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A Longitudinal Analysis of Changes in Accounting Curriculum Requirements Since the Perry Commission Report

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A LONGITUDINAL ANALYSIS OF CHANGES IN ACCOUNTING CURRICULUM REQUIREMENTS SINCE THE PERRY COMMISSION REPORT

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ABSTRACT

This dissertation develops a consistent structure that documents the state of undergraduate and graduate accounting education in the United States and how it has changed from the 1960s to the present. It includes a literature review that summarizes major developments affecting accounting education to provide a historical context relevant to current efforts to accomplish educational change. The analysis identifies patterns in educational requirements and compiles information that may instruct educational policy discussions. It considers the recommendations of the Beamer Committee, policy statements of the AICPA, and the influences of accounting accreditation and the move to 150-hour educational requirements. In combination, these two influences provide strong impetus for the documented changes that have been studied. An increase in the availability of professional accounting graduate programs and broad consistency among program requirements are documented. Future prescriptive or diagnostic efforts can utilize the solid foundation developed in this research.

In addition, analysis of faculty characteristics reveals decreases in proportions of faculty members at doctoral-granting institutions with professional certifications or with tenure-track appointments. The analysis identifies potentially productive areas for future consideration of causes and implications of the observed differences in faculty characteristics between types of institutions and over time.

DEDICATION

This dissertation is dedicated to my father and mother, Homer A. Black and Clara O. Black, for their inspiration and support and for the example they set for me to follow, and to my wife and best friend, Diane W. Black, without whom this dissertation would not have been possible or desirable.

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CHAPTER 1

INTRODUCTION AND OVERVIEW

Accounting education is faced with ongoing pressures to change in order to address the needs of students, employers, and the public for improvements in financial information quality, timeliness, and understandability. Over the past 60 years, numerous studies and reports have recommended changes in accounting education, and the interest in change continues even today. Recently, the Pathways Commission, jointly sponsored by the American Accounting Association (AAA) and the American Institute of Certified Public Accountants (AICPA), was formed to study possible future paths of higher education for those seeking entry into the accounting profession. According to the AAA and AICPA,

> The importance of public, private, governmental, and not-for-profit accounting information to the functioning of the economy cannot be underestimated. Broadly defined, the accounting profession produces, analyzes, interprets and prepares reports about financial and operational information, including assurance on a subset of that information. Stakeholders throughout the economy base critical decisions on information provided by the accounting profession (Commission on Accounting Higher Education 2010).

Numerous other commissions and institutions have identified needed changes in accounting education over an extended period of time (Previts and Merino 1998), but the recommendations of those bodies have not been uniformly accepted and implemented. Change is frequently presented as a desirable social goal, but lasting change is difficult to achieve unless one understands how the processes of change have affected relevant behavior in the past.

Moreover, when seeking change it is important to be able to measure progress, and measurement requires the establishment of a starting point.

Society and the business environment have obviously changed since the 1950s. The maturation of the "Baby Boom" generation leading to first dramatically expanding the demand for college education and then requiring college education to achieve positions of power in business, the dramatically increased participation of women in the work force leading to changes in work schedules and career paths, enhanced technologies removing the need to wait for a reply or do routine calculations mentally, and increasing globalization of commerce are just a few examples of the many substantial changes that have occurred since the Perry Report, a 1956 study on standards of education and experience for Certified Public Accountants organized by the predecessor associations of the AICPA and NASBA. Demographic and cultural changes clearly affect the educational environment, but their impacts on the accounting curriculum are indirect and not susceptible to measurement. Explanation of demographic shifts and changes in the culture of the United States are outside the scope of this dissertation. Similarly, pedagogical innovations such as distance education, online learning and research tools, changes in class format (e.g., lecture to seminar, or increased use of laboratory instruction), and the like have changed the classroom environment, but those changes in course delivery are also outside the scope of this dissertation. The analysis in this dissertation is focused on intentional change in the accounting curriculum at a summary level, and attempts to relate the changes that have occurred to the factors driving the change.

It has long been recognized that accounting curricula are largely focused on preparing students to take the CPA examination, although most accounting graduates do not enter public

accounting (e.g., Moore, Mahler and Ashton, 2011). In an address to the National Association of Cost Accountants in 1948, Thomas Budd stated the issue as follows:

> All accountants are not certified public accountants and many do not aspire to be such. Many accountants are engaged in the industrial field and many practice public accounting without the official designation. But because accounting curricula are aimed toward the passing of the examination, the requirements for the degree dominate the area of instruction. This leads to the important conclusion that a curriculum that has as its goal a particular examination or set of examinations tends to become restricted in its scope (Budd 1948)

This research is a study of the changes in accounting degree requirements in the United States from the 1950s to the present. It provides an empirical analysis of changes in accounting education since the period when a college degree became a requirement for the CPA certificate. More specifically it begins with the Perry Report (1956) and continues to the period of the formation of the Pathways Commission (2010). These two activities or events provide boundaries for the study. Informed by Hatfield's defense of bookkeeping (1924) and Zeff's 1989 discussion of the merits of accounting education, the research assumes that accounting does belong in the university curriculum, and that an investigation of the history and current state of the accounting curriculum is productive. The initial premise is based upon the observation that the accounting curriculum has changed over this period. The research questions are designed to identify, examine and explore factors that may explain some of those changes in order to improve our understanding of how change occurs in educational requirements.

There have been a number of analyses and reports recommending changes in the accounting curriculum, but the actions taken in response to those recommendations have not been analyzed over an extended time period. The central question to be addressed is: Has the accounting education system changed since the 1950s, and has that change been consistent among institutions? Related questions include the impact of organizational structure and

institutional focus on the pace of curriculum change, and the effects of environmental factors on accounting curricula. The research will trace the relationships of changes in accounting curricula to social, business, and environmental factors relevant to accounting and identify patterns that provide insight into the development of accounting education. The factors addressed in this dissertation include: recommendations for change in accounting curricula, enactment of legislation requiring 150 hours of education for licensure as a CPA, separate accreditation of accounting programs, establishment of graduate accounting programs, and movement towards separate schools of accountancy. Institutional characteristics are also considered, including research orientation and mission, organizational structure, faculty size and faculty credentials. Since curriculum changes typically take a long time for implementation, examining an extended time period should help in identifying relevant patterns of change. While the academic literature includes a number of articles describing the accounting curriculum at selected points in time (for example, Allen 1927, Briggs 1930, Noble 1950, Brown and Balke 1983, Hermanson and Carcello 1989, Siegel, Sorensen, Klammer and Richtermeyer 2010a) or within a single institution (Carr and Mathews 2004), there has been no comprehensive analysis tracing changes in accounting curricula by institution over an extended period of time. Since there are some who contend that little has changed in accounting education since the Bedford Report (Siegel, Sorensen, Klammer, and Richtermeyer, 2010b), the analysis in this dissertation will provide insights regarding whether there have been changes in accounting curricula.

The initial research question addressed is "**What are the factors that affect changes in accounting curricula?**"

After identifying or confirming the factors that appear to be associated with changes in accounting curricula, the next research question is "**Which factors have greater impacts on the**

curriculum?" In order to evaluate the impact on the curriculum, the research design must consider both how can those impacts be measured and, after measurement, how can those impacts be evaluated and associated with the magnitude of change.

The final research question addressed is "**What are the implications for change in accounting education?**", based upon the findings in the previous two research questions.

The research approach develops profiles of the requirements to attain a degree with a major in Accounting from the institutions included in the study, and analyzes the changes in those profiles over time. Profiles are compared between institutions as well, and analyzed to find patterns in relationships and changes. The profiles are developed by conducting an empirical analysis of college accounting curricula as reflected in the published catalogues of the selected institutions. During the period under review, structural changes in accounting education have motivated a shift towards postbaccalaureate education as a requirement for entering the public accounting profession, although attaining an undergraduate degree in accounting is still considered adequate educational preparation for many accounting positions. Accordingly the research will consider both undergraduate and master's-level accounting curricula. Regulatory changes in the accounting environment, including changes in the requirements to sit for the CPA examination as well as the advent of accounting-specific accreditation of college programs, constitute other significant factors that are examined in the research. The research focuses on institutions within the United States with accounting accreditation from the AACSB, and will not include institutions accredited by the Accreditation Council for Business Schools and Programs ("ACBSP") or other accrediting bodies.

Another factor to consider is the shift to doctorally-qualified faculty in accounting programs, moving from an environment in the 1950s and 1960s where the combination of a

Master's degree and CPA certification was considered adequate qualification to teach accounting (Langenderfer and Weinwurm 1956) to the current environment where a PhD is widely required for tenure-track faculty appointments (Anderson and Previts 1984). Fogarty and Carduff (2011) credit the publication of the seminal work by Ball and Brown in 1968 with ushering in the modern era of the accounting academy, at least with respect to the direction of published research in the academic literature after that event. The research in this dissertation also investigates whether the shift to doctorally-qualified faculty has resulted in a reduction of the proportion of faculty members with professional certifications, and attempts to identify major impacts on the curriculum that may have resulted from that shift.

Methodology

The research in this dissertation examines data on the courses required to attain bachelor's or master's degrees (with a major in Accounting) at a selected set of institutions with AACSB accounting accreditation, examining those requirements in the 1965-66 academic year and every 10 years thereafter until the present day. Information on a subset of selected institutions was collected for the 1950s to confirm the Perry Commission description of the typical undergraduate accounting program during that time, but limitations on the availability of data preclude comprehensive analysis for the 1950s. Profiles of accounting programs were developed and analyzed from the data available for the 1960s and subsequent periods. The data was collected from course catalogues published by the subject institutions. In addition, data on faculty composition and credentials was collected for the 1975-76 academic year and every 10 years thereafter until the present day. The information collected for each institution was summarized into a profile for the subject institution over time, permitting longitudinal analysis within institutions.

Institutions were selected from states with a sufficient number of eligible accounting institutions to permit the identification and evaluation of factors that may differ among states. Cross-sectional comparisons between institutional profiles were performed to identify similarities and determine common factors associated with change in the accounting curriculum, using principal component analysis and tests of association between groups using Pearson's Chi-Square analysis. Explanatory variables considered in the longitudinal and cross-sectional analyses include: year of initial accounting accreditation, year when the accounting accreditation requirements changed, presence or absence of 150-hour requirements in the home state of the institution, the Carnegie classification and scholarly orientation of the institution, whether the institution is private or public, size of the accounting faculty, number of faculty members with professional certifications, and the organizational structure of the institution (separate School of Accountancy or accounting department within a business school or college).

Contributions

The research makes several contributions to the academic literature. It provides empirical measurement of the pace of curriculum change in accounting programs over an extended period of time, and therefore confirms or rebuts the common perception that curriculum change takes a long time to be implemented. It identifies institutional characteristics (e.g., research orientation, accreditation, structure of the institution) that relate to the accounting curricula in place at selected points over the past half-century, and provides insights regarding the effects of differences in those characteristics on the accounting curriculum. It measures the impact of the adoption of the 150-hour educational requirement on the curricula of institutions in affected states. Further, the research illuminates some of the effects of the move towards graduate accounting programs on the undergraduate accounting curricula in educational institutions.

Educational policy and accounting program management decisions can benefit from consideration of the information developed in this research. Understanding some of the forces that have acted to shape accounting education over the past half-century can assist in selecting strategies to accomplish change going forward.

Organization of Dissertation

The remainder of this dissertation is organized as follows. Chapter 2 describes the research framework, theory development, and the specific research questions to be investigated. Chapter 3 provides details of the research design and data collection, followed by a discussion of the analytical results and identification of overall themes in Chapter 4. Chapter 5 concludes with a summary of implications for accounting education, a discussion of the study's contributions and limitations, and identification of some future research directions.

CHAPTER 2

LITERATURE REVIEW

Background

To understand current accounting curricula and the forces shaping those curricula, it is instructive to consider the historical background of recommendations for change in accounting programs. Such recommendations have been made over an extended period of time, and have resulted in some changes to the accounting curriculum.

Accounting Curricula to the 1950s

Accounting education has been the subject of substantial attention in the accounting profession for a very long time. The lead article in the very first issue of the *Journal of Accountancy* (November 1905) was "Education and Training of a Certified Public Accountant", by J.E. Sterrett. The article discussed the improvements in accounting education that the author considered necessary if the status of accounting was to be elevated to a learned profession, similar to law, medicine or engineering. Sterrett endorsed the movement towards additional emphasis on university education for accountants, coupled with a recommendation for requiring active experience in accounting before granting a full certificate to practice.

> The time has come, however, for a broader view, and it is necessary that accountants should make a concerted movement to lift the standard of preliminary education of their profession. If accountancy is to rank among other learned professions, it must require of every applicant for admission, a standard of preliminary education equivalent to that which is required by law and medicine. There is no royal road to proficiency in accountancy. . . .we should further insist

> upon a period of practical training in the office of a certified public accountant before the issuing of a full certificate (Sterrett 1905, 8).

The themes identified by Sterrett continued throughout the next several decades, as the number of schools offering collegiate-level instruction in accounting expanded dramatically. In 1881, the Wharton School of Commerce and Finance was established at the University of Pennsylvania, with bookkeeping part of the initial curriculum (Committee on Education 1907), and by 1907 it offered courses in advanced accounting as well. The Committee on Education of the American Association of Public Accountants noted that twelve additional schools offered accounting courses in the 1907 academic year, including New York University (School of Commerce, Accounts and Finance founded 1900), Tuck School at Dartmouth College (primarily graduate education intended to meet CPA examining board requirements), University of Wisconsin, University of Illinois, University of California (Henry Rand Hatfield, PhD, was the associate professor of accounting), University of Michigan, University of Vermont, University of Chicago, Harvard University, University of Kansas, Olivet College, and Cincinnati College of Finance, Commerce, and Accounts. The following table illustrates the course offerings in 1907 (courses offered for one year are assumed to equal two one-semester courses)[1]:

[1] According to 1907 Yearbook, p. 152 and p. 156 in Dec. 1907 *Journal of Accountancy*, "Report on Committee on Education", chaired by John R. Loomis

Table 1 - Course Offerings in 1907

Institution	Total courses	Accounting and Auditing	Industrial Mgmt	Corporate Finance	Business Law
University of Pennsylvania – Day Program	4	2		1	1
University of Pennsylvania – Evening Program	8	4	1	1	2
New York University – Day Program	2	2			
New York University – Evening Program	24	16		2	6
Tuck School at Dartmouth College	7	7			
University of Wisconsin	10	6		2	2
University of Illinois	5	2		1	2
University of California	*No course detail provided*				
University of Michigan	4	2			2
University of Vermont	6	4		1	1
University of Chicago	4	4			
Harvard University	2	2			
University of Kansas	1	1			
Olivet College	1	1			
Cincinnati College of Finance, Commerce and Accounts*	4	2			2
*Became the University of Cincinnati in 1912					

The 1907 Committee on Education developed the information above from an examination of college catalogues. Allen (1927) conducted an extensive review of more than 2,200 college catalogues for 1900, 1910, 1916, and 1926, and found additional colleges offering accounting courses for college credit in 1900 (Drake University, Louisiana State University, University of Missouri, Temple College, Agricultural College of Utah, University of Utah, and West Virginia University). Only Dartmouth, New York University, Temple College, and the Agricultural College of Utah offered Auditing courses in 1900, according to Allen's analysis. In 1910, Allen found 52 universities and colleges giving credit towards a bachelor's degree for accounting courses, with thirteen of the schools offering a course in Auditing and five others combining Auditing with advanced accounting or corporation accounting. According to Allen (1927), by 1916 there were 116 institutions offering college courses in accounting, with almost 20 of those schools accepting Accounting as a major subject for a bachelor's degree. Allen found

36 schools offering Auditing courses in 1916, with 14 other institutions combining Auditing with advanced accounting. In 1926, the last year he surveyed, Allen identified 335 colleges and universities offering college courses in accounting, with at least 60 of those schools accepting Accounting as a major subject for a bachelor's degree and 30 accepting Accounting as a major for a master's degree. Auditing was offered by 106 schools in 1926. Allen concluded that substantial change had taken place in accounting education from 1900 to 1926, with the greatest progress being made in the period from 1916 to 1926.

Revzan (1949) observed that business schools, at least in the early days, were primarily schools of accounting, and noted that accounting courses were widely regarded as essential training for careers in management as well as in accounting. Elwell (1924) surveyed accounting courses offered by colleges and universities, and noted substantial variation among the courses offered and the stage in the educational process at which the courses were normally taken. The table below summarizes selected information from the Elwell survey:

Table 2 - 1924 Accounting Courses

1924 Survey of Accounting Courses						
		Year in which course is normally taken				
Course	Number of Courses	Freshman	Sophomore	Junior	Senior	Graduate
Elementary Accounting	81	25	42	11	2	1
Intermediate Accounting	56	Follows Elementary Accounting				
Advanced Accounting	49	0	7	20	18	4
Cost Accounting	59	0	4	30	22	3
Auditing	49	0	0	21	26	2
Accounting Systems	8	0	0	5	3	0
Constructive Accounting*	13	0	0	6	7	0
Income Tax	28	0	0	12	14	2
CPA Review	17	0	0	1	16	0
Municipal or Govt. Acctg	11	0	0	3	7	1
Analysis of Statements	4	0	0	3	0	1
Managerial Accounting	7	0	2	1	0	4
Seminar	9	0	0	0	Both	
* "*Constructive Accounting" in the accounting vocabulary of the 1920s and 1930s appears to relate to accounting systems by which the financial statements are constructed, including records and forms (see Heniel 1931, or Meyer 1933).*						

Even at the time of the Elwell survey of accounting courses in 1924, there was general recognition that variation in the accounting curriculum is natural and desirable. Elwell quoted the 1922 Report of the Committee on Standardization of the American Association of University Instructors as follows:

> The Committee on Standardization in its report to the Association, assembled in Chicago at its annual meeting in December, 1922, definitely took a stand against any attempts to standardize courses in Accounting in the various institutions represented by the membership. This attitude received the endorsement of the Association. It was generally felt that much of the success of individual courses was due to the initiative and energy displayed by the instructor in his choice of materials and in his approach and method of attack (Elwell 1924, 69-70).

Briggs (1930) sampled the 43 members of the American Association of Collegiate Schools of Business ("AACSB") to see what they were doing to further education in accounting. He found that accounting courses in collegiate schools of business were fairly well standardized as to content and that there was a perceptible tendency towards uniformity, but also noted that most schools readily added new courses to the accounting curriculum to meet the needs of their students. The qualifications of the accounting teachers in 1930 were also examined by Briggs. The 43 AACSB schools listed 211 faculty members in Accounting, with 89 Instructors and 122 Assistant, Associate, or Full Professors. Only Kentucky and Marquette had one accounting teacher, while Penn had 12 teachers (7 with the rank of Instructor), Illinois had 13 teachers (6 with the rank of Instructor), Boston University had 15 teachers (6 with the rank of Instructor), and New York University had 40 accounting teachers (34 with the rank of Instructor). Briggs found that 92 of the teachers had CPA designations. Ninety-seven of the accounting teachers had Master's degrees, while only 18 accounting teachers had doctorates in 1930. The objective of accounting education at this time was exemplified by the following statement from the Dartmouth catalogue:

> . . . to present accounting as an administrative agency of the highest order. Particular emphasis is laid upon the interpretation of accounting results. At the same time instruction is planned to give students a working knowledge of technical accounting terms, methods and records. By this means the work is adapted to the needs of students who aspire to the profession of accounting, as well as to the needs of those who are preparing for other fields of business. (Dartmouth 1930)

Briggs found that all the collegiate schools of business he analyzed offered a course in Auditing, with some schools offering single-semester courses and others addressing Auditing with two-semester courses. Cost Accounting courses were also a standard offering, either for one semester or for two. According to Briggs, "With but few exceptions, the collegiate schools of business give a one-semester three-hour course in federal income tax procedure. Boston (University), California, Illinois, Minnesota, and Northwestern go further and offer a semester of advanced work in this important subject." (Briggs 1930, p. 178)

Taylor (1932) described a program for a fifth year of graduate education in accounting, designed to adapt the accounting curriculum to present-day trends in accounting and business. The major difficulties of curriculum-building envisioned by Taylor involved challenges in making a smooth transition from undergraduate to graduate study:

> It is immaterial whether the student who enrolls at the beginning of the fifth year for further study is a candidate for advanced degrees or whether he is merely pursuing certain graduate courses as a continuation of his undergraduate work. The ultimate extent of work which will be completed is not nearly so important as the character of the work which has been completed as an undergraduate. (Taylor 1932, 42)

Taylor advocated broad and fundamental education in the undergraduate program, leaving specialization and intensive concentration until the graduate year. The undergraduate program should require that at least one-third of the total hours of study should be taken in liberal study outside the business school. Graduate study for public accountants would include different elective courses than industrial accounting students, but Taylor believed all graduate

accounting students should take courses in Advanced Accounting Theory, Advanced Income Tax, Seminar in Survey of Accounting Literature, Seminar in History of Accounting, and Research in Accounting. The undergraduate and graduate program in accounting should ground the student in fundamentals, preparing the student for a variety of roles in his career.

An indication of the typical accounting curriculum in the late 1940s comes from Emblen (1949). Recommended accounting courses were suggested to represent approximately one-fourth to one-third of the total undergraduate credits, including Elementary Accounting, Intermediate Accounting, Advanced Accounting, Cost Accounting, Auditing, Fund Accounting, Income Tax, CPA Problems and Review. Emblen suggested that additional courses should be considered in Accounting Systems and in accounting for industries other than manufacturing or merchandising. Recognizing the need for coursework outside the business school, Emblen mentions that introducing a five-year program for professional accounting training would allow the final year to be devoted to a thorough study of professional accounting problems as well as a careful consideration of contemporary accounting thought. Similarly, Revzan (1949) observed that the movement away from a four-year undergraduate school of business represented a recognition that the prime responsibility of a university was first to educate people for citizenship, and then to train them to take their places in the chosen fields of work. The graduate accounting program implemented at Columbia in the late 1940s included two years of study and did not presume any undergraduate preparation (Dohr 1948). The new (for the 1940s) Columbia graduate program established the following course of instruction:

Table 3 - 1940 Columbia Graduate Program

First Year	Second Year
First Semester	**First Semester**
Survey of Economic Resources and Activities Principles of Administration Principles and Procedures of Accounting Statistics Law – Government and Business	Accounting Verification – Internal Auditing Cost Accounting Accounting and Management The Law of Accounting Seminar – Accounting Research
Second Semester	**Second Semester**
Administration of Production (incl. Labor Relations) Administration of Distribution Administration of Finance (incl. Banking & Investments Principles and Procedures of Accounting Law – Government and Business	Accounting Verification – Public Accounting Cost Accounting Tax Accounting Accounting and Management Seminar – Accounting Research
2 accounting courses, 8 non-accounting courses	*10 accounting courses*

Noble (1950) conducted a quantitative evaluation of accounting curricula, examining the college bulletins of the member schools of the AACSB, with particular reference to accounting courses offered in the recommended subject. Noble observed that "while it is recognized that many schools who are not members of the AACSB have complete programs in accounting, the study was limited to this group with the assumption that they would represent a fair cross section of offerings in the leading schools of the country."

The 1954 Report of the AAA Standards Rating Committee included the observation that the familiar four-year program in accounting instruction does not include enough time to accomplish the thorough and penetrative instruction necessary for success in the accounting field. The Standards Rating Committee adopted the viewpoint that graduate study in accounting should be much more aggressively sponsored by institutions, and that graduate accounting study should not only be for those aspiring to careers as instructors of accounting, but also for a substantial majority of all those interested in a career in accounting (Garner et al. 1954).

The 1956 Report of the AAA Task Committee on Standards of Accounting Instruction provides insights into the undergraduate curriculum for accounting programs during the 1950s.

The Committee surveyed the colleges and universities that offered a major or concentration in accounting in an undergraduate program, and developed a profile of the typical accounting program. That profile is presented below:

Table 4 - 1950s Accounting Curriculum

Typical Curriculum for Accounting Majors	*Hours*
Accounting Courses	
Elementary	6
Intermediate	6
Advanced	3
Cost	3
Auditing	3
Income Tax	3
Additional Auditing or Cost	4
Electives	3
Total Accounting Courses (25%)	31
Other Business Courses	
Corporation Finance	3
Marketing	3
Money and Banking	3
Business Law	6
Statistics	3
Electives in Business	13
Total Other Business Courses (25%)	31
Nonbusiness Courses	
English Composition	6
English Literature	6
Economics	6
Mathematics	6
Natural Sciences	6
Social Sciences other than Economics	4
History	3
Public Speaking	2
Electives and assorted requirements	25
Total Nonbusiness Courses (50%)	64
Total Hours	126

Notice that the typical curriculum for accounting majors includes 25% accounting courses, 25% other business courses, and 50% nonbusiness courses, a distribution of effort that closely parallels the recommendations of the Gordon & Howell report and the Pierson report discussed later in this section, as well as the recommendations contained in the Report of the AAA Standards Rating Committee (1954).

To illustrate a typical perspective on the state of accounting education in the middle of the 1950s, consider the observations of Marquis Eaton (1957), then President of the AICPA. Eaton noted that the accounting education opportunities for advanced professionals were less than those available for medical, legal, and dental professionals, but also less than life insurance agents, business management personnel, and bankers, evidencing a "sorry state of neglect". He forecast that increased specialization would become part of accounting practice, and argued that accountancy must deepen and broaden its knowledge, and that it must create the necessary facilities for advanced study, perhaps as part of formal graduate education. Eaton also suggested that accreditation of accounting programs might be required, whether done under the auspices of the AICPA or some other coordinating body.

Accounting Curricula from the mid-1950s onward

To provide context for the analysis in this dissertation, key observations and recommendations since the 1950s regarding accounting curricula are summarized below. The documents referenced below have been selected because they represent significant milestones in the development of accounting education, and therefore should give some indications of forces inspiring subsequent curriculum changes. Accordingly, it is expected that changes in accounting curricula should demonstrate some relationship to the inspiration for change.

Perry Commission (1956)

During the late 1940s and the early 1950s, accounting practitioners and academics were concerned with the educational and experience requirements for entry into the accounting profession as a CPA. The Commission on Standards of Education and Experience for Certified Public Accountants (the "Perry Commission") was created in 1952 to bring about more uniform and more realistic standards for the qualification of Certified Public Accountants. The

Commission included both practitioners and academics among the 25 members (Perry 1955a). The American Institute of Accountants (now AICPA) and the Association of Certified Public Accountant Examiners (now NASBA) charged the Perry Commission to develop and publish what it determines to be the minimum standards of examination, education and experience, considering not only current requirements but elevating standards to meet likely future conditions (Perry 1956). The 1956 Report of the Perry Commission suggested that the accounting curriculum needed to be enhanced in order to meet prospective needs of the public for accounting services for the foreseeable future. The Perry Report states:

> The broadening range of services performed by CPAs in recent years has added new responsibilities, requires a knowledge of many fields, and above all demands individuals who have sufficient flexibility and breadth of training to be able to move from one type of engagement to another with assurance and effectiveness. The increasing range of work of the CPA has the effect of requiring more and more emphasis on comprehension and command of principles.
>
> The Commission believes that the knowledge needed by the CPA of the principles of accounting, auditing, taxes, and other related areas of study, including a background knowledge of business administration, could be acquired effectively through the formal educational process. However, the Commission does not believe that the existing undergraduate programs in schools of business administration generally provide the depth and comprehensiveness of training for a definite professional objective which are needed by the CPAs of today and tomorrow. This conclusion is derived from the fact that the typical undergraduate school of business administration is concerned with providing students with a number of types of training – general and cultural courses, the important core subjects of business administration, and some specialization in one or more areas of business administration. Such programs are not usually directed toward preparation for a particular profession and, in any event, there is insufficient time available for such preparation.
>
> The Commission believes that adequate preparation for the profession of public accountancy requires additional academic study beyond present four-year undergraduate programs. Programs are needed to provide the aspiring CPA with professional training, which is a part of the formal educational process, and is designed specifically to prepare him for the practice of public accountancy. The Commission envisages professional accounting programs, within the framework of collegiate schools of business administration, which will be comparable in

> approach and objectives to those of the professional schools developed in other fields (Perry 1956, 120-121).

