bline et al. (2016) investigated the following factors: (1) whether the research and teaching specializations of accounting program faculty influence CPA Exam performance, (2) the relationship between candidate performance and the research productivity of a program's faculty, and (3) whether candidate CPA Exam performance improves when an accounting program has a higher percentage of CPA-certified instructors as members of its faculty. Their findings suggest that a significant positive relationship exists between faculty specialization and candidate performance across all four sections of the examination and that a significant and positive relationship exists between candidate performance and both faculty research productivity and faculty CPA certification status. They concluded that, to the extent that a school wishes to boost the performance of its students on the CPA Exam, they should recruit CPA-certified faculty with teaching interests related to content directly tested on the CPA Exam and increase resources allocated to faculty research, since research productivity also appears to positively influence candidate scores.

Menk et al. (2017) investigated whether candidates who have completed a graduate degree to satisfy the 150 credit hours of education licensing requirement perform better on the CPA Exam compared with candidates who only completed an undergraduate degree. They found that both the average pass rates and average scores on the CPA Exam were significantly higher for candidates who completed a graduate degree. Their study also replicated the results of prior studies in that the type of accreditation of school attended and school selectivity also had an effect on exam performance.

Gaynor and Askew (2017) conducted the CPA Candidate Success Research Project in 2015 with the ultimate goal of finding ways to help increase CPA Exam sit and pass rates. Their study focused on identifying best practices that accounting programs employ to help their students achieve success on the CPA Exam. Their results pointed to three particularly important best practices for schools that wish to improve their students' exam pass rates: (1) offer CPA review classes on campus, (2) create a study room

on campus and, if possible, a practice testing computer lab, and (3) designate a faculty member to be the academic champion for the CPA Exam. Gaynor and Askew (2017) believed that student success on the CPA Exam could easily be replicated at other schools through the adoption of these procedures.

Eames et al. (2018) researched whether an accelerated post-graduate accounting certificate program can provide an accounting education equivalent (in terms of CPA Exam performance) to that of a traditional undergraduate accounting student. Their research compared two accelerated accounting certificate programs with a traditional program which shares the same or similar instructors, materials, course coverage, time in the classroom, class sizes, and pedagogy. Their results found no differences between the accelerated and traditional program alumni in ultimate pass rates and the number of attempts required to pass. Eames et al. (2018) did find that accounting grade point average (GPA) is positively associated with passing the CPA Exam and inversely associated with the number of attempts and time required to pass the exam. They concluded that accounting GPA is the dominant indicator of CPA Exam success and found little significance for the other explanatory variables tested. They also noted that the availability of an employer bonus for passing on a timely basis and public accounting experience are associated with attempting the exam, but not with passing the exam, passing in fewer attempts, or passing sooner after graduation.

Ugrin and Honn (2018) examined whether engagement and success in advanced placement (AP) courses during high school is associated with CPA Exam performance. Their results indicated that high school students who engaged in advanced placement courses and passed related exams experienced relatively greater success on the CPA Exam compared to students who did not take or pass AP courses in high school. They also noted that certain AP courses, those that focus on higher-order thinking skills, have the highest correspondence with CPA Exam success. Ugrin and Honn (2018) concluded that the results from their analysis may help college recruiters identify high school students who have taken particular AP courses as the most likely to perform well in accounting curricula and ultimately on the CPA Exam.

Shough et al. (2018) researched the curricula of AACSB-accredited Master of Accounting (MACC) programs and their impact on CPA Exam passage rates. Their exploratory study examined (a) commonalities and differences among MACC program curricula, (b) relationships between university resource levels and CPA Exam pass rates, and (c) whether programs with a flexible curriculum report higher CPA Exam pass rates. Their results indicated that higher resource levels are correlated with better CPA Exam performance and that for high-resource and low-resource (but not medium-resource) schools, greater curriculum leeway in elective customization is correlated with better CPA Exam performance.

Nagle et al. (2018) examined the curricular path to 150 credit hours and institutional variables, including type of accreditation, admissions selectivity, accounting faculty credentials, and type of institution (private or public), that may impact performance on the CPA Exam. Their results indicated that the completion of a graduate degree was significantly associated with higher CPA Exam pass rates. Nagle et al. (2018) also concluded that institutional variables including accreditation type, admissions selectivity, and the percentage of accounting faculty holding a CPA license were significant. However, they concluded that other institutional variables including the percentage of accounting faculty holding a doctorate degree, research ranking, and institution type were not significant.

The purpose of the Conteh and Oke (2019) survey study was to examine the pass rates of CPA Exams from 2013 – 2017 and to suggest a redesign of the accounting curriculum. Their study examined the impact of requiring 150 credit hours of education, increasing intermediate accounting courses to at least eight credit hours, as well as having auditing and advanced accounting to each have six credit hours. In addition, their study examined the inclusion of governmental accounting, regulations, and business environment and concepts as part of the accounting curriculum. Conteh and Oke (2019) concluded that intermediate accounting course credits should be increased to at least eight credit hours and that undergraduate auditing should be increased from three to six credit hours.