These recommendations were made in a context where 34 percent of the candidates passing or conditioning the May 1955 Uniform CPA Examination had only a high school degree. Educational requirements to qualify to sit for the exam were set by the states at that point. The Perry Report observed "College training is becoming increasingly common among candidates for the CPA examination". Trueblood (1963) reported that at the time his article was written only Connecticut, Florida, Hawaii, New Jersey, New York, and South Dakota had statutory requirements that CPAs possess college degrees, while thirteen other states had enacted legislation for a college educational requirement at some future date. Trueblood observed:

> Frequently, the accounting curriculum in the typical undergraduate business school of today largely follows the pattern of the 1930's. Textbooks and course content, even though subject to periodic re-evaluation and revision, are not essentially different from those of a couple of decades ago. Systematic consideration of the future requirements of the future accountant has been worked into the educational pattern of only a few institutions (Trueblood 1963, 86).

Recommendations to require extensive collegiate training for accounting were not novel even in the 1950s. For example, in a 1955 round table discussion at the AAA annual meeting, Roy Stone of the American Meat Institute supported additional specialization in different fields of accounting, and stated "Consideration also should be given to whether accounting, like law and medicine, eventually may require a more extended course of study in order to provide adequate training" (Langenderfer and Weinwurm 1956). Donald Perry, the chairman of the Perry Commission, summarized the history surrounding the Commission recommendations as follows:

> The idea of academic training in accounting beyond the undergraduate level is not new. The American Institute of Accountants, through committees and its Council, recommended such training almost twenty years ago and specifically proposed completion of a four-year undergraduate program in arts and sciences to be followed by graduate study designed to prepare the student for public accounting practice (Perry 1955 b).

In an environment where a baccalaureate degree was not yet required to sit for the CPA examination in many jurisdictions, the Perry Commission report aggressively pushed the recommended educational standards even higher than merely an undergraduate accounting degree. Some of the Perry Commission recommendations included:

1. College graduation from a fifth-year professional accounting program, with classroom material drawn from public practice, with faculties experienced in public accounting.
2. A qualifying examination that would test the college graduate's intellectual capacity, his academic achievements, and his aptitude for public accounting.
3. A professional academic program which would require a fifth year, which would require the undergraduate curricula to adjust to the principal areas in accounting and the specialized subject matter would be at the postgraduate level in preparation for public accounting (Edwards 1960).

The AICPA appointed a Special Committee in 1957, headed by George D. Bailey, to study the Perry Report and determine whether any of its recommendations could be adopted by the AICPA. In its Report, the Bailey Committee noted "Public interest and third-party reliance must receive more consideration than the interests of CPAs themselves when making recommendations for standards of education and experience" (Bailey 1959, 68). The Bailey Committee strongly agreed with the Perry Report recommendations on a number of important points, including the broad area of extending and improving education. Other related recommendations were also endorsed by the Bailey Committee, including:

> designing new courses for educating accountants, rendering substantial assistance to colleges and professors, permitting candidates to take the CPA examination immediately after meeting educational requirements, and timing state legislative changes (Bailey 1959, 68).

However, the Bailey Committee disagreed with the recommendations of the Perry Report on several other points, in particular the meaning of the CPA certificate related to competence

for the practice of public accounting. The Committee Report stated "Demonstrated competence for the practice of public accounting requires more than the formal educational process, namely a period of acceptable experience" (Bailey 1959, 68). Accordingly, the Bailey Committee did not agree with the proposal to focus the CPA examination solely on academic preparation, without expecting the candidate to show skills related to competence in practice, or with the Perry Commission recommendation to remove experience requirements for receiving CPA certification.

While agreeing in principle that a college degree should be part of the requirements for the CPA certificate, the Bailey Committee expressed concern that the undergraduate degree requirements should encompass sufficient specific courses in accountancy. The Bailey Committee and Perry Commission were substantially in agreement that postgraduate education for accountants was a good idea.

> Postgraduate education is highly desirable because professional men can profit by more education than can be acquired in four academic years. Considering the growing challenges to the profession and the scope of activities in which public accountants need special education, postgraduate education will become even more desirable (Bailey 1959, 69).

The Council of the AICPA accepted the Bailey Committee recommendations as presented, establishing as AICPA policy that the requirements for the CPA certificate should include a baccalaureate degree with courses in the proportions recommended by the Perry Commission, and resolving "as soon as it is feasible postgraduate study devoted principally to accountancy and business administration become a requirement for the CPA certificate" (Council of the AICPA 1959, 66).

Pierson and Gordon & Howell Reports (1959)

Accounting education in the United States has traditionally been part of or closely related to schools of business, and accordingly developments affecting business education also tend to receive attention from accounting educators. The late 1950s saw substantial attention devoted to the proper position and emphasis of business programs in higher education, including efforts led by institutions broadly concerned with the American educational environment. In 1959, the Carnegie and Ford Foundations published, independently of each other, studies of business education, generally known as the Pierson and the Gordon & Howell Reports, respectively. These Reports recommended that:

1. College and university business curricula be pruned to reduce vocationalism and overspecialization;
2. At least fifty percent of the undergraduate program in business consist of courses in the liberal arts; and
3. Undergraduate education for business put greater stress on foundation courses, as distinguished from courses devoted to the specialties.

The Pierson and Gordon & Howell Reports did not deny the need for education related to business principles, but recommended more balance between liberal arts education and technical training in business. Rather than a descriptive, "trade school" approach to business education, they preferred a less specialized approach. Since accounting has a definite core of principles and requirements, some attention to those subjects is clearly necessary, but many of the Pierson and Gordon & Howell recommendations can be applied to accounting education as well as broader business education. The table below, included in the Pierson report, provides a summary that was characterized as the typical accounting curriculum in 1959.

Table 5 - 1959 Pierson Curriculum

The Typical Accounting Program	(Pierson 1959, p. 367)	
Nonbusiness subjects	**Semester credit**	
Required courses	**Minimum**	**Maximum**
Composition	6	6
Economic principles	6	6
English literature	6	6
Social science, other than economics	6	6
History	3	6
Mathematics	3	6
Science	3	6
Other Humanities	3	6
Required Electives	0	9
Range	36	51
General business subjects		
Required courses		
Business law	6	6
Corporation finance	3	3
Industrial management or production	3	6
Principles of marketing	3	6
Money and banking	3	6
Statistics	3	6
Others, including insurance, survey of business, mathematics of finance, and/or industrial relations	0	6
Range	30	36
Accounting studies		
Required courses		
Elementary accounting principles	6	6
Intermediate accounting principles	6	6
Advanced accounting principles	0	6
Cost accounting	3	6
Auditing principles and procedures	3	6
Income tax accounting	6	6
Range	24	30
Elective courses		
Generally free electives	12	20
Total in program	120	128

In 1961, an American Accounting Association committee reviewed the Pierson and Gordon & Howell Reports and concluded that the Reports seemed to be searching for the one perfect formula for education (Schmidt 1961). That Committee observed that it was unlikely that there existed a single right answer, but the broad recommendations in the Reports for substantially less emphasis on accounting courses in undergraduate education caused great concern among the accounting community. The Gordon & Howell Report specifically cautioned

"under no circumstances should an undergraduate business school undertake to prepare students for the CPA examination by the time they receive their bachelor's degree" (Gordon & Howell, 1959, 214). The Committee's reaction was that such strictures would mandate an immediate shift to graduate education for accountants (Schmidt 1961). The Committee further noted that many of the pedagogical suggestions from the Reports had already been studied by accounting academics and the American Accounting Association, and that valid techniques were already being implemented.

The Carnegie Foundation continued its emphasis on higher education policy development through the succeeding decades. The Carnegie Classifications are recognized as a method for describing institutions of higher education according to their research and educational missions.

> In 1970, the Carnegie Commission on Higher Education developed a classification of colleges and universities to support its program of research and policy analysis. Derived from empirical data on colleges and universities, the Carnegie Classification was published for use by other researchers in 1973, and subsequently updated in 1976, 1987, 1994, 2000, and 2005. For over three decades, the Carnegie Classification has been the leading framework for describing institutional diversity in U.S. higher education. It has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representation of sampled institutions, students, or faculty (Carnegie 2010).

The Carnegie Classification system separates masters-granting institutions into three categories based on the number of masters degrees granted annually, and categorizes doctoral-granting institutions using an index of research activity.

Horizons for a Profession (1967)

In the 1960s, attention was given to the definition of what it means for an accountant to be a member of a profession, and to the knowledge that accountants should be expected to command upon their entry into the profession. The Carnegie Corporation and the American

Institute of Certified Public Accountants sponsored an investigation into these matters, creating a working group of accounting academics and practitioners. The AICPA Committee on Education and Experience Requirements for CPAs (commonly referred to as the "Beamer Committee" in honor of the committee chairman, Elmer Beamer) was formed in 1963 to study the Common Body of Knowledge for CPAs. Robert H. Roy (Dean of the Johns Hopkins University School of Engineering Science) and James H. MacNeill (Chairman of the Department of Accounting at Fordham University) were the directors of the analytical efforts of the Beamer Committee, and were the authors of the comprehensive recommendations in the 1967 *Horizons for a Profession* Report regarding the body of knowledge that beginning CPAs should be expected to possess to equip them to function as competent professionals. Major points in the Horizons Report include:

- Defining accounting as a profession by reference to a set of criteria that apply to Law, Medicine, and Engineering (the "learned professions");
- Recommending conceptual education rather than memorization of rules – analogous to the move medical education made towards medical science and away from apprenticeship;
- Calling for more research in accounting beyond the applied research common at the time the Report was produced, emphasizing research as a productive area separate from teaching. The call for additional research was coupled with a call for additional sponsorship from commercial organizations;
- Describing the areas of knowledge that a beginning CPA should possess in the modern accounting environment. Specific recommended areas of knowledge include:
    - Accounting
    - Communications
    - Auditing
    - Computers

- Logic
- Ethics
- Microeconomics
- Macroeconomics
- Behavioral Science
- Law
- Mathematics, Statistics, Probability
- Finance
- Production
- Marketing
- Personnel Relations

The observations and recommendations of the Horizons Report were essentially incorporated into the recommendations of the Beamer Committee (1969). The Beamer Committee course coverage recommendations are summarized in the table below:

Table 6 - 1969 Beamer Recommendations

Beamer Committee Course Recommendations		Semester Hours
General education		
	Communication	6
	Behavioral sciences	6
	Economics (introduction)	6
	Accounting (elementary)	3
	Mathematics and computer (algebra, statistics, calculus)	14
	Other general education	25
Total general education		**60**
General business		
	Economics (intermediate theory and the monetary system)	6
	Social environment of business	3
	Business law	4
	Production or operational systems	2
	Marketing	2
	Finance	4
	Organizational, group, and individual behavior	6
	Quantitative applications in business	6
	Written communication	2
	Business policy	3
Total general business		**38**
Accounting courses		
	Financial accounting (theory, applications, and contemporary issues)	6
	Cost (managerial) accounting	3
	Tax	3
	Auditing	3
	Computer and information systems	4
Total accounting		**19**
Total Beamer Committee course recommendations		**117**

Holstrum and Wilson (1974) surveyed the 25 schools granting the largest number of accounting degrees in the United States during the 1969-70 academic year, and found substantive movement towards the recommendations of the Beamer Committee. They found that students majoring in accounting fell short of the quantitative methods and behavioral science recommendations of the Beamer Committee, although curricula in other accounting and business areas tended to move towards the Committee recommendations. Holstrum and Wilson were careful not to conclude that the Beamer Committee Report caused the observed change in the accounting curricula, and suggested instead that accounting educators were likely observing and responding to the same environmental and social factors driving the Beamer recommendations.

AAA Committee on Master's Programs in Accounting (1970)

The charge of the Committee on Master's Programs in Accounting was to survey previous AAA studies as well as current practice, and to recommend a preferred curriculum and degree (or degrees) to be conferred (Boyd et al. 1970). That Committee made recommendations on admission requirements, faculty credentials, teaching loads, and prerequisite education for masters' program, and concluded with a recommended course of study for a basic master's program, as summarized below:

Table 7 - 1970 AAA Master's Program

Area	Specific recommendation	Number of courses
Accounting	Must include theory and information systems	4
Quantitative methods and statistics	Assumes two previous undergraduate courses	1
Management policy		1
Organization behavior	Assumes one previous undergraduate course	1
Economic theory or government regulation of business or public policy		1
Computer		1
Elective	If the computer requirement is met with an undergraduate course, 2 electives are allowed	1
Total Courses in Graduate Program		10
Required as graduate courses. Committee did not specify course hours, but considered the program in terms of three-hour courses.		

The Report of the Committee on Master's Programs in Accounting is discussed here to indicate the general expectations for a graduate program in accounting shortly after the time of the Horizons Report. It did not constitute an authoritative prescription for postbaccalaureate accounting education, as its recommendations were not formally adopted by the American Accounting Association.

Cohen Commission (1976)

In the 1970s, there was substantial public concern regarding the quality of information being reported in financial statements as well as the effectiveness of auditors in providing assurance regarding those statements. A subcommittee of the United States Senate, led by Senator Lee Metcalf, conducted investigations of the accounting profession, including public hearings, and produced a staff study report (commonly referred to as the "Metcalf Report") that called for Congressional regulation of accounting practices (Subcommittee on Reports, Accounting, and Management 1976, 20). Among the major observations in the Metcalf Report were the following:

- The success of our competitive economy depends upon the free flow of accurate and meaningful information regarding the activities of its major participants.
- Congress should exercise stronger oversight of accounting practices promulgated or approved by the Federal Government, instead of the existing delegation of authority to private interest groups to establish accounting practices, and more leadership in establishing proper goals and policies.
- Congress should consider methods of increasing competition among accounting firms for selection as independent auditors for major corporations.

At about the same time as the Metcalf Committee hearings, the AICPA appointed a study group headed by Manuel F. Cohen, former chairman of the Securities and Exchange

Commission, to study auditor roles and responsibilities and to recommend standards by which auditor performance should be evaluated (commonly referred to as the "Cohen Commission"). The 1976 Report of the Cohen Commission reported background research on issues including the education and training of auditors. The Report noted a schism between academic and practicing accountants, and observed that:

> The research effort of academic accounting has become almost totally devoted to matters other than auditing and the concerns of accounting practice; practitioners find themselves unable to relate to most published accounting research. Concern with the enhancement of research methodology has tended to displace concern with research into the problems of the profession. Public accounting practice does not have the visibility of either law or medicine in university education, nor has the academic accounting community made the kind of contributions to the development of the knowledge base and problem resolution that the legal and medical professions receive from their academic communities (Cohen 1976, 85).

The Cohen Commission also observed that "the expanding body of knowledge in public accounting, the demands and risks of professional practice, and the required knowledge in allied fields and in the liberal arts provide sufficient substance for a graduate professional program similar to that provided by law schools."

Albers Commission (1979, 1983)

The AICPA Education Executive Committee appointed a task force in 1976 to determine if the curriculum proposals in the Beamer Report and subsequent AICPA educational recommendations were still relevant (Albers 1979). That task force (commonly referred to as the "Albers Commission") issued a report in 1978 summarizing the AICPA's policy on education requirements for entry into the accounting profession, and the recommendations of that report were adopted as policy by Council of the AICPA. Following the issuance of the Horizons Report in 1967, the AICPA had adopted a policy stating that at least five years of college study are needed to cover the common body of knowledge expected for CPAs and therefore five years

should be the educational requirement for accountants (Beamer 1969). The National Association of State Boards of Accountancy (NASBA) adopted a similar policy in 1976 and reaffirmed that policy in 1980.

The report of the task force was adopted as policy by Council of the AICPA in 1978. It presented an explicit requirement for 150 semester hours of education to become a CPA, extending the conclusion of the Beamer Committee that more formal education should be required.

> The recommendations and sample program contained in this revision are substantially the Beamer committee's recommendations, as endorsed and modified by the task force. The task force feels that the sample program might also assist those who are concerned with improving the quality of other accounting programs, such as the baccalaureate degree program (AICPA 1978, 10)

In addition, the 1978 AICPA Policy Statement (AICPA 1978, 7) discussed an explicit requirement for a graduate (post-baccalaureate) degree in preference to a specification of merely 150 hours of education to qualify for entry into the profession. The 1978 AICPA Policy Statement discussed business school limitations on hours students are permitted to take in any one area, and expressed sympathy for the practice of trading off depth of understanding in one area for breadth of understanding in general. However, its authors stated that a program intended to provide adequate preparation for careers in professional accounting cannot pursue breadth of understanding to an extent that creates deficiencies in accounting understanding, and preferred education that developed conceptual understanding while devoting necessary attention to procedural skill. The 1978 AICPA Policy Statement addressed specialization in accounting as well, suggesting that the area of specialization might be allotted three semester hours taken from one of the other accounting areas, and indicating that no more than six of the 12 to 15 semester

hours of electives could also be allotted to a specialization within accounting. The 1978 AICPA Policy Statement recommended that the specialization not include taking additional courses in financial accounting in view of the 15 semester hours already provided in that area (AICPA 1978, 26).

A comparison of the 1978 AICPA Policy Statement sample program to the Beamer Committee recommendations reveals no additional suggested coursework in general education or business education, although in the 1978 sample program a three-hour "Introduction to the Computer" course and 12 hours of Mathematics and Statistics replace the 14 hours recommended by the Beamer Committee for Math and Computer coursework. The Beamer Committee's two-hour recommendation in Production and Operations and three-hour recommendation in Business Policy are replaced by additional hours in Marketing, Business Law, Finance, and Written Communication. The substantive changes in the 1978 AICPA Policy Statement include the introduction of 12 to 15 semester hours of electives, and 20 additional hours in accounting, distributed as nine more hours in Financial Accounting, three more hours in Cost/Managerial Accounting, Taxes, and Auditing, and two additional hours in Computers and Information Systems. If three of the elective hours are applied to bring the Beamer Committee undergraduate program recommendations to a total of 120 semester hours, the remainder of the additional hours are implicitly recommended for the post-baccalaureate education supported in the 1978 AICPA Policy Statement. That implicit recommendation for 30 hours of master's accounting education is consistent with the recommended course of study prescribed by the AAA Committee on Master's Programs in Accounting in 1970.

Concern about slow progress in implementing the AICPA and NASBA educational recommendations inspired the continuation of the task force as the Commission on Professional

Accounting Standards (the "Albers Commission"), including representatives from the AICPA, NASBA, AAA, and the Federation of Schools of Accountancy ("FSA"). The Albers Commission was charged to gather evidence and formulate strategy to aid in the transition from a baccalaureate to a postbaccalaureate education requirement for entry into the public accounting profession (Albers, 1983). The Commission recommended that the AICPA should take the lead in accomplishing legislative enactment of a postbaccalaureate education requirement in all states, with state societies of CPAs and state boards of accountancy serving as the key organizations pursuing legislative enactment in their respective states.

The Albers Commission observed a growing consensus that the existing baccalaureate requirement did not meet the needs of the accounting profession or of the public consumers of accounting information. They noted that the body of knowledge expected to be integrated into the accounting curriculum had expanded substantially since the issuance of the Horizons Report, and that Report had indicated that postbaccalaureate education was advisable even in the late 1960s. The Albers Commission endorsed a strategy of not specifying additional course content in advance in order to allow each educational institution to develop the most efficient, comprehensive coverage of subject matter for their particular requirements.

> The call for a postbaccalaureate requirement is not simply a call for more education; it presumes careful analysis and planning by university faculties to use the additional course work to enhance the entry-level competence and professional advancement potential of new CPAs . . . A principal goal of the postbaccalaureate education requirement in accounting is to improve the quality of accounting services. Because such a requirement attracts a higher quality, more committed student and provides a better base for technical competence and growth, the output of that process – the CPA – will be better able to serve the profession and society with better audits, improved financial reporting, and better advisory services (Albers 1983, 29-30).

In 1984, the Board of Directors of the AACSB passed a resolution opposing a postbaccalaureate educational requirement, in part based on a concern that it would strengthen a

movement toward professional schools of accountancy that would be independent of the business schools (Ellyson, Nelson and MacNeill 1985, 98). While the Beamer Committee recommendations for additional accounting education had been published for more than a decade at that point, Ellyson, Nelson and MacNeill observed that market forces had not yet driven demand for additional education and concluded that legislation would be necessary to bring about the desired change in education. During the early 1980s, NASBA and the AICPA worked together to develop the Model Public Accountancy Bill, which included an education requirement for CPAs of 30 semester hours beyond the baccalaureate degree (Ellyson, Nelson and MacNeill 1985, 95).

The AICPA Education Executive Committee decided in 1986 to review the 1978 AICPA Policy statement to determine how that document's sample program should be modified to reflect changes since it was issued and to address trends that were expected to continue (AICPA 1988, 1). The review concluded that changes in recent years would not have an impact on the basic recommendations for accounting education presented in *Horizons* and endorsed by the Beamer Committee and 1978 AICPA Policy Statement. Accordingly, *Horizons* remained the authoritative description of the common body of knowledge expected for beginning CPAs.

While the 1978 AICPA Policy Statement (No. 4) explicitly called for the awarding of a graduate degree as part of the educational preparation for entry into the accounting profession (AICPA 1978, 4) and that statement was repeated in the 1988 reconsideration of the Policy Statement, the practical impact of the 1988 reconsideration was to relax the graduate degree requirement and require 150 hours of education (AICPA 1988, 8-25). The environment of the 1988 reconsideration included a 1987 AICPA Council resolution which included the provision that new applicants for membership after the year 2000 should have 150 hours of education

(without requiring a graduate degree), and that provision was approved by a vote of the AICPA membership in January 1988. The sample program presented in the 1978 AICPA Policy Statement was revised in the 1988 reconsideration to remove specific coursework recommendations and replace them with broad prescriptions that new entrants to the profession should have 150 hours of education that included 60 to 80 hours of general education, 35 to no more than 50 hours in business education, and 25 to 40 hours of education in accounting.

The 1980 NASBA and 1988 AICPA recommendations called for a baccalaureate degree in accounting, plus 30 additional semester hours, but did not require a graduate degree despite the support for postbaccalaureate education included in the 1978 AICPA Policy Statement. Furthermore, those recommendations did not mandate that all the educational requirements be acquired from the same institution. Therefore, the 1980 NASBA and 1988 AICPA recommendations did not eliminate the undergraduate accounting degree as one step towards a career in accounting.

Bedford Committee (1986)

In 1984, the American Accounting Association appointed a study committee to investigate and report on the future structure, content and scope of accounting education, with the associated charge to recommend educational objectives and goals for adjusting university accounting education by the year 2000 (Bedford and Shenkir 1987, 86). The AAA Committee on the Future Structure, Content, and Scope of Accounting Education (commonly referred to as the "Bedford Committee") published a number of recommendations regarding accounting curricula in 1986. The Bedford Committee stated

> A general professional accounting program that follows will be more effective if all students enter with a certain minimum background. This minimum should include basic courses in mathematics (through calculus), statistics, computer

systems, and economics. (Committee on the Future Structure, Content, and Scope of Accounting Education 1986)

The Bedford Committee Report included the observations and recommendations that are summarized below.

General Professional Accounting Education

The primary purpose of general professional accounting education is to provide a means for students to acquire both a) the knowledge, techniques, sensitivities, and abilities all accountants should have for entry into the accounting profession, and b) the capacity to apply these qualities under reasonable supervision. The essential components include:

- Design and use of information systems
- Communication
- Decision problems and information in organizations
- Financial information and public reporting
- Knowledge of the accounting profession

The educational recommendations of the Bedford Committee include the following ten points:

Scope and Content

1. Accounting should be viewed as a broad economic information development and distribution process, based on the design, implementation, and operation of multiple types of information systems. Accordingly, accounting faculties should maintain competence in the information technologies and in efforts to develop comprehensive information systems for organizations.
2. Accounting faculties should recognize and advise students that a rigorous general accounting education and the development of broad personal capacities and skills is preferred to premature specialization in accounting.
3. Accounting faculties should be receptive to an expansion of educational requirements in the liberal arts and sciences that aim to develop the students' capacities for analysis, synthesis, problem-solving, and communication.
4. University accounting education should emphasize the skills and capacities needed for life-long learning.
5. Learning objectives of courses and programs should be so designed that they help students learn to learn, to think, and to be creative.
6. Accounting faculties should establish high expectations for students and should adjust the curriculum content and learning methods to match the professional skills, personal capacities, and general knowledge they expect students to develop.

7. Universities should maintain flexibility in accounting education programs to permit rapid adjustment to changes in the information needs of society.

Structure

8. A broad educational structure must be made available that spans education in the humanities, arts, and sciences (general education); the general conceptual information development and reporting knowledge required of all accountants (general professional accounting education); and the specialized technical knowledge required in one or more areas of accounting information development (specialized professional accounting education).
9. Specialized professional accounting education should be offered only at the graduate level. Thus, a complete curriculum covering all three levels of education will normally take a minimum of five years.
10. Practicing and academic accountants should be guided by the principle of comparative advantage in deciding upon the specialized professional education content to be provided by universities and that to be provided by employers and others through various programs of continuing education (Committee on the Future Structure, Content, and Scope of Accounting Education 1986).

Treadway Commission (1987)

The National Commission on Fraudulent Financial Reporting (commonly referred to as the "Treadway Commission") was a private-sector response to widespread public concern over the reliability of financial statements. The Treadway Commission was sponsored by the AICPA, the American Accounting Association, the Financial Executives Institute, the Institute of Internal Auditors, and the National Association of Accountants (now IMA). The Commission attempted to identify the forces and opportunities — environmental, institutional, and individual — that may contribute to fraudulent financial reporting. It was also asked to recommend enhanced means of detection and prevention (Kullberg 1987).

The Treadway Commission Report was developed in an economic environment where business failures were prevalent and there were numerous allegations that those failures could be connected to fraudulent financial reporting. Consequently the value of accounting services began to be questioned, and the Treadway Commission studied the performance of the accounting

profession to develop recommendations for changes in accounting education. According to the Treadway Commission, participants in the financial reporting system should be exposed to the knowledge, the skills, and the ethical values that potentially may help them prevent, detect, and deter fraudulent financial reporting. Rigorous and thorough academic preparation will help face the challenge. Limiting students' exposure to the problems of fraudulent financial reporting to a single course on ethics is simply not enough. The Commission recommended that students should be exposed to the problem of fraudulent financial reporting, including its causes, its widespread impact, and practical cost-effective responses to it.

In the Treadway Commission's view, the independent public accountant's responsibility and accountability to the public requires a broad exposure to ethics. Business schools should include ethics discussions in every accounting course. Encouraging faculty to develop improved classroom materials and their own personal competence will require additional incentives in business school faculty reward systems.

The Treadway Commission deferred to professional groups on the question of the fifth year of education. They note that the significant explosion of information related to accounting, systems, and related fields may require more time in course work; entry-level work requires more competence and therefore more educational preparation; developing ethical inquiry, analytical reasoning, sound judgment, and problem-solving skills require more time to develop than simpler cognitive skills like memorization; and a comparable accounting degree to the MBA may become more necessary for advancement as a corporate accountant and as an independent public accountant.

The Treadway Commission noted that practitioners must be able to present and defend their views through formal and informal, written and oral, presentations. They must be able to do

so at a peer level with business executives. Increasing amounts of information must be gathered from outside sources. Practitioners must be able to listen effectively to gain information and understand opposing points of view. They will need the ability to locate, obtain, and organize information. Inductive thought processes and capabilities for judgment must be developed. Practitioners need to identify ethical issues and apply a value-based reasoning system to ethical questions. General knowledge includes an understanding of the flow of events in history and the different cultures in today's world, a sense of the breadth of ideas, issues, and contrasting economic, political and social forces in the world, and experience in making value judgments. The Treadway Commission recommended that the general education component of university education should support the development of these factors and should leave the student excited about, and prepared for, lifelong learning.

The Treadway recommendations were reinforced by the 1988 Porter and McKibbin study of business education commissioned by the AACSB. Porter and McKibbin found that a substantial majority of business school faculty members and deans thought that their schools should be doing more to turn out broadly-educated graduates better prepared for eventual positions of leadership in business (Porter and McKibbin 1988, 108). Furthermore, the business graduate must be committed to continuing their management education after graduation:

> In today's world, and most definitely in the world of tomorrow, a person's management education cannot stop with the completion of a formal bachelor's or master's degree program in business or any other relevant subject. If it did, such an individual would rapidly become obsolete and relegated to the "also rans" rather than continuing to be a member of that group expected to provide leadership – at whatever organizational level – in the management sectors of our society's institutions, including, but not limited to, business firms. (Porter and McKibbin 1988, 217)

"Big Eight" Managing Partners (1989)

Perspectives on Education: Capabilities for Success in the Accounting Profession

In 1989, the managing partners of the largest accounting firms in the world (then the "Big Eight") issued a joint document ("White Paper") recommending changes in the way accounting education should be delivered. The managing partners emphasized their strong interest in enhancing the capabilities of accounting students before they entered the profession. They acknowledged that basing pre-entry education on capabilities will mean fundamental changes in the curriculum. In their view, the current textbook-based, rule-intensive, lecture/problem style should not survive as the primary means of presentation. New methods, both those used in other disciplines and those that are totally new to university education, must be explored. Some of the alternatives for student involvement include seminars, simulations, extended written assignments and case analyses. Creative use of information technology will be essential, according to the White Paper.

The White Paper stated that the use of new teaching methods will be a message in itself. Students learn by doing throughout their education much more effectively than they learn from experiencing an isolated course. The skills and knowledge comprising the needed capabilities must be integrated throughout the curriculum. For example, if students are to learn to write well, written assignments must be an important, accepted and natural part of most or all courses. To relegate writing to a single course implies to students that the skill will not be useful throughout their careers and does not require continuing attention. The capabilities must be reinforced throughout the curricular experience.

The White Paper observed that teaching methods must also provide opportunities for students to experience the kinds of work patterns that they will encounter in the public

accounting profession. As most practice requires working in groups, the curriculum should encourage the use of a team approach.

It was noted that the development of an efficient curriculum requires attention to integration. Re-engineering the curriculum should include a careful evaluation of topical coverage in all subjects. Emphasis should be placed not only on the presentation of relevant material, but also on the compounding of learning by appropriate combination across course and departmental lines. When knowledge and skills learned early in a university experience are expanded on in work at a later stage, the student's experience is reinforced and enriched.

The Big Eight managing partners recommended:

1. A "coordinating committee" should be set up to guide the educational change process. All significant stakeholders should be included, including but not limited to "the AICPA, AAA, AACSB, National Association of State Boards of Accountancy (NASBA), Financial Executives Institute (FEI), National Association of Accountants (NAA) [now the Institute of Management Accountants (IMA)] and the major firms."

2. The Big Eight should provide "leadership, guidance, and financial resources" to the coordinating committee. To this end, the firms made a "five-year commitment of up to $4 million to support the development of stimulating and relevant curricula". The White Paper stated:

> The nonclinical, confidential nature of accounting creates a faculty that designs and executes pre-entry professional education without direct knowledge of current practice. Where other professions enjoy much interaction with their teaching faculty, accounting has a persistent "schism" problem. The classroom experience is diminished by the distance between pedagogical content and practice reality. Academics and practitioners would benefit from the stimulation and challenge that come from a meaningful association. There is no model for increasing interaction between academics and practitioners in a nonclinical, confidential profession. Current efforts to integrate academicians in the practice include seminars, internships and joint conferences. While these efforts are commendable,

> a much greater level of activity must be achieved. Innovative methods to increase interaction between the practitioners and the professoriate must be created.
>
> Ethics discussions in accounting courses should build on the strong liberal arts background, including philosophy and ethical reasoning, that is essential for accounting students' educational and professional development. (Arthur Andersen & Co., et al. 1989)

The Big Eight managing partners suggested that all accounting students take at least one philosophy-based ethics course, either in a philosophy department or within the accounting or business school.

Accounting Education Change Commission (1990s)

In response to the Bedford Committee Report and the Big Eight Managing Partners White Paper, the Accounting Education Change Commission was created by the American Accounting Association with $4 million in funding from the largest public accounting firms (AECC 1989-1990). The overall objective of the Accounting Education Change Commission ("AECC") was to foster changes in the academic preparation of accountants consistent with the goal of improving their capabilities for successful professional careers in practice. Academics and practitioners in the late 1980s continued to call for changes in accounting education, following two decades of proposals from at least 17 different educational and professional groups (Needles and Powers 1990). The rhetoric on both sides included many other issues, but the overriding, uniting factor was the need to produce accounting graduates who could adapt to change. Rules, regulations, and techniques have a short half-life, and that half-life gets shorter as the pace of change accelerates. Sundem (1999) observed that the previous educational models all recognized that "with the expansion of accounting knowledge, there was no longer time in a traditional undergraduate accounting education to learn the complete body of knowledge of accounting". The challenge to accounting educators was to maintain the technical accounting

competence demanded in graduates, while increasing their understanding of accounting and business so that they can adapt and apply their technical skills to new environments.

The Memorandum of Understanding establishing the AECC specified the following as the objective of the effort:

> The overall objective of the Accounting Education Change Commission is to foster changes in the academic preparation of accountants consistent with the goal of improving their capabilities for successful professional careers in practice. These capabilities are described in the sponsoring firms' White Paper, *Perspectives on Education: Capabilities for Success in the Accounting Profession*, and in the American Accounting Association Report of the Committee on the Future Structure, Content, and Scope of Accounting Education (Bedford Committee report). Providing such capabilities will require both curriculum reengineering and supportive institutional changes by educational, professional, licensing, and accreditation bodies, *inter alia*, all with the ultimate goal of serving the public interest through the improved education of accountants. The Accounting Education Change Commission has been formed to pursue the realization of these objectives. (Memorandum of Understanding 1989)

The AECC funded innovative curriculum proposals and sought to create a "dynamic" attitude (Previts and Merino, 1998) during its five-year life (extended to seven years to facilitate handing off ongoing programs to the AAA). During its first three years, the AECC deployed task forces to develop strategies and recommend actions to accomplish the goals of the AECC set forth in its strategic plan. Those goals and task forces included the following:

> Goal 1: *Identify the goals of education for accountants* (Task Force 1A – Objectives of Education for Accountants);
> Goal 2: *Foster an environment for improvement in the education of accountants* (Task Force 2A – Leadership Support; Task Force 2B – Information Dissemination; Task Force 2C – Early Employment Experience; Task Force 2D – Regulatory Issues);
> Goal 3: *Promote implementation of improvements in the education of accountants* (Task Force 3A – Grant Program; Task Force 3B – Faculty Development; Task Force 3C – Student Recruiting; Task Force 3D – Two-Year Schools);
> Goal 4: *Reduce impediments to improvements in the education of accountants* (Task Force 4A – Faculty Incentives; Task Force 4B – University Support; Task Force 4C – Instructional Materials; Task Force 4D – Professional Examinations: Task Force 4E – Accreditation);

> Goal 5: *Measure improvements in the education of accountants* (Task Force 5A – Measurement of Educational Change; Task Force 5B – Change Commission Progress). (Sundem 1999)

One of the major AECC initiatives was a grant program to inspire change in accounting education. Beginning in 1989, the AECC solicited proposals from universities for innovative changes in accounting programs, to be funded by grants from the AECC. The first round Request for Proposal ("RFP") attracted 40 submitted proposals by February 1990, and the AECC selected five proposals for funding: Brigham Young University, Kansas State University, University of Massachusetts – Amherst, University of North Texas, and Rutgers University. The second round RFP attracted 50 submitted proposals by December 1990, and the AECC selected five additional proposals for funding: Arizona State University, University of Chicago, Universities of Illinois and Notre Dame, North Carolina A&T State University, and the University of Virginia. The final round of AECC grants solicited proposals from two-year colleges in January 1992, and grants were made to Kirkwood Community College and to Mesa Community College.

According to Sundem (1999), all grant proposals represented improvements to the accounting program at the proposer's institution, and the proposals that were selected promised benefits beyond the improvement of that one program. Successful programs also integrated changes throughout the curriculum, although Sundem observed that creativity in proposing truly new approaches to accounting education was not abundant.

The AECC also issued Position Statements and Issues Statements on challenges facing accounting education. Position Statement No. 1, *Objectives of Education for Accountants* (AECC 1990), lists the desired capabilities in accounting graduates and the implications of those capabilities for course and curriculum development, and for instructional methods. This Statement consolidated what AECC members considered to be the most important parts of the

Bedford Committee Report and the White Paper. Other Statements addressed the first course in accounting, the priority for teaching in higher education, CPA exam preparation, accounting programs at two-year colleges, the early employment experience, and how to evaluate and reward effective teaching.

By 1994, the initial term of the AECC came to an end, and additional funding from the Sponsoring Members extended the life of the AECC to permit implementation of initiatives then under way. By 1996, the activities of the AECC had been wound up and ongoing responsibilities were transferred to the AAA. Sundem (1999) evaluates the history of the AECC as follows: "The AECC, while not perfect, had a positive impact on accounting education that will be felt for years to come".

Charting the Course through a Perilous Future (2000)

Albrecht, W. Steve and Robert J. Sack, *Accounting Education: Charting the Course through a Perilous Future, Accounting Education Series, Volume 16*

In the late 1990s, four professional groups with a stated desire to improve accounting education joined together to study the current and future problems associated with accounting education. The Institute of Management Accountants (IMA), the AAA, the AICPA, and the Big 5 professional services firms created a Sponsors Task Force and funded the study. The Sponsors Task Force selected Steve Albrecht and Robert Sack to complete the research and write the study's final report (Russell, Kulesza, Albrecht and Sack 2000).

Albrecht and Sack observed that change drivers (technology, globalization, concentration of market power in large pension and mutual funds) affecting business have eliminated the old model that assumed information is expensive, and have dramatically increased the level of competition among organizations. As presented by Albrecht and Sack, Robert Elliott's value

chain diagram progresses from business events to data to information to knowledge to decisions. Activities early in the chain are substantially less valuable than later-stage activities, but accounting education traditionally has focused on the first two stages. Students need to know what cheap information means for the work they will perform as professionals. They need to know how technology is used to facilitate and drive business. Technology has made business models and transactions more complex, has shortened product life cycles, and has been the enabler for dynamic change in the business community. It has created a demand for instant feedback and instant answers.

Capacity for educating accounting students had not changed much from the early 1990s, but at the time of the Albrecht and Sack study the supply of accounting students had decreased dramatically. Other disciplines appeared to offer more attractive opportunities, diverting promising students that formerly had pursued careers in accounting. Problems included course content (curricula are too narrow and often outdated or irrelevant, driven by interest of faculty and not market demands, no exposure to globalization, technology, and ethics), pedagogy (memorization and lack of creativity), skill development (content was emphasized rather than skills), technology (teaching as though information is still costly), faculty development and reward systems (isolated from business-school peers and business professionals), and lack of strategic direction. Albrecht and Sack contended that there was a substantial need to invest in faculty development to drive curriculum change.

The Albrecht and Sack monograph identified several questions that need to be addressed in establishing curriculum and course content, including:

1. Is what we are teaching and the level at which we are covering topics really important in the business world today, or has technology, globalization, or increased competition dictated that we make substantive changes to our curriculum?

2. Are we teaching important concepts in the most efficient and effective way (using the most effective pedagogy in our teaching?
3. Are we partnering sufficiently with related and / or needed courses in other disciplines? Is there an opportunity to eliminate silos in our schools? (Albrecht and Sack 2000, 63)

Albrecht and Sack created a monograph that was widely circulated and discussed. One study found that 29.3% of all research papers published in *Advances in Accounting Education, Issues in Accounting Education,* and the *Journal of Accounting Education* between 2001 and 2007 cited the Albrecht and Sack work (Johnson and Halabi 2009).Albrecht and Sack appear opposed to a separate professional school of accountancy, but that opposition must be considered in the context in which their study was written -- accounting enrollments were declining, the top students were entering other disciplines, and the accounting firms were attempting to become broad-based professional consulting firms. The changes in the profession after 2000, including the Sarbanes-Oxley Act and a renewed focus on the importance of the attest function, were not anticipated in Albrecht and Sack's view of the future.

United States Treasury Advisory Committee on the Auditing Profession (2008)

More than a quarter century after the issuance of the Metcalf Report, agencies of the United States continued to manifest interest in the effects of the auditing profession on the financial markets. The United States Treasury Department created an advisory body to assess the auditing profession in 2007, and announced the creation of that body with the following statement:

> The Committee's objective will be to provide informed advice and recommendations to the Department on the sustainability of a strong and vibrant public company auditing profession. The Committee's charter is expected to direct it to consider, among other things, the auditing profession's ability to attract and retain the human capital necessary to meet developments in the business and financial reporting environment; audit market competition and concentration; and the financial resources of the auditing profession, including the effect of existing limitations on auditing firms' structure. A resilient and quality public company

> auditing profession is essential to the strength of the nation's capital markets. Auditors oversee the integrity of financial reporting and disclosure, critical to investor confidence and market efficiency. Because of the importance of the auditing profession to the prosperity and stability of the capital markets in the United States and the rest of the world, the Department affirms that the Committee is necessary and in the public interest.
>
> The Committee will be directed to conduct its work with a view to furthering the mission of the Department, as the steward of the economic and financial systems of the United States, to promote and encourage the conditions for prosperity and stability in the United States and the rest of the world and to predict and prevent, to the extent possible, economic and financial crises. The charter will provide that the Committee's duties are solely advisory and only extend to the submission of advice or recommendations to the Department. (Advisory Committee on the Auditing Profession 2008, A:1-2)

The Human Capital Subcommittee of the U.S. Department of the Treasury's Advisory Committee on the Auditing Profession (commonly referred to as "ACAP") issued a Report in the fall of 2008 that included a number of recommendations concerning possible future directions for the education of accountants and auditors. The Committee recommended that the AICPA and the AAA jointly form a body to provide a timely study of the possible future of the higher education structure for the accounting profession. (Advisory Committee on the Auditing Profession 2008, VI:26)

The Committee summarized the current state of accounting education as follows:

> Currently, there is no post-graduate institutional arrangement dedicated to accounting and auditing. Graduate programs in accounting are generally housed within business schools and linked with undergraduate accounting programs. The history of the development of U.S. educational programs and preparation for accounting careers reveals a pattern of evolution of increasing formal higher education, with accreditation standards following and reinforcing this evolution, and with market needs providing the impetus and context. Today, accrediting agencies have recognized over 150 accounting programs as the result of these programs' improving accounting education as envisioned by prior studies and reports.
>
> In a November 2006 Vision Statement, the chief executive officers of the principal international auditing networks noted the challenges in educating future auditing professionals, including the sheer quantity and complexity of accounting and auditing standards, rapid technological advancements, and the

> need for specialized industry knowledge. This development in the market leads to a clear need to anticipate and enhance the human capital elements of the auditing profession. As such, this vision statement provides the impetus to commission a group to study and propose a long-term institutional arrangement for accounting and auditing education.
>
> As in the past, in the face of challenges of the changing environment for the profession, the Committee believes that the educational system should thoughtfully consider the feasibility of a visionary educational model. Therefore, the Committee recommends that the AICPA and the AAA jointly form a body to provide a timely study of the possible future of the higher education structure for the accounting profession. This commission may include representation from higher education, practitioners from the wide spectrum of the accounting and auditing profession, regulators, preparers, users of the profession's services, and others. The commission would consider the potential role of a postgraduate professional school model to enhance the quality and sustainability of a vibrant accounting and auditing profession. The commission should consider developments in accounting standards and their application, auditing needs, regulatory framework, globalization, the international pool of candidates, and technology. Finally, a blueprint for this sort of enhanced professional educational structure would also require the consideration of long-term market circumstances, academic governance, operations, programs, funding and resources, the role of accreditation, and experiential learning processes (Advisory Committee on the Auditing Profession 2008, VI:26-27).

Lynn E. Turner, former Chief Accountant of the Securities and Exchange Commission and a member of ACAP, dissented from the report for a number of reasons, presented in his Dissenting Statement (Advisory Committee on the Auditing Profession 2008, X:1-3). With respect to requirements for accounting education, Mr. Turner stated:

> Given the complexities and risks of a global business environment, a post graduate program, similar to that developed at the University of Mississippi, is necessary for future accountants and auditors to provide quality services to investors and others they serve. Educators are being forced to compact too much education into too short a time period today. As a result, students are being short changed and graduating without sufficient knowledge in such areas as derivatives and finance, management information systems, distribution channels and marketing, and production and outsourcing management. In addition there is insufficient training of students as to the process of exercising sound judgment when applying accounting principles and rules to actual transactions, as well as ethical and independence dilemmas. Students are also being asked to be proficient with both U.S. and International generally accepted accounting principles, a significant issue involving a serious lack of available resources and funding the

> Committee did not address. Accounting programs need to change to reflect these substantial, significant changes in business that have occurred during the past four decades, just as the medical and legal education programs did when those professions also went through a great expansion in their knowledge base (Advisory Committee on the Auditing Profession 2008, X:1-2).

In response to the recommendations of the Advisory Committee on the Accounting Profession, the AAA and AICPA created the Pathways Commission to investigate alternative higher education paths for prospective entrants into the accounting profession. Velayutham and Rahman (2011) suggest that the Pathways Commission initiative provides a new opportunity to examine the need for Professional Schools of Accounting in addition to the existing accounting accreditation standards.

Accounting Accreditation

One of the major influences on accounting curricula during the past nearly 100 years has been the accounting accreditation standards applied by AACSB-International, the business and accounting accreditation agency. Accreditation provides assurance that graduates of accredited programs meet certain minimum standards (Mackenzie 1964), thereby qualifying them for professional practice and post-graduate education. Accreditation also provides some assurance regarding uniformity in the educational process (Stettler 1965). Stettler observed that accrediting only the school of business as a whole leaves room for gross variation in the quality of the accounting programs, and called for separate accreditation of accounting programs.

Bailey and Bentz identified the objective of accreditation as:

> … to stimulate and facilitate continuous improvement in accounting education generally and in those schools actively seeking either accreditation or reaccreditation. The process, taken as a whole, serves to encourage improvement of even the strongest programs, establishes threshold standards to challenge schools seeking accreditation, and provides guidance to those schools seeking to improve and to work toward future accreditation (Bailey and Bentz 1991).

Current standards for accounting accreditation

The AACSB accounting accreditation requirements, as revised in 1991 and 2009, do not specify particular course offerings or mandate the number of hours recommended for each area of study. The requirements are stated in terms of learning experiences and learning outcomes for the accounting program, in addition to the learning experiences expected from business education in general. The following excerpts from the current accreditation standards summarize the AACSB perspective on the role of accounting and general business education in society.

> Standard 37: The accounting curriculum stems from the roles assumed by accountants in society of providing financial and other information and ensuring its integrity. For each accounting program, learning goals must be established consistent with the mission statement. Each accounting program incorporates appropriate learning activities to ensure meeting the goals set for the program derived from the input of key stakeholders. The learning outcomes for accounting include, but are not limited to, developing, measuring, analyzing, validating, and communicating financial and other information and ensuring its integrity. Normally, the curriculum management process will result in degree programs that include learning experiences in:
>
> - The roles played by accountants in society providing and ensuring the integrity of financial and other information;
> - The ethical and regulatory environment for accountants;
> - Business processes and analysis;
> - Internal controls and security;
> - Risk assessment and assurance for financial and non-financial reporting;
> - Recording, analysis, and interpretation of historical and prospective financial and non-financial information;
> - Project and engagement management;
> - Design and application of technology to financial and non-financial information management;
> - Tax policy, strategy, and compliance for individuals and enterprises;
> - International accounting issues and practices including roles and responsibilities played by accountants within a global context. (AACSB Accounting Standard No. 37 2009, 30-31)
>
> **Business Education Standards:**
> Curricular contents must assure that program graduates are prepared to assume business and management careers as appropriate to the learning goals of the program. Contents of the learning experiences provided by programs should be both current and relevant to needs of business and management positions. This implies, for example, that present day curricula will prepare graduates to operate

in a business environment that is global in scope. Graduates should be prepared to interact with persons from other cultures and to manage in circumstances where business practices and social conventions are different than the graduate's native country. Another example of present-day relevance and currency is the need for graduates to be competent in the uses of technology and information systems in modern organizational operations. The school must determine the specific ways globalization and information systems are included in the curriculum, and the particular pedagogies used. Curricula without these two areas of learning would not normally be considered current and relevant.

Topics typically found in general management degree programs include:

- Global, environmental, political, economic, legal, and regulatory context for business.
- Individual ethical behavior and community responsibilities in organizations and society.
- Management responsiveness to ethnic, cultural, and gender diversity.
- Statistical data analysis and management science as they support decision-making processes throughout an organization.
- Information acquisition, management, and reporting for business (including information management and decision support systems for accounting, production, distribution, and human resources).
- Creation of value through the integrated production and distribution of goods, services, and information (from acquisition of materials through production to distribution of products, services, and information).
- Group and individual dynamics in organizations.
- Human resource management and development.
- Finance theories and methods; financial reporting, analysis, and markets.
- Strategic management and decision-making in an integrative organizational environment.
- Other management-specific knowledge and skills as identified by the school (AACSB Standard No. 15 2011, 70).

History of AACSB Accounting Accreditation

In the late 1970s, the AICPA proposed establishing accreditation for accounting programs under AICPA auspices. One of the motivations for separate accounting accreditation was the conflict between needs for additional accounting courses to adequately address the required body of knowledge and the conflicting business school accreditation requirements that disapproved of too much focus on any single discipline in business, including accounting. The

AACSB responded to those AICPA proposals with recommendations that the AACSB administer accounting accreditation if separate accreditation were to be implemented. However, the AACSB response did not agree that accounting accreditation was necessary, and indeed challenged the then-current perception that separate professional schools of accountancy were advisable. The AACSB objections largely centered on the possibility that separate accounting schools would interpose organizational barriers and limit cooperation with existing business faculties, and would thereby result in substantial additional costs far in excess of the benefits from a separate structure. In 1977, the AICPA and AAA expressed their willingness to take over accounting accreditation through a separate regulatory organization if AACSB did not promptly move forward with an acceptable alternative (Flesher 2007). The AACSB soon thereafter set forth the outlines of an accounting accreditation program to be administered by the AACSB, short-circuiting the AICPA initiatives in that direction.

After years of discussion regarding the need for and structure of accounting accreditation separate from business school accreditation, the first accounting accreditation standards were published by the AACSB in June 1980. By June 1982, the AACSB had accredited accounting programs (undergraduate programs with a concentration in accounting, MBA programs with a concentration in accounting, or master's of accounting programs) at 18 institutions. The initial AACSB accounting accreditation standards included objective curriculum requirements for each degree program (Brown and Balke 1983), which some accounting educators considered too prescriptive and overly rigid (Kren, Tatum and Phillips 1993). It was argued that rigid standards limited innovation, experimentation, and the development of new accounting programs (Bailey and Bentz 1991).

The AACSB revised its accreditation standards for business schools and for accounting programs in 1991 after a multi-year examination of the accreditation process. The new accreditation standards incorporated greater emphasis on mission-linked accreditation and academic processes considered necessary to the delivery of quality academic programs that create value for students. According to Kren, Tatum and Phillips (1993), faculty and administrators are responsible for developing a mission statement that describes the objectives of their program with respect to students, faculty, and resources, and demonstrating that their program of instruction flows from the mission statement. Not all quantitative requirements were eliminated in the 1991 revised standards – the use of numerical standards for faculty size and qualifications continued from the previous standards, and faculty qualifications remained one of the most important factors in the accreditation decisions. Bailey and Bentz (1991) contend that the primary emphasis on maintaining quality in accounting education remained unchanged despite the substantial changes in the accreditation process directed by the revision of the standards.

By 1992, 97 accounting programs had been accredited by the AACSB (including the four programs receiving accreditation in 1992). The accreditation standards of the AACSB reflect environmental influences on accounting education. While the accreditation standards included requirements for faculty qualifications and institutional resources in support of education, they also included consideration of the courses being offered by the accredited institution. The revised accounting accreditation standards provided more flexibility in the coverage of accounting topics and allowed for increased breadth of the curriculum. This movement to greater breadth in accounting courses was motivated by fundamental changes in both the practice of public accounting and the financial management of corporations, according to Bailey and Bentz (1991).

Sennetti and Dittenhofer (1997) explored the likely costs of changing the accounting curriculum to a less-specialized structure consistent with AACSB recommendations, and concluded that private, research-funded, AACSB institutions would experience lower costs from curriculum changes than public (and some private), non-AACSB institutions not classified as Research I or II by the Carnegie Foundation. These results suggest that research into accounting curricula should include consideration of the organizational structure and scholarly focus of the institution.

Accreditation Requirement for Doctorally-Qualified Faculty

One of the major changes in accounting education since the 1950s is the advent of accreditation standards that require substantial numbers of accounting faculty to have doctoral degrees ("Academically Qualified"). During the 1950s, it was common for educators to accept a master's degree and a CPA certificate as equivalent to a doctoral degree when evaluating faculty credentials (Langenderfer and Weinwurm 1956). Those students who pursued a doctoral degree in accounting preliminary to a teaching career were also viewed as limited:

> Too many doctoral candidates, aspiring to be accounting teachers, take little or no accounting work after their typical undergraduate curriculum in accounting; to the extent that they do take additional courses, they most frequently are taught along the traditional lines. Doctoral candidates usually do not learn any of the tools of their trade, such as teaching methods and procedures, and it is not typical to permit a doctoral student to conduct dissertation research in areas which could conceivably help to improve accounting curricula (Langenderfer and Weinwurm 1956).

In the 1963-64 academic year, 38 of the 113 AACSB member colleges offered doctoral programs with majors or concentrations in accounting (Stone 1965), with ten of those programs having been initiated between 1961 and 1963. Thirty-three of those programs had reported significant changes in their doctoral programs within the previous few years, with most reporting additional emphasis on quantitative methods, research methodology, and other tool areas. The

following table summarizes the accounting doctoral degrees tabulated by Stone up through the 1964-65 academic year:

Table 8 - 1965 Doctoral Degrees

Doctoral Degree Production by AACSB Schools	1957-61	1962-63	1963-64	1964-65
Degrees Awarded	150	64		
Degrees Anticipated			80	121

The additional supply of doctorally-qualified faculty trained in quantitative methods and rigorous research methodology contributed to a shift in the academic literature away from descriptive articles and statements designed to influence accounting policy and practice towards more empirically-based publications. By 1970, recommendations that career accounting teachers should have earned doctoral degrees were commonplace (see Boyd et al. 1970). However, among the recommendations of the Committee on Masters Programs in Accounting was a clear statement that the CPA certificate (with practical experience) should be considered necessary for those teaching courses more directly related to public accounting (Boyd et al. 1970), and a recognition that the CPA certificate as well as responsible business and accounting experience enhanced the qualifications of accounting educators.

The 2011-12 edition of Hasselback's *Accounting Faculty Directory* includes a tabulation of the 7,381 doctorates in accounting that have been awarded through 2008 (Hasselback 2011). That list includes 103 institutions that have graduated at least one PhD or DBA in accounting, although twelve institutions are indicated as currently inactive. Seventy-two institutions have produced ten or more accounting doctoral graduates during the 1999-2008 decade, with the three most active programs (Texas A&M, Rutgers, and the University of Texas at Austin) each producing 30 or more doctorates. Producing doctorally-qualified faculty can be interpreted as an

indication of leadership in accounting education, and 31 of the institutions on the Hasselback list of doctoral programs are included in the institutions selected for the research in this dissertation.

Accounting education is designed to prepare students for careers in the accounting profession, and many educators have substantial experience in accounting practice and relevant professional certifications (Nelson 1983, 71). A 1996 study by Newell and Langsam found that 59% of accounting doctorates they surveyed who received their degrees in 1990 had at least some public accounting experience, with 43% having two years or more in public accounting. Similarly, 13% of the respondents had two years or more of corporate accounting experience, and 23% of the respondents had two years or more of business (non-accounting) experience (Newell and Langsam 1996, 91), although these categories are not mutually exclusive and some respondents had more than one type of experience before entering their doctoral program.

AACSB Accounting Accreditation Standard 34 mandates that accounting faculty have a sufficient number of faculty members who hold professional credentials or certifications consistent with program objectives and each individual's teaching and research responsibilities (AACSB 2009). AACSB Accounting Accreditation Standard 36 indicates that the accounting faculty must maintain a portfolio of relevant experience, and all accounting faculty members must demonstrate ongoing professional interactions (AACSB 2009). However, one of the recurring criticisms of accounting education is that faculty members tend to focus on academic research and publications while neglecting the practical aspects of accounting, and that academic training at the doctoral level is not connected to the needs of the accounting profession. Porter and McKibbin (1988) found that business faculty in general did not produce research designed to be accessible or attractive to practitioners, and attributed the swing away from practice-oriented research over the previous 30 years to prescriptions presented in the 1959 Pierson and Gordon &

Howell reports. Siegel, Sorensen, Klammer, and Richtermeyer (2010a) suggest that there are significant gaps between what accounting educators teach and what practicing accountants do. There are numerous professional certifications in the accounting field, including Certified Public Accountant ("CPA"), Certified Management Accountant ("CMA"), Certified Internal Auditor ("CIA"), and more than 30 other designations (see Hutchinson and Fleischman, 2003, for example), and most of those certifications require the applicant to demonstrate that they have relevant practical experience as well as the ability to pass the certifying examination. The presence of an accounting certification can therefore be used as a proxy for whether the educator has experience in accounting practice, although non-certified educators may certainly have practical experience as well. Some accounting doctoral programs, including the University of Mississippi, require that their graduates achieve CPA certification before completion of the program, but similar requirements are not universal. Possession of professional certifications does not make the list presented by the Joint AAA/APLG/FSA Doctoral Education Committee of twelve qualities sought by doctoral programs in potential admittees (Behn et al. 2008).