Rau et al. (2019) analyzed 2013 – 2016 CPA Exam performance data to determine whether the path students take to amass the required 150 credit hours of education or the credentials of the accounting faculty who teach them are correlated with CPA Exam performance. Their research findings concluded

that graduate degree holders significantly outperformed bachelor's degree holders on the CPA Exam. While their study did not investigate specific graduate curricula and therefore cannot comment on specific courses that may contribute to the enhanced pass rates, they noted it is clear that exam candidates benefit from additional accounting coursework. In addition, they also concluded that the percentage of accounting faculty with a CPA and the percentage of accounting faculty with a doctorate degree were both significantly associated with CPA Exam performance. Rau et al. (2019) focused on pass rate because the main goal of candidates is to pass the exam; however, their results were similar when using an accounting program's average exam score as the dependent variable.

RESEARCH METHODOLOGY AND RESULTS

This research study used NASBA data for the CPA Exam from 2017, which was the most recent year that first-time testing events within one year of graduation were reported separately. NASBA began gathering data on CPA Examination candidates in 1982 and has published reports on performance and selected characteristics since 1985. NASBA offers these reports through the voluntary participation of candidates and their individual State Boards of Accountancy, which provide data, and the cooperation of the AICPA, which prepares and scores the CPA Exam.

Data were collected by institution for all first-time testing events and for first-time testing events within one year of graduation (Appendix B-1 and Appendix C-1 from the 2017 uniform CPA Examination candidate performance report). Data for each institution included both undergraduate and advanced degrees. Calculations were performed to remove first-time testing events within one year of graduation from all first-time testing events, to create the category of first-time testing events more than one year after graduation. The overall pass rate and the average score were collected for each available institution that contained data in both categories and were used as the dependent variables in this study. The final sample included a total of 586 institutions that had observations for first-time testing events and for first-time testing events within one year of graduation. The final sample included a total of 29,250 first-time candidates taking 61,237 sections for the first time more than one year after college graduation and 19,509 first-time candidates taking 35,389 sections for the first time within one year of college graduation.

Using t-tests, this study compared CPA Exam results on overall pass rates and average scores for first-time candidates taking an exam section within one year of graduation to results of first-time candidates taking an exam section more than one year after graduation. See Table 1 for results. For first-time candidates taking an exam section for the first time within one year of graduation, the overall pass rate was 54.1%, and the average score for those candidates was 72.2. For first-time candidates taking an exam section for the first time more than one year after graduation, the overall pass rate was 47.4%, and the average score for those candidates was 69.2. Results for both dependent variables are statistically significant at $p\text{-value} < 0.0001$. The performance by exam candidates waiting more than year after graduation to attempt an exam section for the first time was significantly lower than the performance of exam candidates that attempted an exam section within one year of graduation.

TABLE 1
CPA EXAM RESULTS FOR FIRST-TIME CANDIDATES TAKING THE EXAM WITHIN 1
YEAR OF GRADUATION COMPARED TO FIRST-TIME CANDIDATES TAKING
THE EXAM MORE THAN 1 YEAR AFTER GRADUATION

Category	Within 1 year of graduation	MORE THAN 1 YEAR AFTER GRADUATION
Average Score	72.2	69.2
Pass Rate	54.1%	47.4%
Number of Schools	586	586
Number of Candidates	19,509	29,250
Number of Sections	35,389	61,237
P-value of t-test on Average Score	< 0.0001	< 0.0001
P-value of t-test on Pass Rate	< 0.0001	< 0.0001
Data collected from NASBA 2017 CPA Examination Candidate Performance Book.		

CONCLUSIONS AND COMMENTS

For many accounting programs, success by their students on the CPA Exam is publicized as proof of having a high-quality program. Researchers are continually looking for factors that contribute to candidate success on the CPA Exam. Prior research has shown that numerous factors contribute to success, including: (1) colleges and universities with doctoral and/or CPA-certified accounting faculty, (2) accounting faculty research productivity, (3) candidates with graduate degrees compared to candidates with undergraduate degrees, (4) higher undergraduate accounting grade point average, (5) type of school accreditation, (6) the undergraduate and graduate accounting curriculum provided by colleges and universities, (7) AP courses taken by high-school students, and (8) CPA Exam review courses provided on campus. One important element not mentioned in recent research is time. Results from the current study suggest that the time frame that a candidate chooses to sit for the CPA Exam is also an important factor in determining success.

Results from this research study indicate that candidates who choose to take the CPA Exam within one year of graduation are significantly more successful than candidates who wait more than one year after graduation. Accounting educators can play a key role in helping students develop a plan for completing the CPA Exam earlier rather than later. Undergraduate accounting curricula can be adjusted to focus on topics heavily tested on the CPA Exam, specifically including a course to inform students early in the academic process about the accounting profession and the CPA licensing process. Accounting graduate programs can be geared towards successful completion of the CPA Exam, with CPA review courses included in the curriculum, or classes developed for each section on the CPA Exam. Undergraduate and graduate programs should work together to give students the best chance at successfully completing the CPA Exam as soon as possible. Preferably, accounting educators should work with students to develop a plan to successfully complete the CPA Exam during their graduate program. Results indicate that success rates are improved for students taking the CPA Exam within one year of graduation, as opposed to taking the exam more than one year later, probably while maintaining full-time employment as well.

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