The number of different accounting certifications has increased substantially over the past several decades, as a 1975 study listed only the CMA, the CIA, the CPA, and the Chartered Bank Auditor (CBA) as accounting-intensive professional certifications (Kistler and Guy 1975). The first three designations listed above are tabulated in the Hasselback *Accounting Faculty Directories*, and those designations were available throughout the period studied.

The motivation for pursuing professional certification is typically to provide additional qualifications to help accountants achieve their career goals (Coe and Delaney 2008), and for most students those career goals are typically linked to the practice of accounting. In their survey of more than 350 accounting programs, Coe and Delaney (2008) found that each particular

certification generally appears to be promoted to the same extent that faculty members possess the certification.

> For example, 97% of the respondents' schools have faculty members who are CPAs and 94% of the curricula promote the certification. Likewise, faculty members in 64% of the schools hold the CMA, while 61% of programs promote it (Coe and Delaney 2008).

This research also found that certifications beyond the CPA and CMA were desirable to employers, leading Coe and Delaney to conclude that other certifications need to be considered in the design of accounting curricula. Sack and Albrecht (2000) challenged accounting educators to question whether what they are teaching and the level at which they are covering topics are really important in the business world, and the question of faculty certification appears to be relevant to an investigation of changes in the accounting curriculum, while Nelson (1983) noted that efforts to make the classroom more practice-oriented do not result in more compensation, more esteem, or better job prospects for accounting educators, and therefore the absence of positive rewards acts to discourage such efforts.

Professional Schools of Accountancy

The 1978 AICPA reaffirmation of Council policy in support of the 150-hour educational requirement also contained a statement encouraging the development of quality programs or schools of professional accounting (AICPA Task Force 1978). This encouragement followed observations in the early 1970s by influential accounting academicians and professionals that business school deans had diminished the prominence formerly given to accounting courses in the college curriculum (Paton 1971; Savoie 1971; Burton 1971). In order to restore accounting instruction to the necessary stature, Paton recommended the creation of separate professional schools of accounting, at least for the larger educational institutions, a recommendation largely

consistent with Savoie's observations. Whether one accepts Van Wyhe's 1994 characterization of the history of accounting education as a "search for status", professional schools of accounting were perceived as a mechanism to allow accounting academics greater control over the educational process. Burton presented the argument that accounting education needed to be separate from general business education because accounting required a different attitude and approach:

> Business schools tend to emphasize an approach geared substantially to profit maximization in a competitive environment. Accountants, on the other hand, need a different approach. They need what might be called the dispassionate professional approach. Alone among the professions, the accountant accomplishes his social purpose by being independent of his client rather than serving the client's interest to the exclusion of others or following his own profit-maximizing interest. . . . I think this is something that needs emphasis which a business school is less likely to give than a professional school of accounting (Burton 1975, 6).

Summers (1974, 57) provided a set of goals that he suggested could be used to measure the success of a School of Accounting:

1. Establishing uniqueness
2. Winning recognition and prestige
3. Relating standards of professional practice to educational standards
4. Achieving a balanced emphasis on theory and skill
5. Maintaining good relations with other elements of the university
6. Determining the role of liberal arts in professional education
7. Educating professionals who seek roles as citizen-leaders
8. Helping accountancy define its roles in society
9. Seeking out students in sufficient numbers
10. Maintaining autonomy from all outside control
11. Maintaining good relations with other professions
12. Maintaining good relations with emerging paraprofessions
13. Providing adequate continuing education for those "in service".

The Report of the Metcalf Committee recommended "The preparatory education of individuals who enter the profession of independently auditing publicly owned corporations should be strengthened through such means as the establishment of professional schools of

accounting", providing additional impetus from outside the accounting profession to the movement towards professional schools. (Metcalf 1976)

The first professional schools of accountancy were created during the 1970s, starting in 1973 at C.W. Post – Long Island University and followed by the University of Denver (1975), Brigham Young University (1976), Louisiana Technological University (1976), the University of Florida (1977), the University of Georgia (1977), the University of Missouri – Columbia (1977), the University of Alabama (1978), and San Diego State University (1978). Seven more professional schools of accountancy were designated in 1979, including DePaul University, Golden Gate University, the University of Mississippi, Mississippi State University, Oklahoma State University, the University of Southern California, and the University of Southern Mississippi. National conferences on professionalization of the accounting curriculum (1976 and 1977) led to the establishment of the Federation of Schools of Accountancy ("FSA") in December 1977 with 21 charter members[2].

The primary objectives for FSA were stated as follows:

1. Encourage and assist in the development of quality professional accounting programs extending through post-baccalaureate degrees within universities.
2. Promote, monitor, and support the development of schools of accountancy
3. Provide a forum for the exchange of views among institutions interested in professional accounting programs.
4. Encourage and support a broad spectrum of accounting research activities at member schools. (Williams 1984)

The AICPA Board of Standards for Programs and Schools of Professional Accounting (1977) identified certain conditions that are essential for the effective functioning of a

[2] University of Alabama, Brigham Young University, Clemson University, University of Denver, DePaul University, Drake University, University of Florida, Georgia State University, University of Georgia, University of Illinois, Long Island University – C.W. Post, Louisiana State University, Louisiana Tech University, Mississippi State University, University of Mississippi, University of Missouri – Columbia, University of Nebraska, North Texas State University, Northern Illinois University, Oklahoma State University, San Diego State University, University of Southern California, University of Tennessee, Texas Tech University, Utah State University, University of Utah (Williams 1984).

professional program. Two of the essential characteristics were recognized as “identity” and “autonomy”. White (1982) studied the organizational structures of the Schools of Accounting that had been established by that time, and found varying degrees of autonomy had been achieved. According to White, “Effective administrative autonomy has been secured or exists in areas of curriculum, budget, fund raising, and student standards in the Schools of Accounting. Substantially less autonomy exists in controlling faculty promotion and tenure decisions.” He noted that the establishment of some schools reflected only a name change, which at least achieved a separate identity.

During the years following its inception, the FSA worked to support the establishment of separate schools of accountancy. After the 1980s, the number of separate schools of accounting reached a peak level and subsequent growth appeared to lose momentum. Factors relating to that loss of momentum could include changes in AACSB accreditation requirements, particularly the adoption of separate accounting accreditation. Many business school administrators argued that becoming accredited in accounting was sufficient, obviating the need to establish a separate school (Williams 1984).

After the limits of its push for separate school status had been reached, FSA changed its mission definition, and continued to work for the implementation of the 150-hour education requirement. The mission statement of the FSA became “encouraging, promoting, assisting and supporting the development of high quality accredited programs of education for the accounting profession that lead to a graduate degree; and being a leading advocate of accredited graduate accounting programs”(Federation of Schools of Accountancy 2011). FSA members were no longer limited to those institutions with separate schools of accountancy, but also include institutions interested in encouraging, promoting, assisting and supporting the development of

high quality accredited programs of education for the accounting profession that lead to a graduate degree (Federation of Schools of Accountancy 2011). By 2000, the FSA had 164 members, including 79 full members, 66 affiliates, and 15 accredited affiliates. By 2010, there were 110 full members of FSA (including 15 that had upgraded from affiliate or accredited affiliates), 36 affiliates, and 10 accredited affiliates.

Williams (1984) cites a number of forces inspiring the movement to separate schools of accounting, including the maturation of the accounting profession, the changing role of accountants, the knowledge explosion, the increasing supply of accounting students during the 1970s, and the changing environment in business schools regarding accounting education following the Pierson and Gordon & Howell Reports. He also contends that public expectation of increased responsibility for accountants is another dominant factor driving the School of Accounting movement. In the 1980s, legislative support for postbaccalaureate education (the 150-hour education requirement) was seen as another reason to create separate schools of accounting. The inception of separate accounting accreditation may have removed some of the reasons for establishing a separate professional school of accounting. Velayutham and Rahman (2011) argue that a study of the demise of the Professional School of Accounting (PSA) movement is inextricably linked with the emergence of AACSB accreditation of accounting programs. They observe that the PSA movement was an attempt to gain independence from the school of business, while AACSB accreditation appears to be designed to ensure that accounting programs continue to be part of the school of business. While there may be a common perception that "in order to receive AACSB accreditation, the PSA had to be affiliated with the business school, reflecting a perspective that accounting is a functional area of business education"

(Velayutham and Rahman 2011), that perception is contradicted by Flesher's *The History of AACSB International:* (2007, 56-57):

> . . . in the summer of 1978 when the University of Mississippi announced that it was forming a completely autonomous school of accountancy with a stature equal to that of the school of business. The new school of accountancy had been approved by the university chancellor and the board of trustees in June 1978. In July 1978, Ronald R. Slone, the AACSB director of accreditation, sent a strongly worded letter to the administration of Ole Miss warning that the University's plans for a separate school might directly jeopardize the accreditation of the School of Business Administration, because such a move would leave the business dean without sufficient participating control over key decisions at the School of Accountancy. However, AACSB was forced to back down due to pressure from the AICPA.
>
> Two changes occurred at AACSB as a result of the Ole Miss decision to establish a separate school. First, a university's decision to establish a "free-standing" or separately administered accountancy school would not be grounds for challenging the accreditation of the institution's business program. Instead, the overriding consideration would be the quality of the accounting program – not how or by whom it is administered.
>
> The second change was that AACSB had to remove its requirement that the business dean must have "participating control" over all programs. The replacement verbiage emphasized "the key role and responsibility of the accounting faculty with respect to all facets of the accounting program." (Flesher 2007, 56-57)

Despite the changes in the structure of the AACSB requirements after the establishment of the School of Accountancy at Ole Miss, the momentum towards separate accounting schools dissipated by the early 1980s. The continued inclusion of accounting programs within the business school was perhaps foreshadowed by the findings of Bremser, Brenner and Dascher (1977) that business school deans from AACSB-accredited institutions largely opposed the creation of separate professional schools of accountancy. Business school deans supported the move to separate accounting accreditation by the AACSB for a number of reasons:

> . . . to keep accreditation in the hands of educators rather than professional practitioners, to blunt a movement toward freestanding schools of accountancy (which was perceived to have been a threat to the integrity of business schools,

and (an argument for acquiescence rather than active support) to emphasize the fact that accounting accreditation would be entirely voluntary, i.e., to be entered into independently of other bachelor's and master's level accreditation (Porter and McKibbin 1988, 201-202).

150-Hour Requirement for Licensure as a CPA

As previously noted, the Perry Commission Report (1956) and the Horizons Report (1967) recommended a broad-based university education for beginning CPAs, and observed that more than four years of college education could be necessary to cover the body of knowledge expected of entrants into the accounting profession. The Albers Report (1983) called for five years of education for entry to the profession. These reports are two indications of a widespread concern among accounting educators and accounting professionals that the complexity of modern accounting required additional education beyond the traditional four-year undergraduate accounting program.

Florida was one of the first states to pass legislation mandating 150 hours of education for licensure as a CPA, in 1979 establishing a requirement that by 1983 entrants to the accounting profession must have 30 hours of education beyond the baccalaureate degree before becoming eligible to take the CPA exam in Florida. The Florida Institute of CPAs (FICPA) stated the objectives of the legislation as follows:

1. To provide an academic background that will support the knowledge expansion of the profession over a person's career span;
2. To broaden the person's knowledge in areas of study that are peripheral to the accounting discipline;
3. To increase the accounting expertise of the individual;
4. To increase the overall standards of entry into the accounting profession;
5. To increase levels of personal integrity and professional ethics;
6. To increase commitment to the profession by those preparing for entry;
7. To enhance the communications and interpersonal skills of new professionals;
8. To increase the success rate on the CPA examination;
9. To provide an educational background that is comparable to that of clients who have increasingly higher and more sophisticated ideas and levels of competence; and

10. To attract the best and brightest students into the profession (Anderson 1988).

The objectives stated by the FICPA are similar to the arguments in favor of additional accounting education espoused by numerous educators and accounting societies. The AICPA supported requirements for 150 hours of college education through statements of policy in 1978, 1983, and 1986. Beginning in 1984, the AICPA promoted a model accountancy act that included requirements of 150 hours of education for certification as a CPA, and worked to influence its adoption by the states. A vote of the AICPA membership in 1988 resulted in 83% of the members endorsing a requirement that AICPA members accepted after 2000 must have 150 hours of college education. Most of the states eventually adopted the 150-hour education requirement; by 2002 there were 38 states and three other jurisdictions that required 150 hours as the minimum qualification to sit for the CPA exam. The FSA was also supportive of the 150-hour requirement, and changed its mission statement to specifically mention graduate education in accounting.

However, the 150-hour requirement was not universally supported. For example, Albrecht and Sack (1999) argued that requiring graduate training in accounting served to deter potential candidates from choosing accounting as a career. PricewaterhouseCoopers (2003) questioned the value of masters-level training in accounting, and called for additional "equivalent alternatives" for entry to the profession including substituting additional experience or continuing professional education for some of the training comprehended in the 150-hour education requirement. The PricewaterhouseCoopers study was motivated by the needs of the largest accounting firms for a consistent supply of new accountants:

> The accounting profession cannot function effectively without an adequate and predictable flow of new talent. The quality of the talent, as measured by performance after employment, must be consistent over time, and the availability

> of talent must not be unduly influenced by external factors, including the economic climate. (Pricewaterhouse Coopers 2003)

The debate over the 150-hour education requirement still continues, although by now all 55 jurisdictions have implemented the requirement. The Enron and WorldCom accounting scandals stimulated fresh public interest in the quality of professional accounting services and consequent needs for additional training. Many professional organizations, including AICPA, FSA, and NASBA remain committed to the 150-hour education requirement. Research into the factors affecting the supply of accounting graduates indicates that the 150-hour education requirement can explain a substantial amount of the variation in the number of graduates (Billiot, Glandon, and McFerrin 2004).

NASBA Draft Education and Licensure Requirements for CPAs (2008)

While NASBA supported the recommendations of the Albers Commission in the 1980s and worked with the AICPA to promote a Model Accountancy Bill including 150-hour educational requirements, that organization did not take an active role in proposing its own requirements for licensure and education until 2002, after the major accounting scandals called into question the accounting profession's previous approach to self-regulation. In 2002, NASBA issued a report calling for requirements for candidates to have completed 150 hours of education before sitting for the CPA exam, and suggesting that a master's degree would be desirable for candidates. In 2005, NASBA released a proposal to revise the Uniform Accountancy Act with specific requirements for courses. Those course requirements included prescribed courses or course content in ethics, communication, and research and analysis. Other accounting associations did not agree with the NASBA recommendations, and the recommendations were revised in 2006 and again in 2008.

At the time the NASBA draft was published in 2008, the laws of 48 states were substantially equivalent to the Uniform Accountancy Act (UAA) and required 150 hours for licensure as a CPA; however some of these 48 boards provided other tracks for licensure. Since that time, California and New York have also established 150-hour requirements for CPA licensure. The UAA does not address the myriad other requirements promulgated by boards that define the 150-hour educational requirement. These differences vary significantly among course requirements. Some boards list specific numbers of accounting and/or auditing semester hours; some boards go a step further and require specific courses at specific levels; and 13 other boards trend towards a broad-based liberal arts/humanities course requirement once the 120 hours of undergraduate work has been completed. NASBA recently adopted thoroughly vetted model rules suggesting a consistent approach to these educational requirements, but implementation could be slowed by entrenched, diverse programs. Hence, although only seven boards are "non-UAA," in reality, because each board already has a unique definition of the 150-hour education rule, the 48 boards that require 150 hours are not at all uniform and as previously mentioned, provide different paths to licensure.

The NASBA Draft does not debate the 150-hour education requirement for licensure. The deliberation underlying the Draft is simply whether sitting for and passing an examination at a minimum of 120 hours and subsequently fulfilling the 150-hour education track is harmful in any way to the public. NASBA has found no direct evidence of detriment to the public interest in those states allowing candidates to sit for the CPA examination at less than 150 hours of education and later fulfilling the 150-hour education requirement in order to receive licensure.

Factors Motivating Change in Accounting Education

Nelson, Bailey, and Nelson (1998) identify three external factors motivating changes in accounting education over the previous decade, including:

1) the "White Paper" by the largest national CPA firms, and the accompanying $4 million to found and fund the Accounting Education Change Commission in 1989;
2) the 150-hour educational membership requirement vote of the AICPA in 1988 and subsequent changes in state licensing requirements nationwide; and
3) the new accreditation requirements adopted by the AACSB in 1991 (Nelson, Bailey, and Nelson 1998).

They contend that accounting education changed more in that decade (1988-1998) than in the previous 90 years. While the accounting scandals of the subsequent decade and the passage of the Sarbanes-Oxley Act in 2002 have produced substantial additional change in the practice and regulation of accounting, the Nelson, Bailey, and Nelson contention provides a potentially useful starting point for analysis of accounting education. The 150-hour requirement can be traced back through the Albers and Bedford Commissions, but the recommendations of those Commissions regarding changes in accounting curricula were not broadly accepted until the states began adopting 150-hour legislation.

Summary

As discussed above, some of the major factors associated with changes in accounting education over the past several decades include increases in the amount of education required before qualifying to sit for the CPA exam, greater availability of graduate (master's) programs, increases in the proportion of faculty with doctoral degrees, the imposition of separate accreditation standards for accounting programs, and the establishment of professional schools of accountancy. Public awareness of accounting scandals and the need for reliable accounting information, as stated in the Metcalf, Cohen, Bedford, Treadway and ACAP Reports and as

discussed in the Big Eight Managing Partners "White Paper", provided substantial motivation for educators to consider making changes in accounting education. While the movement to establish professional schools of accountancy lost its momentum after the AACSB implemented separate accreditation for accounting programs, investigation of whether there are differences between professional schools and other schools with accounting accreditation is still instructive regarding the factors leading to change in accounting education.

The remainder of this dissertation develops research questions to investigate the relationship between factors believed to drive changes in accounting curricula and their effects on the curriculum; constructs a research methodology to address the research questions; presents information gained from application of the research methodology to the data collected for analysis; and interprets the findings of the analysis.

CHAPTER 3

RESEARCH DESIGN AND DATA COLLECTION

This dissertation examines the requirements to receive a degree with a concentration or major in Accounting and how those requirements have changed over the period from the mid-1950s to the current day. By exploring the changes in degree requirements over the past half-century, the dissertation provides insights into the forces acting to change accounting education and may contribute to a better understanding of how desired changes in accounting education may be implemented in the future. The research questions in this dissertation are investigated through comparisons of accounting program profiles over time at selected institutions and between selected institutions with differing characteristics. Those comparisons identify the factors that have contributed to change in accounting degree requirements and provide an indication of which factors appear to be most closely related to the changes experienced. This dissertation does not test statistical relationships between dependent and independent variables. Therefore, instead of using formal hypotheses to confirm relationships between forces acting on accounting education and the empirical observations about the accounting degree requirements, research questions are used.

Development of Research Questions

Historically, efforts to change accounting education have taken several different approaches, including: normative conceptual discussions outlining the elements desired in the accounting body of knowledge (e.g. Perry 1956, Roy and MacNeill 1967, Bedford 1986),

supporting changes in the organizational structure of accounting programs within universities (Federation of Schools of Accountancy 1978), incorporating suggested educational programs into accreditation requirements (AACSB 1983), working to change state accountancy laws to alter the prerequisites for taking the CPA examination (Ellyson, Nelson and MacNeill 1985, 95), establishing and funding pilot projects to demonstrate desired educational approaches (Accounting Education Change Commission 1989-1996), focusing on desired educational outcomes (AACSB 1991), and still more normative discussion of the desired content of the accounting curriculum (Albrecht and Sack 1999). The Advisory Committee on the Auditing Profession's 2008 Report to the United States Treasury is the most recent completed effort to address desired changes in accounting education, while the Pathways Commission activities are ongoing at this time.

The following section discusses a number of factors that could affect changes in accounting curricula, to provide a basis for identification of research questions to investigate. Those factors are drawn from the history of efforts to change accounting education over the past half-century. It should be noted that the period under review begins in the 1960s at a time when states increasingly required university education before candidates were allowed to sit for the CPA examination, coincident with a broader societal emphasis on higher education. The expansion of educational requirements through legislation or regulation underlies the focus on changes in accounting program requirements at institutions of higher education, first through the increased expectation for college education for most entrants to the accounting profession by the 1960s, and subsequently through efforts to expand educational requirements beyond the undergraduate degree in the 1970s and the following decades. Over the periods examined in this dissertation, graduate education became more prevalent among entrants to the accounting

profession, motivating the exploration of undergraduate and graduate accounting programs through analysis relevant to the research questions presented below.

What are the factors that affect changes in accounting curricula?

Possible factors that could affect accounting curricula include factors related to regulatory and legislative action. For example, as far back as the 1920s, there were calls to extend accounting education beyond the traditional four-year university degree, but no widespread extension of college curricula occurred until Colorado and Florida enacted legislation in the 1970s to require 150 hours of college education for candidates sitting for the CPA examination in those states. Beginning in 1978, the AICPA adopted policies supporting legislative changes to require 150 hours of education and worked with state accounting societies and accounting educators to implement such legislation in all states (Chenok 2000). Those legislative changes took place at different times over the ensuing three decades. Anecdotal information indicates that many institutions began offering master's degrees in accounting or combinations of bachelor's and master's degrees coincident with the advent of 150-hour legislation in their states. This history suggests the following research questions**:**

Research Question 1a: How do changes in legislation that require 150 hours of education to sit for the CPA examination relate to changes in undergraduate accounting program requirements?

Research Question 1b: How do changes in legislation that require 150 hours of education to sit for the CPA examination relate to changes in Master's program offerings?

Another change in the regulatory environment relating to accounting education is the availability of separate accreditation for accounting programs, beginning in 1982. While accounting accreditation is a voluntary undertaking, competitive pressures and other motivating elements have inspired more than 170 institutions to obtain and maintain accounting accreditation through 2011. Differences in the timing of accreditation among those institutions suggest the following research question:

Research Question 2: How does obtaining accounting accreditation relate to changes in accounting program requirements?

Over the past several decades, there have been a number of commissions and other entities applying public pressure for change in accounting practice, which in turn may affect accounting education. Notable examples include the Trueblood Committee Report (1974) recommending that accounting should strive for "decision-usefulness" and supporting the formation of the Financial Accounting Standards Board, the Metcalf Report (1976) and the Cohen Commission Report (1976) calling for changes in auditing relationships, the Treadway Commission Report (1987) altering the auditor's responsibility for detecting fraud and establishing the Council of Sponsoring Organizations (COSO) framework for ongoing monitoring and improvement of auditing, and Sarbanes-Oxley legislation (2002) addressing perceived conflicts of interest between auditing and consulting responsibilities (among other issues). Since those reports and legislation applied throughout the United States, any change in

accounting education related to those pronouncements should be reflected at approximately the same time in all states. This suggests the following research question:

Research Question 3: How do national calls for changes in accounting practice relate to changes in accounting program requirements?

In addition to the legislative and regulatory factors discussed above, organizational and institutional characteristics can affect the speed and extent of change in curricula and program requirements. Relevant institutional characteristics may include the following:

- Orientation (Carnegie classification)
  - Doctoral-granting / non-doctoral granting
  - Research
  - Masters
- Public / private
- School of accountancy / department
- Faculty size
- Faculty certifications

Consideration of those organizational and institutional characteristics suggests the following research question:

Research Question 4: How do organizational and institutional characteristics relate to changes in accounting program requirements?

A related issue concerns the research orientation of the institutions under study, as the period reviewed coincides with a widespread move to doctorally-qualified faculty rather than the previous reliance on educators with master's degrees and professional certifications. An emphasis on research qualifications may not directly affect the accounting curriculum, but may

impact the focus of the educator and their perception of the importance of close ties between accounting practice and accounting education. A corollary question involving the institutional characteristics is therefore:

Corollary Question 4: How have faculty characteristics changed over time?

The factors and research questions identified above provide some insights into changes in accounting education. However, it must be recognized that these are not the only elements that could contribute to changes in accounting education. For example, output market factors, such as public expectations for competencies, growing interest in and requirements for functional and industry specialization, and the proliferation of specialized credentials and certifications available to accountants may also have some impact on changes in accounting education. Furthermore, additions to the expected body of knowledge, for developments such as changes in capital markets, the proliferation of accounting standards and changes in the way information is stored and retrieved (e.g., accounting codifications), and the application of technology to accounting information, contribute to changes in the content of accounting courses. Broader demographic changes, such as the successive impacts of the Baby Boom, Generation X, and Millennial generations on education and commerce, greater female participation and broader diversity in the workforce, and the effects of an aging population on business and intergenerational transfers of wealth, also contribute to changes in the environment, which may impact accounting education. One additional factor, the influence of seminal educators (e.g., Ray Sommerfeld and the changes his students have contributed to the way tax research is taught), clearly drives changes in accounting education as well. However, these broadly pervasive forces are not susceptible to isolation and measurement and therefore are beyond the scope of the research questions considered in this dissertation.

Which factors have greater impacts on the curriculum?

Analysis addressing the research questions identified above is only productive if it not only identifies impacts of relevant factors, but provides the basis for measurement so that those impacts can be evaluated. Measuring impacts requires differentiating between those institutions that have certain characteristics and others that do not have those characteristics, and determining whether the groups demonstrate different patterns in their curricular changes. Principal component analysis is utilized to evaluate whether institutions can be analytically separated into groups possessing similar characteristics. As an alternative, comparison of groups is done using chi-square analysis of statistical associations between groups. Analysis of the factors considered in the research questions and their impact, if any, on changes in the accounting curriculum permits high-level evaluation of which factors appear to be related to the greatest changes in the accounting curriculum. That evaluation leads to one of the contributions from this dissertation, which is a consideration of the following question:

What are the implications for change in accounting education?

The research in this dissertation measures change in accounting education by first identifying course requirements for obtaining an undergraduate accounting degree, including specifically required courses, course hours required to achieve an accounting degree, and the number and distribution of electives, and incorporating that information in a profile for each institution. Institutions to be included in the sample are further discussed below. Since changing educational requirements is typically a process that requires substantial time, the research was designed to identify changes over time by examining selected institutions longitudinally to

determine the published requirements to obtain an accounting degree from each institution, observing changes at the end of each decade after the starting point. The Pierson Report presents a summary of typical requirements for accounting degrees in 1959, close to the timing of the Perry Report. To validate the Pierson summary, information was collected on requirements for undergraduate accounting degrees at a subset of selected institutions in the late 1950s and profiles were developed for those institutions with available information. Those profiles were compared to the Pierson summary to confirm its general indications of the requirements to obtain an accounting degree in the 1950s. Additional information was collected on requirements for undergraduate accounting degrees at a subset of selected institutions in 1965-1966, before the publication of the Horizons Report. Since the Horizons Report was published in 1967, it is instructive to determine whether accounting curricula changed between the 1966 and 1976 academic years.

The research sample includes "snapshots" of data from selected institutions in the population of interest starting in 1965-1966 and every ten years thereafter (1975-1976, 1985-1986, 1995-1996, and 2005-2006), following the sample selection methods used by Fogarty and Markarian (2007) and Fogarty and Carduff (2011), among others. Data were also collected from the selected institutions for a recent academic year (2010-2011 or 2011-2012). For institutions that did not have undergraduate accounting programs for the entire period being reviewed, the analysis includes those institutions for the sample year in which the undergraduate accounting program was first reported and for each of the remaining decades consistent with the overall analysis. The research sample includes institutions that began offering master's degrees in accountancy during the period being reviewed.

The research also analyzes the profiles of the accounting degree requirements for each selected year, including investigating the use of principal component analysis and other analytical techniques to identify patterns of relationships in a cross-sectional analysis. Principal component analysis examines relationships between a set of observations of possibly correlated variables into a set of values of uncorrelated variables called principal components, designed so that successive components explain as much of the variance in the observations as possible. Explanatory variables considered in the longitudinal and cross-sectional analyses include: year of initial accounting accreditation, year when the accounting accreditation requirements changed, presence or absence of 150-hour requirements in the home state of the institution, the Carnegie classification and scholarly orientation of the institution, whether the institution is private or public, size of the accounting faculty, number of faculty members with professional certifications, and the organizational structure of the institution (separate School of Accountancy or accounting department within a business school or college).

Information on the number of accounting faculty members and their ranks, education, length of service, and profession certifications was extracted from the Hasselback *Accounting Faculty Directories* for 1975-1976, 1980-1981, 1985-1986, 1995-1996, 2005-2006, and 2011-2012. The titles reported for each faculty member were used to classify them as tenure-track (e.g., Professor, Associate Professor, and Assistant Professor) or non-tenure-track (e.g., Instructor, Lecturer, Senior Lecturer, Adjunct, Clinical, and Executive in Residence). Visiting faculty, emeritus faculty, and retired faculty members were excluded from the analysis. While Hasselback makes no representation that the information in his directory is complete or current, the Hasselback directories do represent a comprehensive source of information on accounting

faculty composition and qualifications, and the information is believed to have been gathered consistently over time.

The research includes institutions representing leaders in accounting education, using accounting accreditation by the AACSB as a selection criterion. In September 2011, there were 167 institutions in the United States with AACSB accounting accreditation, including a broad spectrum of geographic locations and types of institutions. While the CPA examination was made uniform across all states after many years of effort (Heimbucher 1961), the multiplicity of jurisdictions establishing educational requirements to take the CPA examination and experience requirements to obtain licensure have in the past contributed to substantial differences in the qualifications of CPAs between states. According to Heimbucher,

> Substantial variations in requirements for the CPA certificate tend to create confusion as to what the certificate really means. . . . A wide range of levels of competence within the profession delays public acceptance of it as a learned profession (Heimbucher 1961).

Trueblood (1963, 92) reported that only nineteen states at that time required more than a high-school education to qualify to take the CPA exam. Connecticut, Florida, Hawaii, New Jersey, New York, and South Dakota required college degrees in 1963. States that had enacted legislation for an educational requirement at some future date included Arizona, California, Idaho, Illinois, Massachusetts, Nevada, New Mexico, Ohio, Pennsylvania, Rhode Island, Utah, Virginia, and West Virginia. Changes in undergraduate accounting program requirements from the 1960s to the present reflect the advent of required college education in the thirteen states with educational legislation awaiting implementation and the thirty-one states that adopted educational legislation subsequent to the Trueblood article.

To address the implications of the 150-hour education requirement as they affect undergraduate and graduate accounting programs, institutions from several different states are

examined, including all states with six or more schools possessing AACSB accounting accreditation in 2010. Using these institutions as the group for analysis is done in order to provide a manageable yet meaningful sample. The states selected (California, Florida, Illinois, Mississippi, New York, Ohio, Tennessee, Texas, and Virginia) include a substantial number of institutions with accredited accounting programs, and states in all three conditions implied by Trueblood (1963) – college education required in 1963, college education requirement pending in 1963, and college education requirement established subsequent to 1963. Noble (1950) provides a precedent for examining AACSB schools utilizing the assumption that they would represent a fair cross-section of course offerings and requirements in the leading schools of the country. Stettler (1965) argued that "even schools not possessing the financial capacity to bring themselves up to levels that would warrant accreditation would nevertheless be guided by accreditation standards in making many important program decisions", and suggested that non-accredited programs would attempt to follow the lead of the accredited schools.

The states selected for analysis include Florida, Tennessee, and Mississippi representing states where the 150-hour education requirement was adopted relatively early, Illinois, Texas and Ohio as states adopting the 150-hour education requirement during the middle of the period of change, and Virginia, New York and California as late adopters of the 150-hour education requirement. Texas provides additional insights since its regulations require specifically-approved courses in ethics in order to be eligible to take the CPA exam. In the group of states classified as early adopters of the 150-hour education requirement, Florida's enabling legislation was passed in 1979 with an effective date of 1983; Tennessee's legislation was passed in 1987 with an effective date of 1993; and Mississippi enacted 150-hour education legislation in 1990 with an effective date of 1995. The states in the middle group include Texas, with legislation

passed in 1989 but not effective until 1997; Ohio, which enacted 150-hour education legislation in 1992 with an effective date in 2000; and Illinois, with legislation passed in 1991 establishing an effective date in 2001. Among the later-adopting group of states, Virginia passed legislation establishing its 150-hour education requirement in 1999 with an effective date of 2006; New York's legislation requiring 150 hours of education to sit for the CPA examination was passed in 1998 with an effective date in 2009, and the effective date of the 150-hour education requirement in California is not until 2014.

It is recognized that studying primarily institutions with accounting accreditation may not provide information representative of the institutions without accreditation. However, the initial AACSB accounting accreditation requirements were established in an environment that was informed by recommendations from the Horizons Report and the Cohen Commission, while the revised AACSB accounting accreditation requirements were established in an environment that was informed by the Bedford Commission recommendations, and those recommendations and requirements were public and available to non-accredited programs as well as accredited programs. For example, the initial AACSB accounting accreditation requirements included a course on Accounting Systems, which requirement can be traced to the Horizons observation that accountants need to understand and utilize computers in order to work effectively in the current professional environment and the subsequent recommendation of the Beamer Committee for relevant coursework in this area. In order to include some non-accredited schools in the analysis, four of the seven schools in the Holstrum and Wilson (1974) sample that do not currently have AACSB accounting accreditation were also included (California State University – Los Angeles, Long Island University – Brooklyn Campus, City University of New York – Brooklyn Campus, University of Cincinnati), since their home states are included in the states selected for detailed

analysis. Furthermore, the schools recently accredited by AACSB provide insights regarding non-accredited schools for the period for which they were not accredited.

The AACSB presentation of data on accredited institutions includes self-reported elements regarding the general orientation of the institution and the scholarly orientation of the institution, using the orientation codes in Appendix B to indicate the areas of emphasis for the institution. In addition, the AACSB data includes Carnegie Classifications of the institutions, using the 2000 Carnegie Classification structure to indicate whether the school is classified as "Doctoral/Research – Extensive", "Doctoral/Research – Intensive", or "Masters I". In 2005, the Carnegie Commission changed its classifications of institutions to report additional information on the volume of research output. The 2005 Carnegie Classifications include three classifications of research institutions, including "Research Universities / Very High Output", "Research Universities / High Output", and "Doctoral / Research Universities". Institutions focusing on master's programs are classified as "Master's Universities – Larger Programs" (corresponding to "Masters I" in the 2000 Carnegie Classifications), "Master's Universities – Medium Programs", and "Master's Universities – Smaller Programs". The analysis in this dissertation considers both the 2000 Carnegie Classifications and the 2005 Carnegie Classifications.

The following table summarizes the Carnegie Classifications of the accounting-accredited institutions in the United States in 2011 according to the AACSB, using the 2000 Carnegie Classification definitions:

Table 9 - Carnegie Classifications

Carnegie Classification	Private Institutions	Public Institutions	Total
Doctoral / Research -- Extensive	10	66	76
Doctoral / Research -- Intensive	8	29	37
Subtotal	18	95	113
Masters Colleges and Universities I	14	31	45
Masters Colleges and Universities II		1	1
Subtotal	14	32	46
Other or Unknown	1	2	3
Total	33	129	162

Although the current trend in accounting education is towards master's degrees in accounting, driven by the widespread acceptance of a 150-hour educational requirement for licensure as a CPA, that acceptance has taken years to arrive. Even now, the vast majority of the accredited accounting programs offer undergraduate degrees for students not pursuing CPA certification or seeking certification with additional non-degree education. At the beginning of the period under analysis, there were very few programs offering master's degrees in accounting. The research addresses undergraduate accounting programs from the beginning of the period analyzed, with master's-level programs incorporated into the analysis when they are introduced. That incorporation involves indicator variables for schools that have established master's-level programs, or direct comparisons of curriculum requirements between schools with master's-level programs and schools with baccalaureate-only programs.

Data sources

Data on accounting degree requirements was obtained from college undergraduate catalogues. In addition to the Committee on Education (1907), Allen (1927), and Noble (1950), the analysis supporting the 1967 Horizons Report utilized college catalogues as one source for identifying degree requirements, and the analysis herein follows that precedent. Noble (1950)

addressed the potential difficulties stemming from a lack of uniformity in course offerings, and found that useful categorizations could be made that were broad enough and general enough to classify adequately the great majority of courses offered by the various colleges. In contrast to Noble, the analysis in this dissertation is focused on degree requirements for an accounting major, rather than a tabulation of every accounting course offered by the colleges.

CollegeSource Online includes catalogues beginning in 1993 and offers more complete coverage in subsequent years, with sporadic inclusion of data from years earlier than 1993. The University of Mississippi Library has microfiche copies of college catalogues (the predecessor to the CollegeSource online service) with available selections generally covering the 1975-76 academic year and other catalogues from the mid-1980s. Information on course requirements was summarized with reference to the areas of knowledge identified in the Horizons Report. Data for the 1950s and 1965-66 accounting program requirements were solicited by direct contact with librarians at the selected institutions. Those librarians were asked to provide documentation of the published requirements for obtaining undergraduate and graduate accounting degrees at their institution during the selected years.

Information on the qualifications and professional certifications of the faculty at selected institutions was obtained from the *Accounting Faculty Directories* compiled by James R. Hasselback for the academic years 1975-1976, 1980-1981, 1985-1986, 1995-1996, 2005-2006, and 2011-2012. That data includes academic rank, highest degree attained, professional certifications reported, and year in which the faculty member joined their current institution. To the extent that a comparison of the numbers of tenure-track and non-tenure-track faculty members is instructive over time, that data was also gathered from the Hasselback directories.

If complete information could have been obtained for all currently accredited undergraduate accounting programs, as well as the relevant institutions in the Holstrum and Wilson study that do not have AACSB accounting accreditations, in the selected states there would have been 79 observations for undergraduate accounting programs for each of the 1965-1966, 1975-76, 1985-1986, 1995-1996, and 2005-2006 selected years, as well as a recent academic year, including seven institutions in California, nine in Florida, 11 in Illinois, three in Mississippi, nine in New York, 12 in Ohio, seven in Tennessee, 13 in Texas, and eight in Virginia. Not all programs selected for analysis offered graduate accounting programs in the 1960s, or indeed offered graduate accounting programs at all during the periods studied. Limitations on the availability of data result in only 33 observations for 1965-66 (19 undergraduate and 14 graduate programs), 73 observations for 1975-76 (51 undergraduate and 22 graduate programs), 110 observations for 1985-86 (63 undergraduate and 47 graduate programs), 146 observations for 1995-96 (76 undergraduate and 70 graduate programs), 144 observations for 2005-06 (76 undergraduate and 68 graduate programs), and 168 observations for a current academic year (80 undergraduate and 78 graduate programs), or 676 observations in total for all years examined (378 undergraduate programs and 298 graduate programs), as summarized in the table below. That number of observations permits meaningful analysis of the overall sample, and allows analysis of major subdivisions of the sample as well, although not all institutions for which data was available offered undergraduate or graduate accounting programs in all the years sampled. Appendix A lists the schools selected for detailed analysis.

Table 10 - Catalogues Collected

Undergraduate Course Catalogues

Schools	Period							
State	1950s	1960s	1970s	1980s	1990s	2000s	2010s	Total
California			5	6	7	7	7	32
Florida	2	4	6	8	8	8	9	45
Illinois	2	4	10	11	11	11	11	60
Mississippi	1	1	2	3	3	3	3	16
New York	2	1	3	6	8	9	9	38
Ohio	1	2	5	9	9	11	12	49
Tennessee	3	4	4	4	7	6	7	35
Texas		2	5	8	13	12	13	53
Virginia	1	2	6	6	8	8	8	39
Summary	12	20	46	61	74	75	79	367

Graduate Course Catalogues

	Period							
State	1950s	1960s	1970s	1980s	1990s	2000s	2010s	Total
California			2	5	6	6	7	26
Florida		2	2	6	8	8	9	34
Illinois	1	3 *	5	9	11	12	11	52
Mississippi		2	1	3	3	3	3	15
New York		1 *	3	6	9	5	9	32
Ohio	*	2	2	5	8	10	11	38
Tennessee	*	2	1	2	7	7	7	26
Texas	*	1	5	9	12	11	12	49
Virginia		1	2	3	6	6	8	25
Summary	1	14	22	47	69	67	77	298

** Other available catalogues did not provide sufficient details of program requirements*

Methods of Data Analysis

The analysis of data was designed to permit the identification of patterns of relationships among factors believed to drive changes in accounting curricula and the changes, if any, that actually took place in the accounting curriculum at the subject institutions over the period examined. Principal component analysis can highlight those factors associated with particular types of change and further can reveal whether there are relationships among the factors. As an alternative, possible relationships among institutional characteristics were analyzed using Pearson's Chi-Square analysis to identify statistically significant associations. Factors that have not in the past been consistently associated with effective change are also identified. The results

of the analysis contribute to our understanding of the forces that have historically led to types of changes in accounting education, and therefore can enlighten those who desire to accomplish future change in accounting education.

Principal component analysis is often used when the researcher knows that the variables used in the study are highly correlated (Aldenderfer and Blashfield 1984). While the precise relationships between the variables analyzed in this dissertation is not known, it appears reasonable to assume that there may be substantial correlation among some of the measures relating to institutional characteristics. According to Aldenderfer and Blashfield (1984), principal component analysis can be used to reduce the dimensionality of the data, creating new, uncorrelated variables that can be used to calculate the degree of similarity between cases. One of the advantages of principal component analysis is that it tends to maintain an appropriate representation of widely separated clusters, but Rohlf (1970) observes that principal component analysis minimizes the distances between clusters or groups that are not widely separated. Eigenvalues are utilized in cluster analysis to indicate how important the factors are and to resolve how many factors exist in the data.

The identification of patterns in the data and the interpretation of the differences between data elements are presented in Chapter 4 of this dissertation, “Results of Analysis”. Discussion of the implications of the findings, contributions, and limitations of the research is presented in Chapter 5 of this dissertation, together with identification of possible future research related to the analysis in this dissertation.

CHAPTER 4

RESULTS OF ANALYSIS, OVERALL THEMES

This chapter is organized as follows: the first section describes and analyzes the characteristics of the institutions selected for review, including whether they are public or private, their self-reported Carnegie classification, their self-reported general orientation and scholarly orientation, whether they offer doctoral degrees in accounting, and the characteristics of the faculty (size, proportion of tenure-track faculty members, proportion of faculty members with terminal degrees, proportion of faculty members with professional certifications. Those institutional characteristics are then evaluated to identify patterns and associations. The second section summarizes and analyzes observations regarding undergraduate accounting program requirements, including program hours required and courses required for a degree. Those observations are then evaluated to identify patterns and associations. The third section summarizes and analyzes observations regarding graduate accounting program requirements, including degrees offered, program hours required, courses required, and elective course options, and compares those observations to a profile developed from data on graduate accounting programs in the 1960s. Those observations are then evaluated to identify patterns and associations. The concluding section describes and discusses overall themes identified in the analysis described in this chapter.

The sections of this chapter that present data developed for this dissertation provide a summary table of data, followed by discussion of the data presented. The sections of this chapter that present analysis provide the context for analysis and discussion of findings, followed by a

table showing the results of analysis. Tables presenting analytical results include only variables and associations that show statistical significance, without presenting the elements of the analysis that did not show statistical significance.

Characteristics of Institutions Selected

The 79 institutions included in the data reviewed for this dissertation include 58 public institutions and 21 private institutions. Table 11, below, summarizes the characteristics of the institutions included in the sample

Table 11 - Characteristics of Institutions Included in Analysis

		California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Total
Public Institutions		4	7	8	3	4	9	6	11	6	58
Private Institutions		3	2	3	0	5	3	1	2	2	21
All Institutions		7	9	11	3	9	12	7	13	8	79
Carnegie Classification	Doctoral / Research - Extensive	1	5	5	3	3	5	2	6	3	33
	Doctoral / Research - Intensive	2	1	2		3	6	2	4	2	22
	Masters I	4	2	4		3	1	3	3	2	22
Institutions with Accounting Accreditation	1985	1	6	5	1	2	2	2	5	6	30
	1995	2	7	7	2	2	9	4	10	8	51
	2005	5	9	11	3	5	10	7	12	8	70
	2011	5	9	11	3	6	11	7	13	8	73
Doctoral-Granting Institutions	1981	2	2	2	2	3	4	1	5	2	23
	1985	1	3	2	2	4	4	2	6	2	26
	1995	1	6	2	2	5	5	2	6	3	32
	2005	1	5	2	2	5	4	2	8	3	32
	2011	1	5	2	2	5	4	2	8	2	31
Institututions with Data Available - Undergraduate Programs	1960s		4	4	1	1	2	4	2	2	20
	1970s	5	5	10	2	3	5	4	5	6	45
	1980s	6	8	10	3	6	9	4	8	6	60
	1990s	7	8	11	3	8	9	7	13	8	74
	2000s	7	9	11	3	9	11	6	13	8	77
	2010s	7	9	11	3	9	12	7	13	8	79
Institututions with Data Available - Graduate Programs	1960s		1	3	1		2	1	1		9
	1970s	2		5	1	2	2	1	4	1	18
	1980s	5	5	8	3	6	4	2	8	3	44
	1990s	5	8	11	3	8	6	7	9	5	62
	2000s	6	7	11	3	4	9	7	10	5	62
	2010s	7	9	11	3	8	10	7	12	7	74

As reported by the AACSB, 33 of the institutions classify themselves as "Doctoral/Research – Extensive" (awarding 50 or more doctoral degrees per year across at least 15 disciplines), while 22 are classified as "Doctoral/Research – Intensive" (awarding 10 or more doctoral degrees across three or more disciplines or at least 20 in total) and 22 are classified as "Masters Colleges and Universities – I" (awarding 40 or more masters degrees per year). The two remaining institutions offer Bachelor's degrees but not Master's or doctorates. Although an institution may be broadly included as doctoral-granting in the reported classification, such inclusion does not necessarily mean the institution issues accounting doctorates. According to the Hasselback *Accounting Faculty Directory* for 1981 (the first year with this data field available), 23 of the institutions in the sample offered doctorates in accounting, and in the 1985 directory 27 institutions reported offering doctorates in accounting. In 1995, 32 institutions offered doctorates in accounting, with four changes in 2005: Cleveland State University and the University of Miami did not report offering doctorates in 2005, and the University of Texas-Dallas and the University of Texas-San Antonio started offering doctorates in accounting by 2005. The University of Virginia reported offering an accounting doctorate in 2005 but did not report offering an accounting doctorate in the 2011 edition, bringing the 2011 total of accounting doctoral programs to 31 institutions in the sample.

Sources of Data

Two sources of information were utilized to gather data on Master's program offerings for the analysis in this dissertation. The college catalogues of the selected institutions were reviewed to identify the requirements to attain a Master's degree in accounting. If the institution offered a professional Master's degree (e.g., Master of Accountancy, MS-Accounting, or Master of Professional Accountancy) the requirements for that degree were tabulated. Only one degree

program was selected for each institution, so data on MBA programs with concentrations or majors in accounting is included only for those institutions that did not offer a professional Master's degree in accounting. In addition, the degree offerings listed in the *Accounting Faculty Directory* were summarized beginning with the 1980-1981 edition of the directory. Those directory listings permitted the identification of institutions that reported offering professional Master's degrees exclusively or in combination with MBA degrees as well as those institutions that offered only MBA degrees and those that did not offer any Master's programs. Not all institutions in the sample were reflected in the directory listings for all years, but the information from this source was the most complete information available for the analysis in this dissertation. Table 12, below, summarizes the Master's degree offerings as reported in the *Accounting Faculty Directory* for the periods indicated.

Table 12: Summary of Master's Degree Offerings per Hasselback Accounting Faculty Directory

	MACC or other professional	MBA	MBA & MACC or other professional	No Masters Degree	Institutions with data
1981	44	41	29	4	63
1985	55	39	29	7	72
1995	62	45	31	2	79
2005	69	37	30	3	79
2011	72	33	27	1	79

Accounting Accreditation

By 1985, 30 of the 79 institutions in the sample held AACSB accounting accreditation (the first point in the period studied when accounting accreditation was available). By 1995, 51 institutions held AACSB accounting accreditation, with 70 accounting-accredited institutions in 2005 and 73 accounting- accredited institutions in 2011. Four of the remaining institutions hold AACSB Business Accreditation only, while the remaining two institutions (City University of New York – Brooklyn, and Long Island University – Brooklyn) have no AACSB accreditation.

These six institutions are included in the sample due to their inclusion in the Holstrum & Wilson (1974) analysis of the curricula in the 25 largest accounting programs.

General and Scholarly Orientation

The AACSB directory includes information on the General Orientation and the Scholarly Orientation of the sampled institutions in 2011, based on the Carnegie Classification structure discussed in Chapter 3. Detailed information is presented in Appendix B about the Carnegie Classifications. For General Orientation, 30 institutions reported equal emphasis on Teaching and on Intellectual Contributions (code E), 25 institutions reported highest emphasis on Teaching, followed by Intellectual Contributions (code A), 17 institutions reported highest emphasis on Intellectual Contributions, followed by Teaching (code B), two institutions reported highest emphasis on Teaching, with Intellectual Contributions and Service equally weighted (code F), and three institutions were not AACSB-accredited. For Scholarly Orientation, 29 institutions reported highest emphasis on Discipline-based Scholarship, with medium emphasis on Contributions to Practice (code A), 16 gave equal emphasis on Discipline-based Scholarship and Contributions to Practice (code G), and the 27 remaining institutions were distributed among seven other Scholarly Orientation codes. Table 13, below, summarizes information on the General and Scholarly Orientation codes reported in the AACSB directory for the institutions in the sample.

Table 13: Institutional Orientation

Panel A - General Orientation

	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
A	4	2	3	1	2	3	5	2	3	25
B	1	5		2	1	2	1	3	2	17
E	1	1	6		3	7	1	8	3	30
F	1	1								2
Unavailable			2		3					5
Overall	7	9	11	3	9	12	7	13	8	79

Panel B - Scholarly Orientation

	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
A	1	7	1	2	2	4	1	6	5	29
B			2				2	1		5
D						1		2		3
E		1								1
F	1	1			1	1	1	1		6
G	2		5	1	1	2	3	2		16
H	1					1				2
K			1		1	2		1	1	6
L	1									1
M	1				1	1			2	5
Unavailable			2		3					5
Overall	7	9	11	3	9	12	7	13	8	79

Detailed information on Carnegie Classifications is presented in Appendix B.

The Carnegie Classification of the institutions, whether the version reported in the AACSB directory based on the 2000 revisions or the version reported under the 2010 revisions to the Carnegie structure, is highly correlated with the General Orientation, Scholarly Orientation, and whether the institution granted doctorates in accounting in 1995 or in 2011(Pearson's Chi-Square 2-sided asymptotic significance p-values .009 or smaller). This result confirms that the classifications tested are measuring similar characteristics, but adds no new insights regarding institutional structure. A comparison of Carnegie Classifications, orientation codes, and public / private status of the institution does provide new information, as a cross-tabulation of public / private status against Carnegie Classification (2010 version) reveals that private institutions are proportionately more likely to classify themselves as Doctoral / Research

Universities or as Masters (Large) institutions than public institutions (p-value .020). This result suggests that the private institutions in the sample tend towards the ends of the range between Doctoral / Research and Masters Institutions, not attempting to cover as broad a mission as the public institutions classified as Research University (high research activity or very high research activity).

School of Accountancy

The characteistics of the institution are also related to whether the institution offers its accounting instruction as a School of Accountancy rather than a department within a School of Business. While there is limited data available on the administrative reporting relationships within the institutions in the sample, 14 institutions are termed "School of Accountancy" or "School of Accounting" in their catalog or on their website. Pearson's Chi-Square analysis reveals associations between General Orientation, Carnegie Classification (both versions) and designation as a School of Accountancy, although the small number of observations limits the conclusions that can be drawn from the data available. Institutions reporting a General Orientation code of B (highest emphasis on Intellectual Contributions) represent only 21.5% of the institutions in the sample, but fully half of the Schools of Accountancy are reported in this General Orientation code (p-value of .027). There are similar (statistically significant at α=.10) associations with the Carnegie Classifications, as Doctoral / Research –Extensive institutions make up 41.8% of the sample but include 64.3% of the Schools of Accountancy (p-value of .078), and Research Universities (high research activity) are 35.4% of the sample and include 64.3% of the Schools of Accountancy (p-value of .063). These results suggest that the mission or orientation of the institution can have an effect on its decision to obtain designation as a School of Accountancy.

FSA Membership

The Federation of Schools of Accountancy ("FSA") was founded in 1978 to support the establishment of professional schools of accountancy. After the advent of AACSB accounting accreditation in 1982, the push to designate accounting programs as separate schools of accountancy lost momentum. The FSA mission statement was revised to declare, "We promote and support high-quality accredited graduate accounting programs" (FSA 2011). In 2012, the FSA had 108 full members, including 21 institutions designated as Schools of Accountancy. Fifty of those members (67.6%) are included in the 74 institutions with graduate data in the current decade that were sampled for this dissertation. Of the institutions sampled, only Ohio University is designated as a School of Accountancy but does not hold FSA membership.

Pearson's Chi-Square analysis of the association between FSA membership and the characteristics of the institution reveals associations with doctoral-granting status, Carnegie Classification, General Orientation, and Scholarly Orientation. The institutions reported as doctoral-granting in 1995 are 39.2% of the sample with graduate data in the current decade but are only 20.7% of the institutions that are not FSA members, indicating that FSA membership is more prevalent among doctoral-granting institutions (p-value of .083). FSA members compose 88.2% of the institutions reporting a General Orientation code of B (highest emphasis on Intellectual Contributions) and in the institutions reporting a General Orientation code of A (highest emphasis on Teaching) only 52.2% are FSA members (p-value of .077), again suggesting that FSA members are more oriented towards research than non-FSA members. Even stronger associations were observed between FSA membership and the Carnegie Classifications (both versions), as Doctoral / Research institutions make up 68.9% of the sample and include 78.0% of the FSA members (p-value of .028), and Research Universities (high or very high

research activity) are 56.8% of the sample and include 83.3% of the FSA members (p-value of .009). In summary, research-oriented institutions are observed to be a proportionately greater share of FSA members than teaching-oriented institutions.

Faculty Size

Consistent data on program size or number of graduates is not available, but information on the size of accounting faculties can serve as a proxy for the size of an accounting program. Differences in course loads for faculty members, class size, reporting practices regarding adjunct and visiting faculty, and numbers of students taught during summer sessions make this an inexact method of comparison, but in general it is assumed that institutions with greater numbers of faculty members are likely to teach greater numbers of students than institutions with smaller numbers of faculty members. Table 14, below, summarizes information on the faculty size at the institutions in the sample.

Table 14: Characteristics of Faculty Members at Institutions in the Sample

		Carnegie Classification				
	Period	D/R - E	D/R - I	Masters I	Other	Overall
Mean Faculty Size	1975	15.2	13.9	18.3	10.0	15.3
	1985	20.4	19.6	14.9	14.0	18.6
	1995	20.4	16.8	12.5	13.0	17.1
	2005	18.4	16.0	12.5	11.0	15.9
	2011	19.5	17.2	12.6	13.5	16.8
Range of Faculty Size	1975	3 - 31	7 - 25	4 - 35	10 - 10	3 - 35
	1985	10 - 35	7 - 35	7 - 34	14 - 14	7 - 35
	1995	9 - 38	9 - 29	6 - 25	13 - 13	6 - 38
	2005	7 - 38	8 - 28	5 - 30	10 - 12	5 - 38
	2011	8 - 45	9 - 35	2 - 34	10 - 17	2 - 45

In 1975, the largest reported faculty size was 35 members (Baruch College – City University of New York) and the smallest reported faculty size was three members (Case Western Reserve University) among the 54 institutions that reported data. In 1985, 76 institutions reported data. Five institutions reported faculty of 34 or 35 members, while the

smallest reported faculty size was seven members at two institutions (Stetson University, University of Texas – Dallas). In 1995 the 78 institutions with available data reported faculty sizes that ranged from 36 faculty members at two institutions (University of Southern California, University of Illinois – Urbana/Champaign) to six faculty members at two institutions (Belmont University, Long Island University – Brooklyn). The 79 institutions in the 2005 sample reported faculty sizes that ranged from 38 members (University of Southern California) to five members (Long Island University – Brooklyn). Data on the 79 institutions sampled for 2011 reported faculty sizes that ranged from 45 members (University of Illinois – Urbana/Champaign) to two members (Long Island University – Brooklyn).

Faculty Characteristics

The characteristics of faculty members varied over the period for which data were available. Table 15, below, summarizes faculty member characteristics over time for the institutions in the sample.

Table 15: Faculty Member Characteristics at Institutions in the Sample

		Carnegie Classification				
	Period	D/R - E	D/R - I	Masters I	Other	Overall
Proportion of faculty members with tenure-track positions	1975	89.6%	86.3%	82.3%	80.0%	87.4%
	1985	84.4%	78.2%	80.5%	85.7%	81.6%
	1995	82.7%	84.0%	90.0%	100.0%	85.3%
	2005	79.6%	83.5%	88.8%	80.0%	83.2%
	2011	76.6%	78.6%	87.5%	72.1%	80.1%
Proportion of faculty members with terminal degrees	1975	68.9%	53.5%	54.5%	40.0%	62.0%
	1985	74.5%	58.9%	56.3%	71.4%	65.2%
	1995	83.7%	77.2%	75.0%	100.0%	79.6%
	2005	84.0%	81.3%	80.2%	85.0%	82.2%
	2011	81.5%	77.2%	79.0%	82.1%	79.6%
Proportion of faculty members with professional certifications	1985	66.1%	67.2%	67.3%	71.4%	66.8%
	1995	75.1%	76.5%	74.8%	84.6%	75.5%
	2005	68.8%	73.0%	75.5%	86.7%	72.3%
	2011	58.0%	63.0%	68.8%	83.2%	63.1%

In 1975, tenure-track faculty members (Assistant Professor, Associate Professor, and Professor) constituted 87.4% of the reported faculty, while in 1985 mean tenure-track faculty members made up 81.6% of the reported total. Overall, tenure-track faculty proportions increased in 1995 to 85.3% of reported faculty before declining to 83.2% in 2005 and 80.1% in 2011. The summary by Carnegie Classification reveals that tenure-track faculty proportions decreased in every period at Doctoral / Research – Extensive institutions from a high point in 1975 of 89.6% to 76.6% in 2011. That decline among Doctoral / Research institutions was counteracted in part by an increase in tenure-track faculty proportions at Masters I institutions from 1975 to a high point in 1995 of 90.0%, followed by slight declines to 88.8% in 2005 and 87.3% in 2011.

The mean proportion of faculty members with terminal degrees (e.g., PhD, DBA, JD) increased from 62% in 1975 to 84.6% in 2005 before returning to 80% in 2011. Masters I institutions reported lower proportions of faculty members with terminal degrees in every period compared to Doctoral / Research – Extensive institutions, and in every period but 1975 compared to Doctoral / Research – Intensive institutions, confirming that the doctoral institutions showed greater emphasis on terminal degrees at earlier periods than did the Masters institutions.

The proportion of faculty members that reported professional certifications (predominantly CPA certificates, but also CMA and CIA designations) increased from a mean of 66.8% in 1985 (the first year for which data on certifications were available) to 75.5% in 1995. The mean proportion of faculty member certifications decreased to 72.3% in 2005 and 63.1% in 2011. In contrast to the terminal degree comparison presented above, Masters I institutions reported higher proportions of faculty members with professional certifications in every period than Doctoral / Research – Extensive institutions, and in every period but 1995 compared to

Doctoral / Research – Intensive institutions. The Doctoral / Research - Extensive institutions reported lower proportions of professionally certified faculty than the Doctoral / Research – Intensive institutions in every period, and reported that only 58.0% of faculty members held professional certifications in 2011.

Analysis of Institutional Size

The size of the institution may also make a difference in the characteristics of the faculty and how they relate to the accounting program. Consistent information on numbers of students or numbers of graduates could not be located, but the *Hasselback Directory of Accounting Faculty* provides other information that can be used as a proxy for the size of the institution. The Hasselback Directory lists faculty members affiliated with the institution in a number of roles, and a tabulation was performed to summarize the faculty members identified as actively engaged in operations (not including Emeritus, Retired, or Deceased faculty designations) based on the information reported in the 1975-1976, 1980-1981, 1985-1986, 1995-1996, 2005-2006, and 2011-2012 editions. Information was available on 54 institutions in 1975, 74 institutions in 1985, 78 institutions in 1995, and 79 institutions in 2005 and 2011. Table 4, presented earlier in this dissertation, summarized observations about the sizes of accounting faculty over time for the institutions in the sample.

Faculty Size Grouping by Quartiles

Information on faculty size was utilized to assign institutions to quartiles for each of the years for which information was reported. To avoid spurious conclusions based on small differences in faculty size, the institutions in the largest quartile were compared to institutions in the smallest quartile by faculty size, and the institutions in the middle two quartiles were not included in the analysis of institutional characteristics and associations by size. In those

instances where the number of faculty members crossed the boundary of the largest or smallest quartile, all institutions with the same number of faculty members were assigned to the largest or smallest quartile, and were not grouped into the middle quartiles that were not included in the analysis.

The institutions in the largest quartile in 2011 were more likely to offer doctorates in accounting than the institutions in the smallest quartile. The larger institutions had smaller proportions of tenure-track faculty and faculty with professional certifications than those in the smallest quartile in both 1995 and 2011. With respect to the graduate curriculum, the larger institutions supported a higher proportion of elective accounting courses in the 2000s than the institutions in the smallest quartile, perhaps due to greater institutional resources at the larger institutions. Table 16, below, summarizes the results of the comparison of programs on these characteristics between size quartiles.

Table 16: Comparison of Program Characteristics between Largest Quartile and Smallest Quartile Institutions

		t-test for Equality of Means (equal variances not assumed)					
	Quartiles based on 2011 sizes	N	Mean	Std. Deviation	t	df	Significance (2-tailed)
Doctoral Program in 2011	Largest Quartile	22	0.59	0.50	3.000	39.75	.005
	Smallest Quartile	22	0.18	0.39			
% Tenure Track - 1995	Largest Quartile	22	0.81	0.13	-2.197	40.91	.034
	Smallest Quartile	21	0.89	0.12			
% Tenure Track - 2011	Largest Quartile	22	0.74	0.12	-3.547	41.78	.001
	Smallest Quartile	22	0.87	0.13			
% Certified - 1995	Largest Quartile	22	0.70	0.20	-2.158	37.33	.037
	Smallest Quartile	21	0.81	0.13			
% Certified - 2011	Largest Quartile	22	0.50	0.23	-2.974	41.91	.005
	Smallest Quartile	22	0.72	0.25			
2000s-Total Elective Accounting Courses	Largest Quartile	18	9.78	6.23	2.699	28.92	.012
	Smallest Quartile	16	5.02	3.90			

An analysis utilizing the Carnegie classifications according to the 2010 revisions (RU/VH –Research Universities (very high research activity); RU/H – Research Universities (high research activity); DRU – Doctoral/Research Universities; Master's/L – Master's Colleges and Universities (larger programs)) revealed a higher proportion of faculty members on the

tenure track in 1995 among institutions in the smallest quartile than at institutions in the largest quartile (quartile classification based on reported 2011 faculty complements). RU/H institutions in the largest quartile had lower proportions of tenure-track faculty members in 2011 than the institutions in the smallest size quartile. RU/VH institutions in the largest quartile had higher proportions of faculty members with terminal degrees in 1995 than the institutions in the smallest quartile. Table 17, below, summarizes the results of these comparisons between institutions in the largest quartile and those in the smallest quartile.

Table 17: Comparison of Carnegie Classification Relationships by Largest Quartile vs. Smallest Quartile by Faculty Size

t-test for Equality of Means (equal variances not assumed

Carnegie Category - 2010		SizeQuartile2011	N	Mean	Std. Deviation	t	df	Significance (2-tailed)
Master's L: Master's Colleges and Universities (larger programs)	% Tenure Track - 1995	Largest Quartile	4	0.86	0.03	-3.037	12.98	.010
		Smallest Quartile	11	0.95	0.09			
RU/H: Research Universities (high research activity)	% Tenure Track - 2011	Largest Quartile	8	0.72	0.12	-2.287	12.65	.040
		Smallest Quartile	7	0.84	0.09			
RU/VH: Research Universities (very high research activity)	% w/ terminal - 1995	Largest Quartile	8	0.85	0.08	2.767	7.77	.025
		Smallest Quartile	2	0.76	0.02			

Public and Private Institutions

The sample included both public and private institutions. Table 18, below, summarizes some observations on public or private status and other institutional characteristics, presented according to the faculty size quartile for the institution (2011 data).

Table 18: Characteristics of Private and Public Institutions

By Faculty Size Quartile - 2011	Private					Public					Overall
	Total	Largest	Next Largest	Next Smallest	Smallest	Total	Largest	Next Largest	Next Smallest	Smallest	
Number of Institutions - 2011	21	5	3	6	7	58	17	13	18	10	79
	100.0%	23.8%	14.3%	28.6%	33.3%	100.0%	29.3%	22.4%	31.0%	17.2%	100.0%
School of Accountancy - 2011	2	2	0	0	0	12	2	3	6	1	14
	9.5%	9.5%	0.0%	0.0%	0.0%	20.7%	3.4%	5.2%	10.3%	1.7%	17.7%
Doctoral-Granting											
1981	4	1	1	2	0	19	7	7	3	2	23
	19.0%	4.8%	4.8%	9.5%	0.0%	32.8%	12.1%	12.1%	5.2%	3.4%	29.1%
2011	4	2	0	2	0	27	11	8	5	3	31
	19.0%	9.5%	0.0%	9.5%	0.0%	46.6%	19.0%	13.8%	8.6%	5.2%	39.2%
With Accounting Accreditation											
1985	5	2	1	1	1	25	10	7	7	1	30
	23.8%	9.5%	4.8%	4.8%	4.8%	43.1%	17.2%	12.1%	12.1%	1.7%	38.0%
1995	11	3	2	3	3	40	14	9	12	5	51
	52.4%	14.3%	9.5%	14.3%	14.3%	69.0%	24.1%	15.5%	20.7%	8.6%	64.6%
2005	18	4	3	5	6	52	17	12	16	7	70
	85.7%	19.0%	14.3%	23.8%	28.6%	89.7%	29.3%	20.7%	27.6%	12.1%	88.6%
2011	19	4	3	6	6	54	17	12	17	8	73
	90.5%	19.0%	14.3%	28.6%	28.6%	93.1%	29.3%	20.7%	29.3%	13.8%	92.4%

The information presented in Table 18, above, indicates that the majority of the institutions in the sample are public institutions, and that the largest institutions are typically public universities. Only two of the largest private institutions are organized as a separate School of Accountancy, while the 12 public institutions with Schools of Accountancy are dispersed through all size ranges. Private institutions also sought accounting accreditation at a slower pace than public institutions, as only 23.8% of the private institutions in the sample held accounting accreditation by 1985 compared to 43.1% of the public institutions. By 1995, 52.4% of the private institutions held accounting accreditation compared to 69.0% of the public institutions. The difference in proportions of institutions with accounting accreditation was largely eliminated by 2005. However, smaller private institutions showed earlier movement to accounting accreditation than smaller public institutions. By 1995, 27.3% of the accredited private

institutions were in the smallest size quartile, while the public institutions in the smallest quartile constituted only 12.5% of the accredited public institutions.

Table 19: Characteristics of Private and Public Institutions

Institutional Orientation and Carnegie Classification data as of 2012

	General Orientation	Carnegie Classification					
		D/R - E	D/R - I	Masters I	Other	Overall	
Private	Summary	5	9	7		21	100.0%
		23.8%	42.9%	33.3%	0.0%	100.0%	
	A: Teaching, then Intellectual Contributions		4	2		6	28.6%
	B: Intellectual Contributions, then Teaching	3				3	14.3%
	E: Equal for Teaching and Intellectual Contributions	1	5	2		8	38.1%
	F: Teaching, then Intellectual Contributions and Service equal			1		1	4.8%
	Unavailable	1		2		3	14.3%
Public	Summary	28	13	15	2	58	100.0%
		48.3%	22.4%	25.9%	3.4%	100.0%	
	A: Teaching, then Intellectual Contributions	3	5	10	1	19	32.8%
	B: Intellectual Contributions, then Teaching	11	2	1		14	24.1%
	E: Equal for Teaching and Intellectual Contributions	13	6	2	1	22	37.9%
	F: Teaching, then Intellectual Contributions and Service equal			1		1	1.7%
	Unavailable	1		1		2	3.4%
Overall		33	22	22	2	79	
		41.8%	27.8%	27.8%	2.5%	100.0%	

Table 19, above, presents information on public and private institutions by Carnegie Classification and General Orientation. The information in Table 19 is consistent with the indications in Table 18 that private institutions tend to be smaller than public institutions, as shown by the dominant proportion of public institutions in the largest Doctoral / Research category, accounting for 28 of the 33 institutions (84.8%) in Doctoral / Research – Extensive. Private institutions are also less likely to place primary emphasis on Intellectual Contributions (General Orientation code B) than public institutions, as only 14.3% of the private institutions classified themselves in this category compared to 24.1% of the public institutions. The proportions of private and public institutions emphasizing Teaching and Intellectual Contributions equally (General Orientation code E) are close to each other.

The influences of size, general orientation, and Carnegie Classification will be examined in later sections of this chapter.

Pattern Analysis for Institutional Characteristics

The research questions discussed in Chapter 3 were used to frame the analysis of institutional characteristics and assist in the identification of patterns in the data. Research Question 4 asks "How do organizational and institutional characteristics relate to changes in accounting program requirements?" Analysis was performed to ascertain whether characteristics of the institutions in the sample were related in identifiable patterns. Principal component analysis of institutional characteristics over time produced no factors with loadings above 0.40, indicating that no analytical combination of institutional factors in the data offered meaningful explanatory insight through principal component analysis. This result can be interpreted as an artifact of the limited data set available in the sample in conjunction with issues encountered in making operational measurements of outcomes. Principal component analysis was not relied upon in evaluating institutional characteristics. ANOVA and t-tests were utilized to identify significant associations between institutional characteristics, faculty characteristics, and environmental characteristics.

Changes in Faculty Characteristics over Time

Corollary Question 4 leads to the consideration of how faculty characteristics have changed over time. One-way ANOVA based on whether the subject institution offered a doctorate in Accounting in 2005 identified significant associations (α=.10) with respect to the proportion of faculty members with professional certifications (CPA, CIA, CMA) in 2005 and 2011, and with respect to the proportion of faculty members with terminal degrees (e.g., PhD, DBA, JD) in 1985, 1995, 2005, and 2011. Institutions with doctoral programs in accounting had

a higher proportion of faculty with terminal degrees than programs not offering doctorates in 1985, 1995, 2005, and 2011, indicating that the doctoral-granting schools utilized faculty with more advanced academic credentials than did the non-doctoral granting institutions. The influence of the terminal degree as a research-oriented credential rather than a practice-oriented credential can be observed in the lower proportion of faculty with professional certifications at doctoral-granting institutions in 2005 and 2011 compared to the non-doctoral-granting institutions in the sample. Table 20, below, presents the results of the ANOVA (non-significant associations not shown).

Table 20: Associations of Faculty Characteristics and Institutional Doctoral-Granting Status

ANOVA

		N	Mean	Std. Deviation	F	Significance
% Certified - 2005	No Doctoral Program	47	0.78	0.16		
	Doctoral Program	32	0.64	0.22		
	Total	79	0.72	0.20	10.974	.001
% Certified - 2011	No Doctoral Program	47	0.69	0.22		
	Doctoral Program	32	0.54	0.22		
	Total	79	0.63	0.23	9.144	.003
% w/ terminal - 1985	No Doctoral Program	44	0.60	0.18		
	Doctoral Program	32	0.72	0.19		
	Total	76	0.65	0.19	7.625	.007
% w/ terminal - 1995	No Doctoral Program	46	0.76	0.16		
	Doctoral Program	32	0.84	0.10		
	Total	78	0.80	0.14	6.713	.011
% w/ terminal - 2005	No Doctoral Program	47	0.80	0.14		
	Doctoral Program	32	0.86	0.09		
	Total	79	0.82	0.13	4.832	.031
% w/ terminal - 2011	No Doctoral Program	47	0.77	0.15		
	Doctoral Program	32	0.83	0.10		
	Total	79	0.80	0.13	3.684	.059

Doctoral Program Status as of 2005 for Institutions in the Sample

Carnegie Classifications in Relation to Faculty Size

Analysis of programs on the basis of their self-reported Carnegie Classifications in the current AACSB directory of accredited institutions also revealed some significant associations between faculty characteristics and the type and number of graduate degrees granted by the overall institution (Doctoral / Research Extensive "D/R - E", 50 or more doctorates; Doctoral / Research Intensive "D/R – I", 20 or more doctorates; Masters I, 40 or more Master's degrees). For analytical purposes, the Doctoral / Research institutions were compared to the Masters I institutions to extend the analysis of doctoral-granting schools presented above to include institutions that grant doctorates in other fields but do not grant doctorates in accounting. ANOVA based on the Carnegie Classification revealed that Doctoral / Research institutions had a smaller proportion of faculty on the tenure track in 1995, 2005 and 2011 than Masters I and Other institutions in those years. This observation presents opportunities for future investigation to identify the causes of this structural difference, which may include influences from faculty salary structure differences, selectivity of hiring, or difficulty in locating faculty with sufficient qualifications to warrant a tenure-track appointment at a Doctoral/Research institution. With respect to the proportion of faculty with terminal degrees, in 1985 Doctoral/Research institutions had a larger proportion of faculty with terminal degrees than Masters I and Other institutions, possibly reflecting the ability of Doctoral/Research institutions to attract more highly credentialed faculty members while the academic accounting emphasis on terminal degrees was still relatively recent. The significant association between faculty certification and institutional classification in 2011 is consistent with the similar findings above that show Doctoral/Research institutions utilize a lower proportion of faculty with professional certifications than do Masters I and Other institutions. Table 21, below, presents the results of the ANOVA.

Table 21: Associations of Carnegie Classifications and Faculty Characteristics

ANOVA

		N	Mean	Std. Deviation	F	Significance
% Tenure Track - 1995	Masters I and Other	23	0.90	0.09		
	D/R - E and D/R - I	55	0.83	0.12		
	Overall	78	0.85	0.12	6.379	.014
% Tenure Track - 2005	Masters I and Other	24	0.88	0.13		
	D/R - E and D/R - I	55	0.81	0.11		
	Overall	79	0.83	0.12	5.829	.018
% Tenure Track - 2011	Masters I and Other	24	0.86	0.13		
	D/R - E and D/R - I	55	0.77	0.13		
	Overall	79	0.80	0.13	7.933	.006
% Certified - 2011	Masters I and Other	24	0.70	0.26		
	D/R - E and D/R - I	55	0.60	0.21		
	Overall	79	0.63	0.23	3.273	.074
% w/ terminal - 1985	Masters I and Other	21	0.57	0.18		
	D/R - E and D/R - I	55	0.68	0.19		
	Overall	76	0.65	0.19	5.579	.021

Analysis of 150-hour Educational Requirements

Analysis was performed to ascertain whether differences in the timing of the passage of 150-hour educational requirement legislation were associated with differences in the characteristics of the institutions in the affected states. Fifty-five institutions were located in states that had passed 150-hour legislation by 1995 and 24 institutions were located in states that passed their 150-hour legislation subsequent to 1995. The 1995 and prior group had a smaller proportion of faculty members on the tenure track in 2011 than the institutions in post-1995 states, indicating that the states with earlier passage may have had a common characteristic that encouraged the utilization of significantly less tenure-track faculty. An explanation for this structural anomaly awaits future research. A possible explanation why the institutions in 1995 and prior states utilized larger proportions of faculty members with professional certifications in both 1995 and 2011 than the institutions in post-1995 states is more readily apparent. Arguably,

the states that passed 150-hour education requirements earlier could have more politically powerful accounting practitioners and professional organizations than the states that took longer to pass educational requirements. Alternatively, accounting educators who were professionally certified may have also been more active in promoting 150-hour education requirements in their states, and may have placed greater emphasis on offering larger numbers of accounting courses. Also, in the 1990s proportionately fewer institutions in the states that passed 150-hour legislation by 1995 required four or more accounting courses than did the institutions in post-1995 states. The difference in required courses indicates greater flexibility of course choices was permitted at that time in the states with earlier legislation. Table 22, below, summarizes the results of these comparisons between institutions in the states that passed 150-hour education legislation in 1995 or earlier and institutions in the post-1995 states.

Table 22: Program Characteristics with Respect to Passage of 150-Hour Legislation by 1995

t-test for Equality of Means (equal variances not assumed)

150 Hour Law - Status determined as of 1995		N	Mean	Std. Deviation	t	df	Significance (2-tailed)
% Tenure Track - 2011	150 Hour Law Passed	55	77.4%	0.13	-2.900	49.97	.006
	150 Hour Law Not Passed	24	86.1%	0.12			
% Certified - 1995	150 Hour Law Passed	54	79.0%	0.14	2.549	32.65	.016
	150 Hour Law Not Passed	24	67.6%	0.20			
% Certified - 2011	150 Hour Law Passed	55	66.7%	0.21	2.093	39.18	.043
	150 Hour Law Not Passed	24	54.6%	0.24			
1990s-4 or more Required Courses	150 Hour Law Passed	44	0.05	0.21	-2.805	19.50	.011
	150 Hour Law Not Passed	18	0.39	0.50			

Undergraduate Accounting Program Requirements

Basis for Comparison

The Beamer Committee published its recommended undergraduate accounting program in 1969, after the issuance of the *Horizons* report. The Beamer Committee recommendations included 60 semester hours of general education (including six hours of Economics and three

hours of Introductory Accounting), 38 hours of general business courses, and 19 hours of accounting courses, totaling 117 recommended hours of undergraduate education. In the general business area, the Beamer Committee's recommended 38 semester hours consisted of six hours recommended for Intermediate Economics and for Quantitative Applications, four hours recommended for Business Law and Finance, and two hours recommended in Marketing and in Written Communications. For consistency in data collection in this dissertation, the Beamer Committee's recommendations in Social Environment, Production, Organizational Behavior, Management, and Business Policy were grouped together to accommodate variations in course titles and catalog descriptions, with 14 hours recommended in the combined areas. The Beamer Committee recommendations were intended to provide a broad general understanding of business for accounting graduates (Beamer 1969, 2). Course requirements that were reported by the institution under the quarter system have been converted to semester hours for consistency of comparisons.

The following sections compare observations on undergraduate accounting programs during selected periods to the Beamer Committee recommendations. The comparisons are complicated by the presence of electives not specifically addressed by the Beamer Committee recommendations, but in general the overall structure of educational requirements and direction of change is clearly evident in the comparisons below. As Holstrum and Wilson noted,

> One very significant difference between the Beamer recommendations and the average requirements of the surveyed schools was in the number of electives allowed. The Beamer Committee proposed only 3 hours of electives whereas the surveyed schools allowed about 20 hours of electives. On an average, students would undoubtedly have taken some of the elective courses in the quantitative or behavioral areas, which, in effect, would reduce the apparent deviation between the Beamer proposals and the actual scholastic programs of accounting students at the surveyed schools. However, it was impossible to measure or even estimate the number of elective hours which would have been taken in these areas by the average student. (Holstrum and Wilson 1974, 93-94)

Each comparative section below begins with a table that summarizes data from the indicated decade, followed by a discussion of the data from that decade in relation to the Beamer Committee recommendations. Comparisons to the Beamer Committee recommendations as a reference point are made to facilitate identification of changes over time, and are not intended to suggest that the Beamer recommendations are necessarily prescriptive of the appropriate coursework for accounting curricula at the present day.

Undergraduate Accounting Program Requirements in the 1960s

Data from the 1960s was available for 20 programs in eight states, and illustrates how actual requirements in the 1960s differed from the Beamer Committee recommendations that were published at the end of the decade. Table 23, below, summarizes undergraduate Accounting program requirements in the 1960s for institutions in the sample with data available.

Table 23: Undergraduate Accounting Program Requirements in the 1960s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Undergraduate Programs with Data	*	4	4	1	1	2	4	2	2	20
Semester credit hours										
General Education - Mean	*	62.4	63.0	70.0	64.0	77.3	71.2	60.0	74.5	67.2
(Beamer recommendation = 60 s.h.)										
General Business - Mean	*	28.1	28.0	27.0	37.0	13.7	21.8	36.0	18.0	25.5
(Beamer recommendation = 38 s.h.)										
Accounting - Mean	*	19.1	23.0	24.0	29.0	22.3	11.0	10.5	17.0	18.3
(Beamer recommendation = 19 s.h.)										
Number of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	*	0	0	0	0	0	0	0	0	0
Behavioral Sciences - Gen. Ed.	*	0	1	1	1	0	1	0	1	5
Written Communications - Gen. Bus.	*	2	3	0	0	1	2	1	1	10
Quantitative Applications - Gen. Bus.	*	0	1	0	0	0	0	2	0	3
Auditing	*	3	4	1	1	2	1	1	2	15
Accounting Information Systems	*	2	4	1	1	1	1	0	0	10
Proportion of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	*	0%	0%	0%	0%	0%	0%	0%	0%	0%
Behavioral Sciences - Gen. Ed.	*	0%	25%	100%	100%	0%	25%	0%	50%	25%
Written Communications - Gen. Bus.	*	50%	75%	0%	0%	50%	50%	50%	50%	50%
Quantitative Applications - Gen. Bus.	*	0%	25%	0%	0%	0%	0%	100%	0%	15%
Auditing	*	75%	100%	100%	100%	100%	25%	50%	100%	75%
Accounting Information Systems	*	50%	100%	100%	100%	50%	25%	0%	0%	50%

** No data was available in this category for this period*

During the 1960s, the programs sampled required slightly more than half of the courses to be taken outside business or accounting, with a mean requirement of 67.2 hours outside business out of mean total requirements of 124.6 semester hours for an undergraduate degree. The proportion of hours outside business is consistent not only with the Beamer recommendations, but with the earlier prescriptions in the Pierson and Gordon & Howell reports. In the Beamer categories included in the general education area, most programs met or exceeded the Beamer recommendations on Communications, where 12 programs (60.0%) required six or more hours, Introductory Economics, where 17 programs (85.0%) required six or more hours, and Elementary Accounting, where all 17 programs (85.0%) that required Elementary Accounting mandated six or more hours rather than the Beamer Committee's three-hour

recommendations. Areas falling short of the Beamer Committee's recommendations included Behavioral Sciences and Math & Computer. Only 10 programs (50.0%) had specific requirements in Behavioral Sciences, and only five of those programs (25.0%) met or exceeded the Beamer six-hour recommendation. In Math & Computer none of the 17 programs (85.0%) with specific requirements met or exceeded the Beamer Committee's 14-hour recommendation, with a mean requirement of 6.1 hours among the programs for which data were available.

During the 1960s, eight programs (40.0%) came close to or exceeded the overall general business recommendations, with 36 required hours or more. The mean general business requirement was 25.5 semester hours, and five programs (25.0%) required 24 or fewer hours in general business. Twelve programs (60.0%) required six hours or more of Intermediate Economics, and 12 programs (60.0%) required four hours or more of Business Law. While two programs (10.0%) required the Beamer Committee's recommended two hours in Marketing, 16 other programs (80.0%) required three hours or more in Marketing. The mean requirement for Finance courses was four hours, calculated by combining eight programs (40.0%) that required six hours of Finance with seven programs (35.0%) that required three hours and two programs (10.0%) that required four hours. Areas where the sampled programs typically fell short of the Beamer Committee recommendations included Quantitative Applications, Written Communications, and Management. Sixteen programs (80.0%) had specific requirements for Quantitative Applications courses, but only four of those programs (20.0%) required the Beamer Committee's six-hour recommendation. All 10 programs (50.0%) that had specific requirements in Written Communications during the 1960s met or exceeded the Beamer Committee's two-hour recommendation for Written Communications, with one program (Stetson) that required

nine hours. In the summarized Management area, only one program (Texas-El Paso) met or exceeded the Beamer Committee's 14-hour recommendation.

The Beamer Committee recommended 19 hours in accounting courses above Elementary for accounting undergraduates, which was slightly above the observed mean of 18.3 hours for the institutions sampled in the 1960s. Only two programs (10.0%) in the sample required fewer than 18 hours in accounting. Nine programs (45.0%) required 24 hours or more of Accounting during the 1960s. In general, the programs met the Beamer Committee's three-hour recommendations in Cost Accounting, where 10 programs (50.0%) required three or four hours of Cost / Managerial Accounting, four programs (20.0%) required five or six hours, and six programs (30.0%) had no requirement; Tax (three recommended hours), where 10 programs (50.0%) required three or four hours of Tax coursework, five programs (25.0%) required five or six hours, one program required two hours of Tax coursework, and four programs (20.0%) had no Tax requirement; and Auditing (also three recommended hours), where 13 programs (65.0%) required Auditing coursework, including nine programs (45.0%) that required three or four hours, three programs (15.0%) that required six hours, and one program that required two hours. The programs sampled generally exceeded the Beamer Committee recommendations in Financial Accounting, with 12 programs (60.0%) that required nine or more hours and seven programs (35.0%) that met the Beamer Committee's six-hour recommendation. Only six undergraduate accounting programs (30.0%) during the 1960s had any requirement for Accounting Information Systems courses, with one program that required five semester hours and five programs (25.0%) that required three semester hours, compared to the Beamer Committee's four-hour recommendation. Five programs (25.0%) during the 1960s required two or three-hour courses in Governmental / Not-for-Profit Accounting, a subject not included in the Beamer Committee recommendations.

In summary, undergraduate accounting programs during the 1960s met the requirement to balance a business education with courses outside of business, fell short of the Beamer Committee recommendations in Quantitative Applications, Written Communications, and Accounting Information Systems, and required substantially more Financial Accounting than the Beamer Committee recommendations.

Undergraduate Accounting Program Requirements in the 1970s

Table 24, below, summarizes undergraduate accounting program requirements in the 1970s for institutions in the sample with data available.

Table 24: Undergraduate Accounting Program Requirements in the 1970s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Undergraduate Programs with Data	5	5	10	2	3	5	4	5	6	45
Semester credit hours										
General Education - Mean	65.1	73.4	63.6	69.5	68.3	68.7	69.3	57.6	59.0	65.2
(Beamer recommendation 60 s.h.)										
General Business - Mean	19.6	28.8	23.7	25.5	20.7	24.7	19.8	33.0	28.5	25.1
(Beamer recommendation 38 s.h.)										
Accounting - Mean	17.4	23.9	17.7	26.5	29.3	12.7	20.8	16.2	14.5	18.6
(Beamer recommendation 19 s.h.)										
Number of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	0	0	0	0	0	1	1	1	0	3
Behavioral Sciences - Gen. Ed.	0	0	3	1	0	0	1	0	1	6
Written Communications - Gen. Bus.	1	2	1	1	0	0	2	4	2	13
Quantitative Applications - Gen. Bus.	1	1	4	0	0	2	0	2	6	16
Auditing	3	2	5	2	2	0	2	2	3	21
Accounting Information Systems	2	2	5	2	1	0	1	3	4	20
Proportion of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	0%	0%	0%	0%	0%	20%	25%	20%	0%	7%
Behavioral Sciences - Gen. Ed.	0%	0%	30%	50%	0%	0%	25%	0%	17%	13%
Written Communications - Gen. Bus.	20%	40%	10%	50%	0%	0%	50%	80%	33%	29%
Quantitative Applications - Gen. Bus.	20%	20%	40%	0%	0%	40%	0%	40%	100%	36%
Auditing	60%	40%	50%	100%	67%	0%	50%	40%	50%	47%
Accounting Information Systems	40%	40%	50%	100%	33%	0%	25%	60%	67%	44%

During the 1970s, total requirements for graduation increased 1.8 hours from the previous decade, as the 45 programs in nine states for which data were available reported mean total hour

requirements of 126.4 semester hours for the 1970s. Nineteen of the programs (42.2%) required more than 124 hours, while only six programs (13.3%) required less than 120 hours, and 22 programs (48.9%) required from 120 to 124 semester hours for graduation with an accounting degree. Once more, the mean general education requirement of 65.2 hours in the 1970s was a slightly higher proportion of the total undergraduate program than the Beamer, Pierson, and Gordon & Howell recommended minimum level of 50% outside business and accounting. In the Beamer categories included in the general education area, 30 programs (66.7%) met or exceeded the Communications recommendation of six hours, while 15 programs (33.3%) required fewer than three hours in Communications; 38 programs (84.4%) met or exceeded the Introductory Economics recommendation of six hours; and 39 programs (86.7%) met or exceeded the Elementary Accounting recommendation of three hours, as 37 of those programs required five or more hours in Elementary Accounting. Areas where the undergraduate accounting programs fell short of the Beamer Committee's recommended levels include Behavioral Sciences, where only nine programs (20.0%) required the recommended six hours and six programs (13.3%) exceeded the Beamer Committee recommendation, and Math & Computer, where only three programs (6.7%) required the recommended 14 hours or more. Eight programs (17.8%) required courses in Business during the first or second year, contrary to the Beamer Committee recommendation that Business and Accounting topics be reserved for students with more advanced standing.

In the general business area during the 1970s, the mean requirement of 25.1 semester hours was below the Beamer Committee's recommendations and actually decreased slightly from the previous decade. Areas where more than half the programs met or exceeded Beamer Committee recommendations included Intermediate Economics, with 15 programs (33.3%) that required the recommended six hours and 11 programs (24.4%) that required more than six hours;

Marketing, with 33 programs (73.3%) that required two or three hours and six programs (13.3%) that required more than three hours; and Quantitative Applications, with 14 programs (31.1%) that required six hours and 16 programs (35.6%) that required more than six hours. Areas where the observed general business requirements were below the Beamer Committee's recommended levels in the 1970s included Business Law, where 27 programs (79.2%) required less than the recommended four hours and only 19 programs (42.2%) required four or more semester hours; Finance, with 30 programs (66.7%) that required less than four hours and only 16 programs (35.6%) that required four or more hours in Finance; Written Communication, where 33 programs (73.3%) required less than two hours of Written Communication instruction and only 13 programs (28.9%) included any Written Communication instruction in their general business curriculum; and Management, where the mean requirement of 7.6 semester hours was slightly more than half the Beamer Committee's recommended 14 hours in this area, and where only four programs (8.9%) required more than 14 hours.

With respect to accounting, areas that met or exceeded the Beamer Committee's recommendations included Cost Accounting, with 32 programs (71.1%) that required three or more hours; Tax, with 29 programs (64.4%) that required three or more hours of Tax coursework; and Financial Accounting, where 13 programs (28.9%) required six hours and 26 programs (57.8%) required more than six hours of coursework. The Financial Accounting requirements in the 1970s represent only a slight movement towards the Beamer Committee's recommendations, as the 56% of programs that exceeded the Beamer recommendations in the 1970s was roughly comparable to the 60% that required more Financial Accounting than the Beamer Committee recommendations in the 1960s. While only 13 programs (28.9%) met the Beamer Committee recommendation to require four hours of Accounting Information Systems

instruction and seven programs (15.6%) exceeded that level, the 43% of the programs that met or exceeded recommended levels in the 1970s was a substantial increase from the 5% of sampled programs in the 1960s that met the Beamer Committee's recommendations for Accounting Information Systems coursework. Only two programs required any courses in Governmental or Not-for-Profit Accounting during the 1970s. The mean requirement for accounting courses in the 1970s was 18.6 hours, barely closer to the 19 hours recommended by the Beamer Committee than the mean accounting requirement in the 1960s.

In summary, the requirements to attain an accounting degree in the 1970s were not substantially different than the requirements in the 1960s, although progress towards the Beamer Committee recommendations was evident in the areas of Quantitative Applications and Accounting Information Systems. Only 13 programs (28.9%) included Written Communications requirements in their general business curricula during the 1970s, a substantial decrease from the 50.0% level reported in the 1960s. The proportion of schools requiring behavioral science courses also decreased, with the decreases possibly attributable to the increased requirements for courses in Quantitative Applications and Accounting Information Systems.

Undergraduate Accounting Program Requirements in the 1980s

More data is available on accounting program requirements in the 1980s, as some new institutions came into existence (e.g., University of Houston – Clear Lake, University of North Florida) and other institutions added accounting programs (e.g., University of Tennessee – Chattanooga, Western Illinois University). Table 25, below, summarizes undergraduate Accounting program requirements in the 1980s for the institutions in the sample with data available.

Table 25: Undergraduate Accounting Program Requirements in the 1980s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Undergraduate Programs with Data	6	8	10	3	6	9	4	8	6	60
Semester Credit Hours										
General Education - Mean	61.9	64.5	70.8	70.0	63.2	64.9	64.2	66.4	61.9	65.5
(Beamer recommendation 60 s.h.)										
General Business - Mean	23.0	21.6	28.6	30.0	30.0	23.8	26.8	25.8	24.3	25.7
(Beamer recommendation 38 s.h.)										
Accounting - Mean	21.8	16.1	15.8	25.0	25.5	19.0	19.8	18.5	23.5	19.8
(Beamer recommendation 19 s.h.)										
Number of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	0	1	1	0	0	3	1	0	1	7
Behavioral Sciences - Gen. Ed.	0	0	4	1	3	1	1	3	1	14
Written Communications - Gen. Bus.	1	2	1	2	0	3	1	3	2	15
Quantitative Applications - Gen. Bus.	1	2	7	1	3	1	2	1	3	21
Auditing	5	5	5	3	6	6	2	7	4	43
Accounting Information Systems	5	7	7	3	4	4	3	6	5	44
Proportion of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	0%	13%	10%	0%	0%	33%	25%	0%	17%	12%
Behavioral Sciences - Gen. Ed.	0%	0%	40%	33%	50%	11%	25%	38%	17%	23%
Written Communications - Gen. Bus.	17%	25%	10%	67%	0%	33%	25%	38%	33%	25%
Quantitative Applications - Gen. Bus.	17%	25%	70%	33%	50%	11%	50%	13%	50%	35%
Auditing	83%	63%	50%	100%	100%	67%	50%	88%	67%	72%
Accounting Information Systems	83%	88%	70%	100%	67%	44%	75%	75%	83%	73%

Information on requirements to attain an undergraduate degree in accounting in the 1980s is available on 60 programs in nine states. Mean total hours required for an undergraduate accounting degree in the 1980s were 126.7 hours, with 28 programs (46.7%) that required 125 hours or more, and two programs (3.3%) that required less than 120 semester hours.

Mean required general education hours were 65.5 hours, representing a proportion of total credit hours required for an undergraduate accounting degree that is once again above the Beamer Committee, Pierson, and Gordon & Howell recommendations, as well as above the AACSB business accreditation standards. Only nine undergraduate accounting programs (15.0%) required less than 60 general education hours, and three of those programs (5.0%) allowed sufficient free electives to bring the general education component of the program above 50% of the required hours. In the Beamer categories included in the general education area, 43 of

60 programs (71.7%) met or exceeded the Communications recommendation of six hours, while 18 programs (30.0%) required fewer than three hours in Communications; 56 programs (93.3%) met or exceeded the Introductory Economics recommendation of six hours; and 57 programs (95.0%) met or exceeded the Elementary Accounting recommendation of three hours. Fifty-two of those programs (86.7%) required five or more hours in Elementary Accounting. In Behavioral Sciences for the first time 50% of the programs included a Behavioral Sciences requirement of six or more hours, with 30 of 60 programs at or above the Beamer Committee's recommended level. The only general education area where the 1980s undergraduate accounting programs fell far below the Beamer Committee recommendations was Math and Computer, where only six programs (10.0%) required the recommended 14 hours or more. Thirteen programs (21.7%) required courses in Business during the first or second year.

In the general business area, the mean requirement of 25.7 semester hours was still below the Beamer Committee's recommendations and represented only a 0.6 hour increase over the mean general business requirement in the 1970s. Areas where more than half the programs met or exceeded the Beamer Committee's recommendations included Intermediate Economics, with 22 programs (36.7%) that required the recommended six hours and 12 programs (20.0%) that required more than six hours; Marketing, where 49 programs (81.7%) required two or three hours and 10 programs (16.7%) required more than three hours; and Quantitative Applications, where 18 programs (30.0%) required six hours and 22 programs (36.7%) required more than six hours. Areas where the general business requirements were below recommended levels included: Business Law, where 38 programs (63.3%) required less than the recommended four hours and only 23 programs (38.3%) required four or more hours of Business Law; Finance, with 44 programs (73.3%) that required less than four hours and only 17 programs (28.3%) that

required four or more hours in Finance; Written Communication, where 46 programs (76.7%) required less than two hours of Written Communication instruction and only 15 programs (25.0%) included any Written Communication instruction in the general business curriculum; and Management, where the mean requirement of 7.9 hours was an increase from the 6.9 semester hour mean requirement in the 1970s and was greater than half the Beamer Committee's recommended 14 hours in Management. Only three programs (5.0%) required more than 14 hours of Management during the 1980s.

With respect to accounting, coursework areas that met or exceeded the Beamer Committee recommendations included Cost Accounting, with 44 programs (73.3%) that required three or more hours; Tax, with 44 programs (73.3%) that required three or more hours of Tax coursework; Auditing, with 43 programs (71.7%) that required three or more hours; and Financial Accounting, with three programs (5.0%) that required six hours and 49 programs (81.7%) that required more than six hours. The Financial Accounting requirements in the 1980s represent a strong movement above the Beamer committee recommendations, as the 82% of programs that exceeded the Beamer Committee recommendations in the 1980s increased from the 56% level of programs that exceeded the Beamer Committee recommendations reported in the 1970s and the 60% level reported in the 1960s. The 21 programs (35.0%) that met or exceeded the recommendation for four hours of Accounting Information Systems instruction was a small increase over the 13 programs (28.9%) that required such courses in the 1970s. However, shortfalls in Accounting Information Systems requirements may have been addressed in the accounting electives available in the 1980s, as the mean value for Accounting Electives was 6.6 semester hours. Only five programs (8.3%) required any courses in Governmental or Not-for-Profit Accounting during the 1980s. The mean requirement for accounting courses in the 1980s

was 19.8 hours, an increase above the 19 hours recommended by the Beamer Committee and above the 1970s mean requirement of 18.6 hours.

In summary, the requirements to attain an undergraduate accounting degree in the 1980s changed slightly from the 1970s, including more required accounting hours and larger numbers of elective hours. More than half the programs met or exceeded the Beamer Committee's recommendations in Quantitative Applications, but two-thirds of the programs did not meet the Beamer Committee's recommendations for Accounting Information Systems instruction. Only 15 programs (25.0%) required Written Communications instruction in their general business curricula.

Undergraduate Accounting Program Requirements in the 1990s

Table 26, below, summarizes undergraduate accounting program requirements in the 1990s for institutions in the sample with data available.

Table 26: Undergraduate Accounting Program Requirements in the 1990s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Undergraduate Programs with Data	7	8	11	3	8	9	7	13	8	74
Semester credit hours										
General Education - Mean	65.5	61.0	60.2	67.0	62.1	70.1	61.4	64.2	57.0	62.9
(Beamer recommendation 60 s.h.)										
General Business - Mean	25.0	29.5	21.2	32.0	28.8	22.4	28.1	24.5	26.0	25.6
(Beamer recommendation 38 s.h.)										
Accounting - Mean	21.1	23.6	23.7	24.0	18.0	20.2	23.1	21.5	23.0	21.9
(Beamer recommendation 19 s.h.)										
Number of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	2	1	0	0	0	2	0	0	1	6
Behavioral Sciences - Gen. Ed.	0	0	0	0	1	2	1	2	1	7
Written Communications - Gen. Bus.	3	3	1	3	1	2	2	4	2	21
Quantitative Applications - Gen. Bus.	2	2	1	2	3	1	2	4	2	19
Auditing	5	8	8	2	5	5	7	11	7	58
Accounting Information Systems	6	8	8	3	5	7	5	13	8	63
Proportion of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	29%	13%	0%	0%	0%	22%	0%	0%	13%	8%
Behavioral Sciences - Gen. Ed.	0%	0%	0%	0%	13%	22%	14%	15%	13%	9%
Written Communications - Gen. Bus.	43%	38%	9%	100%	13%	22%	29%	31%	25%	28%
Quantitative Applications - Gen. Bus.	29%	25%	9%	67%	38%	11%	29%	31%	25%	26%
Auditing	71%	100%	73%	67%	63%	56%	100%	85%	88%	78%
Accounting Information Systems	86%	100%	73%	100%	63%	78%	71%	100%	100%	85%

Mean total hours required for an undergraduate accounting degree were 124.4 semester hours in the 1990s, a reduction of 2.3 hours compared with total hour requirements from the 1980s. The distribution of required total hours ranged from 117 hours to 138 hours, with 32 programs (43.2%) that required 125 hours or more and only one program that required less than 120 hours. Eighteen programs (24.3%) required exactly 120 hours in total, while 16 programs (21.6%) required exactly 128 hours to attain an undergraduate degree.

Regarding general education during the 1990s, the mean requirement of 62.9 hours decreased 4% from the 65.5 hours of general education required in the 1980s. Sixteen programs (21.6%) required less than 50% of the total hours to be expended in general education, although seven of those programs offered opportunities through free electives that would be sufficient to move the general education segment above 50%. The programs that required less than 50% of

the total hours for an undergraduate accounting degree in general education were distributed throughout the country, with three programs in Virginia and Illinois, two programs in California, New York, Ohio and Texas, and single programs in Florida and Tennessee falling into this condition. In the Beamer categories included in the general education area, 41 programs (55.4%) met or exceeded the Beamer Committee's Communications recommendation of six hours, with an additional 17 programs (23.0%) that required three or four hours of Communications and 16 programs (21.6%) that required less than three hours; and 66 programs (89.2%) met or exceeded the Introductory Economics recommendation of six hours. Four programs (5.4%) required the recommended three hours of Elementary Accounting while 63 programs (85.1%) required more than three hours in Elementary Accounting. Areas where the institutions with data available for the 1990s reported levels below the Beamer Committee recommendations once more included Behavioral Sciences, where 21 of 74 programs (28.4%) required six or more hours of Behavioral Science, and Math & Computer, where only six programs (8.1%) met or exceeded the Beamer recommendations of 14 hours in the area. Mean Math & Computer requirements during the 1990s were 8.1 hours, nearly a 10% decrease from the 8.9 hour mean Math & Computer requirements in the 1980s. Nineteen programs (25.7%) required courses in Business during the first or second year.

In general business in the 1990s, the mean requirement of 25.6 hours was nearly the same as the 25.7 hour mean requirement from the 1980s, and the institutions with data available in the 1990s remained below the Beamer Committee's recommended levels for general business education. Areas where more than half of the programs met or exceeded the Beamer Committee's recommendations included Intermediate Economics, with 24 programs (32.4%) that required the recommended six hours and 14 programs (18.9%) that required seven or more

hours; and Marketing, with 63 programs (85.1%) that required two or three hours of Marketing and nine programs (12.2%) that required four or more hours. In Quantitative Applications, 19 programs (25.7%) required at least the Beamer Committee's recommended six hours, with an additional 26 programs (35.1%) that required at least three hours of Quantitative Applications in the 1990s. However, 29 programs (39.2%) included no Quantitative Applications requirement in their general business curricula. Fifteen programs (20.3%) had no Business Law requirements, while 28 programs (37.8%) required four or more hours in Business Law. While all but two programs specified three or more hours of Finance education during the 1990s, only 17 programs (23.0%) required four or more hours in Finance. In Management, 10 programs (13.5%) required the Beamer Committee's recommended 14 hours or more during the 1990s, with the mean requirement of 8.8 hours representing an 11% increase from the 7.9 hour mean in the 1980s. Only 21 programs (28.4%) required any Written Communication instruction in the general business area, but that was an increase of six programs over the 1980s Written Communication requirements.

In accounting during the 1990s, the 21.9 mean required hours was an 11% increase over the 19.8 hour mean requirement in the 1980s, and was 2.9 hours above the Beamer Committee's 19-hour recommendation. Areas in accounting where the majority of the programs met or exceeded the Beamer Committee's recommendations include Cost Accounting, with 48 programs (64.9%) at or above the three-hour Beamer Committee recommendation; Tax, with 61 programs (82.4%) at or above the three-hour Beamer Committee recommendation; Auditing, with 58 programs (78.4%) at or above the three-hour target; Accounting Information Systems, with 35 programs (47.3%) that required four or more hours and 31 programs (41.9%) that required three hours; and Financial Accounting, where only one program required the Beamer

Committee's recommended six hours and 70 programs (94.6%) required seven hours or more in Financial Accounting. The observations in these subdivisions understate the actual proportions of conformity with the Beamer recommendations, as eight programs offer elective choices that would be sufficient to bring each subdivision up to the Beamer Committee recommendations. Only six programs (8.1%) required courses in Governmental or Not-for-Profit Accounting during the 1990s. The increases in accounting coursework are associated with decreases in general education requirements during this period.

In summary, more accounting coursework became required during the 1990s, and in general the undergraduate accounting programs for which data is available remained below the Beamer Committee's recommended levels in Math & Computer, Behavioral Sciences, Written Communication, and Quantitative Applications.

Undergraduate Accounting Program Requirements in the 2000s

Table 27, below, summarizes undergraduate accounting program requirements in the 2000s for institutions in the sample with data available.

Table 27: Undergraduate Accounting Program Requirements in the 2000s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Undergraduate Programs with Data	7	9	11	3	9	11	6	13	8	77
Semester credit hours										
General Education - Mean	63.6	62.1	60.5	63.7	59.9	67.1	57.7	60.5	62.4	62.0
(Beamer recommendation = 60 s.h.)										
General Business - Mean	23.6	23.9	22.7	28.0	23.7	22.1	25.8	25.5	21.6	23.7
(Beamer recommendation = 38 s.h.)										
Accounting - Mean	22.1	20.3	24.0	24.0	23.0	21.2	25.0	23.1	21.0	22.5
(Beamer recommendation = 19 s.h.)										
Number of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	1	1	0	1	0	3	0	0	1	7
Behavioral Sciences - Gen. Ed.	0	0	1	1	0	1	0	0	0	3
Written Communications - Gen. Bus.	3	3	3	3	0	4	3	5	1	25
Quantitative Applications - Gen. Bus.	1	1	1	1	2	2	2	1	1	12
Auditing	3	6	10	3	7	8	6	9	6	58
Accounting Information Systems	7	8	9	3	6	10	6	11	7	67
Proportion of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	14%	11%	0%	33%	0%	27%	0%	0%	13%	9%
Behavioral Sciences - Gen. Ed.	0%	0%	9%	33%	0%	9%	0%	0%	0%	4%
Written Communications - Gen. Bus.	43%	33%	27%	100%	0%	36%	50%	38%	13%	32%
Quantitative Applications - Gen. Bus.	14%	11%	9%	33%	22%	18%	33%	8%	13%	16%
Auditing	43%	67%	91%	100%	78%	73%	100%	69%	75%	75%
Accounting Information Systems	100%	89%	82%	100%	67%	91%	100%	85%	88%	87%

Mean total hours required for an undergraduate accounting degree in the 2000s decreased to 122.9 hours from the 124.4 hours required in the 1990s. Thirty programs (39.0%) required 125 semester hours or more, including three programs (3.9%) that required 130 hours or more, while only one program required less than 120 hours. Twenty-six (33.8%) programs required exactly 120 hours in total, while 16 programs (20.8%) required exactly 128 hours to attain an undergraduate degree.

Mean general education requirements in the 2000s were 62 hours, a reduction of 0.9 hours from the required level in the 1990s. Eighteen programs (23.4%) required fewer than 60 hours of general education, but four of those programs (5.2%) offered sufficient free electives to bring the proportion of non-business courses above 50% of the total hours required for graduation. In the Beamer Committee categories included in the general education area, 43

programs (55.8%) met or exceeded the Communications recommendation of six hours, with an additional 13 programs (16.9%) that required three or four hours of Communications and 19 programs (24.7%) that required less than three hours of Communications; 63 programs (81.8%) met or exceeded the Introductory Economics recommendation of six hours; and six programs (7.8%) required the Beamer Committee's recommended three hours of Elementary Accounting while 56 programs (72.7%) required more than three hours in Elementary Accounting in the 2000s. Areas where the institutions in the sample reported coursework requirements below the Beamer Committee's recommended levels once more included Behavioral Sciences, where only 23 programs (29.9%) required six or more hours of Behavioral Science, and Math & Computer, where only seven programs (9.1%) met or exceeded the Beamer recommendations of 14 hours in the area. Mean Math & Computer requirements for the 2000s were 7.6 hours, a 6% decrease from the mean requirements in the 1990s. Twenty-five programs (32.5%) required courses in Business during the first or second year during the 2000s.

In general business in the 2000s, the mean requirement of 23.7 hours was 1.9 hours below the 1990s mean of 25.6 hours and the institutions in the sample remained below the Beamer Committee recommendations for general business education. The only area where more than half the programs met or exceeded the Beamer Committee's recommendations during the 2000s was Marketing, with 61 programs (79.2%) that required two or three hours of Marketing and eight programs (10.4%) that required four or more hours. In Intermediate Economics, 23 programs (29.9%) required the six hours recommended by the Beamer Committee and 12 programs (15.6%) required more than six hours, while 40 programs (51.9%) required fewer than six hours of Intermediate Economics. In Business Law, 19 programs (24.7%) required four or more semester hours during the 2000s, while 36 programs (46.8%) required only three hours of

Business Law and 18 programs (23.4%) had no specific Business Law requirement. In Quantitative Applications, 26 programs (33.8%) required three or four hours while 12 programs (15.6%) required the Beamer Committee's recommended six hours or more. Thirty-five programs (45.5%) required no Quantitative Applications coursework in their general business curricula. Fifty-two programs (67.5%) required three hours of Finance, with 19 programs (24.7%) that required four hours or more of Finance. The remaining four programs (5.2%) may have addressed Finance requirements in the unspecified general business coursework requirements listed in their catalogues. In Management, eight programs (10.4%) required the recommended 14 hours or more during the 2000s, with the mean requirement of 8.8 hours unchanged from the 1990s. Only 25 programs (32.5%) required any Written Communication instruction in the general business area, an increase of four programs over the institutions in the 1990s that reported Written Communication requirements.

In accounting during the 2000s, the 22.5 mean required hours was an increase of 0.6 hours above the 1990s mean of 21.9 hours, and was 3.5 hours above the Beamer Committee accounting recommendations. The increases in accounting coursework reflect a shift from general business to accounting. Areas of accounting coursework where most of the programs met or exceeded the Beamer Committee's recommendations include Cost Accounting, with 61 programs (79.2%) at or above the three-hour recommended level; Tax, with 62 programs (80.5%) at or above the three-hour recommended level; Auditing, with 68 programs (88.3%) at or above the three-hour recommended level; Accounting Information Systems, with 42 programs (54.5%) that required four or more hours and 24 programs (31.2%) that required three hours of coursework; and Financial Accounting, where only five programs (6.5%) required the recommended six hours and 66 programs (85.7%) required seven hours or more in Financial

Accounting. The observations in these subdivisions understate the actual proportions of conformity with the Beamer recommendations, as 15 programs (19.5%) offer elective choices sufficient to bring the coursework in each subdivision up to the Beamer Committee recommendations. Eight programs (10.4%) required courses in Governmental or Not-for-Profit Accounting during the 2000s.

In summary, accounting requirements during the 2000s were similar to those in place during the 1990s, and the coursework requirements reported by most undergraduate accounting programs remained below Beamer Committee recommended levels in Math & Computer, Behavioral Sciences, Written Communication, and Quantitative Applications.

Current Requirements for Undergraduate Degrees

Information is available for all 79 undergraduate accounting programs during the current decade. Table 28, below, summarizes the most current undergraduate accounting program requirements available (either 2010-2011 or 2011-2012) for institutions in the sample.

Table 28: Undergraduate Accounting Program Requirements in the Current Decade

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Undergraduate Programs with Data	7	9	11	3	9	12	7	13	8	79
Semester credit hours										
General Education - Mean	65.7	59.3	60.8	60.3	61.8	67.5	60.3	61.9	56.4	61.9
(Beamer recommendation = 60 s.h.)										
General Business - Mean	26.1	27.9	21.5	27.0	23.8	20.8	25.3	25.6	23.2	24.2
(Beamer recommendation = 38 s.h.)										
Accounting - Mean	19.6	19.3	21.3	23.0	23.8	19.4	22.7	23.0	22.9	21.6
(Beamer recommendation = 19 s.h.)										
Number of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	0	1	1	0	0	4	0	1	1	8
Behavioral Sciences - Gen. Ed.	0	1	1	0	0	0	0	1	0	3
Written Communications - Gen. Bus.	5	6	3	2	1	3	3	7	0	30
Quantitative Applications - Gen. Bus.	2	2	0	1	2	1	2	2	1	13
Auditing	3	8	10	3	8	9	7	12	6	66
Accounting Information Systems	7	9	10	3	8	11	7	12	7	74
Proportion of Programs Meeting or Exceeding Beamer Recommendations										
Math - Gen. Ed.	0%	11%	9%	0%	0%	33%	0%	8%	13%	10%
Behavioral Sciences - Gen. Ed.	0%	11%	9%	0%	0%	0%	0%	8%	0%	4%
Written Communications - Gen. Bus.	71%	67%	27%	67%	11%	25%	43%	54%	0%	38%
Quantitative Applications - Gen. Bus.	29%	22%	0%	33%	22%	8%	29%	15%	13%	16%
Auditing	43%	89%	91%	100%	89%	75%	100%	92%	75%	84%
Accounting Information Systems	100%	100%	91%	100%	89%	92%	100%	92%	88%	94%

Most requirements reported by undergraduate accounting programs in the current decade remained similar to the requirements in the 2000s, with the only major difference a 61% decrease in the mean requirement for Accounting Information Systems coursework from 5.4 hours in the 2000s to 3.3 hours in the current decade. The remainder of this section will highlight the similarities and differences of undergraduate accounting programs in the 1960s and in the current decade.

Comparison of Current Decade to 1960s Undergraduate Accounting Programs

Mean total hours required for a degree in the current decade decreased to 122.3 hours from 124.6 required hours reported in the 1960s. Fourteen programs (17.7%) in the current decade required 125 total hours or more, including two programs (2.5%) that required 130 hours

or more, compared to eight of 20 programs in the 1960s (40%) that required 125 hours or more and only one program in the 1960s that required less than 120 hours. Forty-three programs (54.4%) required exactly 120 hours in total in the current decade, while six programs (30%) in the 1960s required 120 hours to attain an undergraduate degree. These data, both overall and by comparison of programs with specific requirements, indicate that current decade programs in general require slightly fewer total hours than was the case at the beginning of the period studied in this dissertation.

Mean general education requirements in the current decade were 61.9 hours, a reduction of 5.8 hours (9%) from the 67.7 hour mean general education requirements reported in the 1960s. Seventeen programs (21.6%) required fewer than 60 hours of general education in the current decade, but two of those programs offered sufficient free electives to bring non-business coursework above 50% of the total hours required for graduation. In total, 21 programs (26.6%) in the current decade did not meet the Beamer, Pierson, and Gordon & Howell recommendations for 50% or more of the coursework outside the business school, compared to three of 20 programs (15.0%) that required less than 50% of coursework outside accounting in the 1960s. In the Beamer Committee categories included in the general education area, during the current decade 44 programs (55.7%) met or exceeded the Beamer Committee's Communications recommendation of six hours, with 12 programs (15.2%) that required three or four hours of Communications and 23 programs (29.1%) that required less than three hours of Communications coursework. This contrasts with 12 programs (60.0%) during the 1960s that required six hours or more of Communications. In the current decade, 66 programs (83.5%) met or exceeded the Beamer Committee's Introductory Economics recommendation of six hours, consistent with the 17 programs (85.0%) in the 1960s that required six or more hours of

Introductory Economics. Five programs (6.3%) required the recommended three hours of Elementary Accounting in the current decade while 64 programs (81.0%) required more than three hours in Elementary Accounting. In comparison, 17 programs (85.0%) required more than three hours of Elementary Accounting in the 1960s. No programs met the Beamer Committee's recommended level of 14 hours of Math & Computer instruction in the 1960s, while eight programs (10.1%) met or exceeded the Math & Computer recommendations in the current decade. In Behavioral Sciences, 22 programs (27.8%) in the current decade required six or more hours of Behavioral Science, while in the 1960s five programs (25%) met or exceeded the Beamer Committee's six-hour recommendation. Mean Math & Computer requirements for the current decade were 7.5 hours, a 23% increase from the mean requirement of 6.1 semester hours in the 1960s.

Regarding general business in the current decade, the mean requirement of 24.2 hours was 1.3 hours below the 1960s mean requirement. The only general business area in the current decade where more than half of the programs met or exceeded Beamer Committee recommendations is Marketing, where 64 programs (81.0%) required two or three hours of Marketing and seven additional programs (8.8%) required four or more hours. The total of 71 programs (89.8%) that met or exceeded the Beamer Committee's two-hour Marketing recommendation is similar to the 1960s Marketing requirements when 18 programs (90.0%) required two or more semester hours. In Intermediate Economics during the current decade, nine programs (11.4%) required at least the six hours recommended by the Beamer Committee and 23 programs (29.1%) required three hours, while 47 programs (59.5%) had no specific Intermediate Economics requirements in the current decade. The Intermediate Economics requirements during the 1960s present a stark contrast, as 12 of 20 programs (60.0%) required six hours or

more of Intermediate Economics, five programs (25.0%) required two to four hours of Intermediate Economics coursework, and only three programs (15.0%) had no specific Intermediate Economics requirements. In Business Law during the current decade, 16 programs (20.3%) required four or more semester hours, while 45 programs (57.0%) required only three hours of Business Law and 13 programs (16.5%) had no specific Business Law requirement in the current decade. This compares to 12 programs (60.0%) during the 1960s that required four or more semester hours of Business Law, another six programs (30.0%) that required three hours of Business Law coursework, and only two programs (10.0%) that lacked a specific Business Law requirement. In Quantitative Applications during the current decade, 28 programs (35.4%) required three or four hours while 13 programs (16.5%) required the Beamer Committee's recommended six hours or more, and 38 programs (48.1%) required no Quantitative Applications in their general business curricula. During the 1960s, four programs (20.0%) required six hours or more of Quantitative Applications, while nine other programs (45.0%) required three or four hours and five programs (25.0%) lacked any Quantitative Applications requirements. Fifty-eight programs (73.4%) required three hours of Finance in the current decade, while an additional 15 programs (19.0%) required four hours of Finance or more. The remaining six programs (7.6%) may have addressed Finance requirements in the unspecified general business requirements listed in their catalogues. In Management, fourteen programs (17.7%) required the Beamer Committee's recommended level of 14 hours or more during the current decade, with the mean requirement of 9.7 hours reflecting a 0.6 hour increase above the 1960s mean requirement. Thirty programs (38.0%) required Written Communication instruction in the general business area during the current decade, a proportionate decrease from the 10 of 20 programs (50%) that required Written Communications instruction during the 1960s.

In accounting during the current decade, the 21.6 mean required hours was an 18% increase from the 18.3 hour 1960s mean requirement, and was 2.6 hours above the Beamer Committee's recommendation for accounting coursework. Areas where most of the programs met or exceeded the Beamer Committee's accounting coursework recommendations during the current decade included Cost Accounting, with 67 programs (84.8%) at or above the three-hour recommended level; Tax, with 68 programs (86.1%) at or above the three-hour recommended level; Auditing, with 66 programs (83.5%) at or above the three-hour recommended level; Accounting Information Systems, with 40 programs (50.6%) that required four or more hours in the current decade and 34 programs (43.0%)that required three hours; and Financial Accounting, where four programs (5.1%) required the Beamer Committee's recommended six hours and 72 programs (91.1%) required seven hours or more in Financial Accounting coursework.

The levels of coursework required during the current decade are generally comparable to the requirements during the 1960s for Cost Accounting and Tax. In Cost Accounting during the 1960s 10 programs (50.0%) required three or four hours, while four programs (20.0%) required five or six hours, and six programs (30.0%) had no Cost Accounting coursework requirement). In Tax during the 1960s 10 programs (50.0%) required three or four hours of Tax coursework, with five programs (25.0%) that required five or six hours, one program that required two hours of Tax, and four programs (20.0%) that had no Tax requirement. The Auditing requirements during the 1960s were not as substantial as the requirements during the current decade, as only 13 programs (65.0%) during the 1960s had Auditing requirements, including nine programs (45.0%) that required three or four hours, three programs (15%) that required six hours, and one program that required two hours of Auditing coursework. The programs sampled during the current decade generally exceeded the Beamer Committee's recommendations in Financial

Accounting, with 72 programs (91.1%) that required nine or more hours and four programs (5.1%) that met the Beamer Committee's six-hour recommendation. Most programs required at least one course in Accounting Information Systems, with 74 programs (93.6%) that required three or more hours in this area during the current decade, a substantial increase from the 1960s.. Coursework requirements for Financial Accounting during the 1960s were not quite as high as the current decade, as seven programs (35.0%) met the Beamer Committee's six-hour recommendation and 12 programs (60.0%) required nine hours or more of Financial Accounting coursework. Seven programs (8.9%) required courses in Governmental or Not-for-Profit Accounting during the current decade, compared to five programs (25.0%) that required Governmental or Not-for-Profit Accounting courses during the 1960s.

In summary, accounting requirements during the current decade are similar to those in place during the 1960s in several respects but the current decade undergraduate accounting programs require more total Accounting hours and more Auditing instruction than did the programs reported in the 1960s.

During the entire period reviewed in this chapter, the coursework requirements in most undergraduate accounting programs remained below Beamer recommendations in Math & Computer, Behavioral Sciences, Written Communication, and Quantitative Applications. Table 29, below, summarizes the overall comparisons to Beamer recommendations for all decades analyzed for undergraduate accounting program requirements.

Table 29: Overall Comparison to Beamer Recommendations

Description	1960s	1970s	1980s	1990s	2000s	Current Decade
Undergraduate Programs with Data	20	45	60	74	77	79
Semester credit hours						
General Education - Mean	67.2	65.2	65.5	62.9	62.0	61.9
(Beamer recommendation = 60 s.h.)						
General Business - Mean	25.5	25.1	25.7	25.6	23.7	24.2
(Beamer recommendation = 38 s.h.)						
Accounting - Mean	18.3	18.6	19.8	21.9	22.5	21.6
(Beamer recommendation = 19 s.h.)						
Number of Programs Meeting or Exceeding Beamer Recommendations						
Math - Gen. Ed.	0	3	7	6	7	8
Behavioral Sciences - Gen. Ed.	5	6	14	7	3	3
Written Communications - Gen. Bus.	10	13	15	21	25	30
Quantitative Applications - Gen. Bus.	3	16	21	19	12	13
Auditing	15	21	43	58	58	66
Accounting Information Systems	10	20	44	63	67	74
Proportion of Programs Meeting or Exceeding Beamer Recommendations						
Math - Gen. Ed.	0%	7%	12%	8%	9%	10%
Behavioral Sciences - Gen. Ed.	25%	13%	23%	9%	4%	4%
Written Communications - Gen. Bus.	50%	29%	25%	28%	32%	38%
Quantitative Applications - Gen. Bus.	15%	36%	35%	26%	16%	16%
Auditing	75%	47%	72%	78%	75%	84%
Accounting Information Systems	50%	44%	73%	85%	87%	94%

Pattern Identification for Undergraduate Programs

In this section, introductory discussion to provide a context for analysis is followed by details of findings and summary tables of observations or analysis. Comparisons to the Beamer Committee recommendations as a reference point are made to facilitate identification of changes over time, and are not intended to suggest that the Beamer recommendations are necessarily prescriptive of the appropriate coursework for accounting curricula at the present day.

Beamer Implementation Index

Holstrum and Wilson (1974) evaluated progress towards the Beamer Committee recommendations from 1967 to 1972 by means of a "Beamer Implementation Index" calculated

as the difference between 1967 and 1972 in the absolute value of variances from the Beamer Committee's semester hour recommendations in general education, general business, and accounting. For the 25 institutions in the Holstrum and Wilson sample, the Beamer Implementation Index in 1972 for general education revealed a 20% decrease in variance from the Beamer Committee recommendations; the general business Beamer Implementation Index revealed a 12% decrease in variance; and the accounting Beamer Implementation Index revealed a 16% decrease in variance. Holstrum and Wilson concluded that there had been slight but measurable movement towards the Beamer Committee recommendations by 1972.

Similar Beamer Implementation Index calculations were performed for the data collected on undergraduate accounting programs in this dissertation, using data from the 1960s as the base period for index calculation. The programs sampled in this dissertation in general showed less movement towards the Beamer Committee recommendations in the 1970s than did Holstrum and Wilson, with the sampled programs showing only a 6.7% improvement in general education to the 1970s, a 6.2% deterioration in general business, and no change in accounting to the 1970s. By the 1980s, more substantial progress was evident, with the Beamer Implementation index for general education showing 20.8% improvement compared to the 1960s and the Beamer Implementation Index for accounting showing 13.8% improvement. General business during the 1980s showed only a 1.4% decline in its Beamer Implementation Index, which was an improvement over the performance on that measurement in the 1970s. Some of the gains in general business were lost during the 1990s, as the Beamer Implementation Index was only 16.0% ahead of the 1960s. Accounting showed continued improvement during the 1990s, with its Beamer Implementation Index increasing to 20.2% better than the 1960s. General business during the 1990s continued slight improvement in comparison to the 1960s. In the 2000s, every

measurement was less favorable than the 1990s in comparison to the 1960s. In the current decade, the Beamer Implementation Index for accounting reached its best level of any period, at 29.4% improvement over the 1960s. The current decade Beamer Implementation Index for general business improved over the 2000s, but was still inferior to all other periods. The current decade Beamer Implementation Index for general education reached its least favorable level of any period, at 5.1% improvement over the 1960s.

These index observations indicate that the accounting area has made the most substantial progress towards the Beamer Committee recommendations since the 1960s, while general business has moved away from the Beamer recommendations and general education has only improved 5.1% over the period studied. Table 30, below, presents Beamer Implementation Index summaries for general education, general business, and accounting educational requirements for the periods studied. Negative numbers in the Beamer Implementation Index ("BI Index") represent movement towards the Beamer Committee's recommendations. Larger negative numbers represent greater progress. Each decade is compared to the Beamer Committee's recommendations – index numbers are not cumulative between columns.

Table 30: Beamer Implementation Index

Negative percentages indicate movement toward Beamer recommendations	1960s	1970s	1980s	1990s	2000s	Current Decade
	Absolute Value of Variance from Beamer Recommendations					
General education						
Communication	0.3	0.4	0.4	0	0	0.6
Behavioral sciences	3.6	4.4	3.5	4.8	4.9	5
Economics (introduction)	0.3	0.5	0.4	0.4	0.7	1
Accounting (elementary)	2.4	2.3	2.6	2.2	1.7	2.1
Mathematics and computer	7.9	6.4	5.1	5.9	6.4	6.5
Other general education	16.8	15.2	12.8	13	13.4	14.5
Total general education	31.3	29.2	24.8	26.3	27.1	29.7
BI Index - general education		-6.7%	-20.8%	-16.0%	-13.4%	-5.1%
General business						
Economics (intermediate)	1.1	2.7	3.3	3.5	3.8	4.2
Business law	0.7	0	0.4	0.5	1	0.9
Marketing	0.8	0.7	1.3	1.2	0.9	0.9
Finance	0.2	0.4	0	0.4	0.7	0.8
Quantitative applications in business	3.2	2.2	2.5	3.2	3.8	3.8
Written communication	0.3	1.2	1.2	0.9	0.8	0.6
Management (combined)	9.1	7.1	6.1	5.2	5.2	4.3
Not in Beamer list or Not Specified	5.6	8	6.5	5.8	6.6	7.1
Total general business	21	22.3	21.3	20.7	22.8	22.6
BI Index - general business		6.2%	1.4%	-1.4%	8.6%	7.6%
Accounting courses						
Financial accounting	2.8	2.8	1.8	3	2.5	2.2
Cost (managerial) accounting	0.1	0.1	0.2	0.1	0	0.1
Tax	0.1	0.1	0.3	0.1	0	0.2
Auditing	0.6	0.6	0.4	0.4	0.4	0.2
Accounting Information Systems	3	3	0.1	0.5	1.4	0.6
Not in Beamer list or Not Specified	4.3	4.3	6.6	4.6	5.5	4.4
Total accounting	10.9	10.9	9.4	8.7	9.8	7.7
BI Index - accounting		0.0%	-13.8%	-20.2%	-10.1%	-29.4%

Observations Regarding Individual Institutions

While current accounting program requirements are similar in aggregate to the requirements in place during the 1960s, analysis of how individual institutions met or exceeded the Beamer Accounting recommendations provides a basis for further insight. The Beamer Committee recommended six semester hours of Financial Accounting, three hours each of Cost (Managerial), Tax, and Audit, and four hours of Computer & Information Systems for a total of 19 hours in Accounting above the Elementary level. In the 355 observations of accounting

program requirements (20 in the 1960s, 45 in the 1970s, 60 in the 1980s, 74 in the 1990s, 77 in the 2000s, and 79 in the current decade) 104 programs met or exceeded all the Beamer recommendations. No programs met all the Beamer accounting recommendations in the 1960s, three programs met all the Beamer accounting requirements in the 1970s (6.5% of programs with data available), increasing to 16 programs (26.6%) in the 1980s, 28 programs in the 1990s (37.9%), 27 programs in the 2000s (35.1%), and 30 programs in the current decade (38.0%). The most frequently missed Beamer Committee recommendation was for four hours of Accounting Information Systems coursework, as 135 observations met all the other Beamer Committee recommendations but only required three hours of Accounting Information Systems rather than four hours. If these "near misses" are included in the summary as "substantial conformity", the proportion of programs meeting the Beamer Committee's recommendations increases substantially, beginning with 55% in substantial conformity in the 1960s and increasing to 74.3% in the 1990s. The apparent decline during the 2000s is attributable to an increased number of programs offering choices among accounting electives while reducing the total hours in required courses. Table 31, below, summarizes undergraduate accounting program conformity over time with the recommendations of the Beamer Committee.

Table 31: Summary of Conformity with Beamer Accounting recommendations

Period	Programs	Meet or exceed all Beamer recommendations		Require 3 or more AIS hours and meet all other recommendations	
1960s	20	0	0.0%	11	55.0%
1970s	45	3	6.7%	24	53.3%
1980s	60	16	26.7%	41	68.3%
1990s	74	28	37.8%	55	74.3%
2000s	77	27	35.1%	50	64.9%
2010s	79	30	38.0%	58	73.4%
Summary	355	104	29.3%	239	67.3%

State-by-State Analysis

Underlying patterns become more evident when the undergraduate accounting requirements are examined on a state-by-state basis. In the 1960s, all programs with data available in Illinois, Mississippi, New York, and Ohio were in substantial conformity with the Beamer Committee's accounting recommendations, although only eight programs are included in those states, while three programs in Florida and Tennessee also reached the threshold of substantial conformity. Texas and Virginia reported no programs in substantial conformity, and no data is available for California programs during the 1960s. In the 1970s, every state had 40% or more of the reported programs in substantial conformity with the Beamer Committee's accounting recommendations, led by both programs in Mississippi reaching substantial conformity and 60% or more of the programs in Illinois and New York in substantial conformity (the percentages presented in this section are calculated in relation to the undergraduate accounting programs with data for that state and period). In the 1980s, all states reported 50% or more of their undergraduate accounting programs in substantial conformity with the Beamer Committee's accounting recommendations, with Mississippi and New York reporting 100% in substantial conformity, California reporting 83% of programs in substantial conformity, and Illinois, Ohio and Virginia showing 63% or more in substantial conformity. One state reversed course in the 1990s, as New York decreased to only 37.5% of institutions with data reported in substantial conformity with the Beamer Committee's accounting recommendations. All other states reported 61% or more in substantial conformity during the 1990s, led by Tennessee with 100%, Virginia and Florida with 87.5%, California with 85.7%, and Ohio with 77.8%. Virginia, California and Florida regressed during the 2000s, declining to 37.5%, 42.9% and 50% respectively, while New York recovered to 77.8% of reported institutions in substantial

conformity with the Beamer Committee's accounting recommendations. Tennessee once more reported 100% in substantial conformity during the 2000s, with all other states in the 2000s within four percentage points of their 1990s level. In the current decade, California continues to trail with 42.9% of its undergraduate accounting programs in substantial conformity, while every other state reports 66.7% or more in substantial conformity with the Beamer Committee's accounting recommendations. Table 32, below, provides information on undergraduate accounting program conformity with the Beamer Committee accounting recommendations by state over time, tabulated to show the number of institutions in each state that demonstrated substantial conformity.

Table 32: Undergraduate Accounting Programs in Conformity with Beamer Accounting Recommendations

	Period	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Substantial Conformity with Beamer Accounting Recommendations (AIS adjusted to 3 hours)	1960s	*	2	4	1	1	2	1	0	0	11
	1970s	2	3	6	2	2	2	2	2	3	24
	1980s	5	4	7	3	6	6	2	4	4	41
	1990s	6	7	8	2	3	7	7	8	7	55
	2000s	3	4	8	2	7	9	6	8	3	50
	Current Decade	3	6	9	3	7	8	6	10	6	58

** Data not available in this state for this period*

Undergraduate Program Findings in Response to Selected Research Questions

The research questions discussed in Chapter 3 were used to provide a framework for the analysis of undergraduate accounting programs in the following sections. Research Question 1a asks "How do changes in legislation that require 150 hours of education to sit for the CPA examination relate to changes in undergraduate accounting program requirements?" To address one aspect of this research question, the state-by state differences in conformity with the Beamer Committee recommendations were investigated to identify whether there is an association between the required accounting courses and the legislative educational requirements for

accounting programs (150-hour educational requirements). Small sample sizes in the various states did not support finding significant results on a state-by-state basis with respect to undergraduate accounting course requirements. When the data is partitioned into states with 150-hour legislation by 1995 and states with post-1995 legislation, only one significant result is obtained, relating to differences in requirements for auditing courses in the 1980s. Finding a single result with apparent statistical significance may be an artifact of the number of analyses conducted, absent the identification of a reason why the result should occur. Since this finding relates to a condition observed in the 1980s that pre-dates the enactment of 150-hour educational requirements in all states in the sample but Florida, and since no convincing rationale is immediately evident to suggest why this association is meaningful, no conclusions are drawn from this result.

Analysis of Accounting Accreditation

Research Question 2 asks "How does obtaining accounting accreditation relate to changes in accounting program requirements?" Analysis of differences in the timing of AACSB accounting accreditation was performed to identify possible associations among undergraduate Accounting program course requirements and accreditation status. The initial group of programs that had achieved accounting accreditation by 1995 included 51 institutions from the states selected for analysis in this dissertation, but not all those institutions had data available for all periods in the analysis. Periods before the attainment of accounting accreditation were included in the analysis to investigate whether the timing of accounting accreditation revealed structural or practical differences among institutions.

The analysis (t-test for differences in mean coursework requirements between early-accredited and later-accredited institutions) revealed that in the 1970s, the 30 institutions

accredited by 1995 for which data were available required more coursework in Accounting Information Systems than did the 15 institutions that were not accredited by 1995 (p value .012). Similarly, the 39 institutions accredited by 1995 required more Accounting Information Systems coursework in the 1980s than did the 21 institutions with later accreditation (p value .010), and the 47 institutions accredited by 1995 required more Accounting Information Systems coursework in the 1990s than did the 27 institutions with later accreditation (p value .019). No significant results were observed in this analysis for coursework in other required areas during the period examined. Table 33, below, provides information on differences in conformity with the Beamer Accounting course recommendations among undergraduate Accounting program in conjunction with accounting accreditation status.

Table 33: Conformity with Beamer Accounting Recommendations - by Accounting Accreditation Status as of 1995

	Area	1960s	1970s	1980s	1990s	2000s	Current Decade
Not Accounting Accredited by 1995	Financial Accounting	3	12	18	25	23	25
	Cost Accounting	3	13	16	21	23	25
	Taxes	3	11	16	20	22	25
	Auditing	3	11	16	20	20	23
	Req 3 hours of AIS	3	13	21	26	26	28
	Number of Institutions	**4**	**15**	**21**	**27**	**27**	**28**
Accounting Accreditation by 1995	Financial Accounting	16	27	31	45	43	47
	Cost Accounting	11	24	32	41	41	44
	Taxes	12	23	31	43	43	45
	Auditing	9	18	31	42	40	45
	Req 3 hours of AIS	16	29	37	47	48	51
	Number of Institutions	**16**	**30**	**39**	**47**	**50**	**51**
Total Institutions - All Status		**20**	**45**	**60**	**74**	**77**	**79**

Analysis of General Orientation

As introduced in Chapter 3, the General Orientation and Scholarly Orientation codes reported by institutions provide indications of how those institutions perceive their educational missions. The General Orientation of institutions in the sample was analyzed for patterns and

associations to undergraduate Accounting program requirements, in combination with the timing of accounting accreditation.

Table 34: Conformity with Beamer Accounting Recommendations - By Accreditation Status and General Orientation

	Not Accredited by 1995						Accounting Accreditation by 1995					
Area	1960s	1970s	1980s	1990s	2000s	Current Decade	1960s	1970s	1980s	1990s	2000s	Current Decade
A: Teaching, then Intellectual Contributions												
Financial Accounting	2	5	9	13	11	13	4	5	5	10	10	11
Cost Accounting	2	5	8	10	11	14	3	6	6	10	9	11
Taxes	2	4	8	11	12	14	3	5	5	9	10	11
Auditing	2	4	8	10	11	13	2	3	5	8	10	11
Req 3 hours of AIS	2	5	12	13	12	14	4	6	6	11	11	12
Number of Institutions	**3**	**7**	**12**	**13**	**13**	**14**	**4**	**6**	**6**	**11**	**11**	**12**
All Institutions-General Orientation A	**7**	**13**	**18**	**24**	**24**	**26**						
B: Intellectual Contributions, then Teaching												
Financial Accounting	*Not Presented - Only One Institution in This Classification With Data (Current Decade Data Only, No Earlier Data)*						4	9	11	14	12	14
Cost Accounting							3	7	12	13	12	11
Taxes							3	7	11	14	12	13
Auditing							2	5	11	14	11	11
Req 3 hours of AIS							4	9	13	14	14	16
Number of Institutions							4	9	13	14	14	16
All Institutions-General Orientation B	**4**	**9**	**13**	**14**	**14**	**16**						
E: Equal for Teaching and Intellectual Contributions												
Financial Accounting		5	5	6	7	6	8	13	15	21	21	22
Cost Accounting		5	4	6	6	5	5	11	14	18	20	22
Taxes		5	4	5	6	6	6	11	15	20	21	21
Auditing		5	4	6	6	6	5	10	15	20	19	23
Req 3 hours of AIS		5	5	6	7	7	8	14	18	22	23	23
Number of Institutions		**5**	**5**	**7**	**7**	**7**	**8**	**16**	**21**	**22**	**23**	**23**
All Institutions-General Orientation E	**8**	**21**	**26**	**29**	**30**	**30**						
F: Teaching, then Intellectual Contributions and Service												
Financial Accounting	1	1	2	2	2	2	*Not Presented - No Institutions in This General Orientation Classification With Data*					
Cost Accounting	1	1	2	2	2	2						
Taxes	1	1	2	2	1	2						
Auditing	1	1	2	2	0	1						
Req 3 hours of AIS	1	1	2	2	2	2						
Number of Institutions	**1**	**1**	**2**	**2**	**2**	**2**						

Table 34, above, summarizes observations regarding associations among undergraduate Accounting program requirements and the General Orientation reported by the institutions in the sample, showing the number of institutions that meet the indicated conditions in the periods presented.

These observations show, for example, that Accounting-accredited institutions (1995 and prior) that reported General Orientation code A (high emphasis on teaching, medium emphasis on intellectual contributions) required more Accounting Information Systems coursework during the 1980s than did institutions in this General Orientation with accreditation post-1995. Pearson's Chi-Square analysis was performed to identify statistically significant associations of General Orientation and undergraduate accounting program output measures. Although the accreditation status of the institutions was evaluated as of a point subsequent to the 1970s and 1980s, those periods were included in the investigation in order to ascertain whether institutional differences leading to the timing of accreditation may have associations with structural measures from earlier periods. The number and distribution of institutions that reported General Orientation code B or F was insufficient to permit analysis of the association of General Orientation and undergraduate accounting program output measures.

In the analysis of General Orientation Code A, institutions that attained accounting accreditation by 1995 showed higher proportions of programs that exceeded the Beamer Committee's Written Communication recommendation in the 1980s, and more institutions that required 128 total hours or more in the 1970s and 1980s than did institutions that attained accounting accreditation after 1995. The conclusions drawn from these findings are necessarily limited due to the number of observations not permitting statistically rigorous analysis. The analysis of General Orientation code E showed three significant associations in the 1970s, one

significant association in the 1980s and in the 1990s, and two significant associations during the 2000s and the current decade. The findings are presented in Table 35, below, for informational purposes.

Only associations with p-values of 0.10 or lower are presented in table 5. Institutional characteristics and measures of output not listed in the table did not show p-values of less than 0.10 in the periods analyzed. The top (boldface) row in each section counts the number of associations observed, and the lower rows show the observed p-value (asymptotic 2-sided significance from Pearson's Chi-Square analysis). The conclusions drawn from these findings are necessarily limited due to the number of observations not permitting statistically rigorous analysis.

Table 35: Associations of General Orientation and Output Measure - By Accreditation Status

General Orientation * Output Measure	Significant Associations					
	1970s	1980s	1990s	2000s	2010s	Overall
A - Teaching, then Intellectual Contributions	**1**	**2**				**3**
Exceed Written Communications Rec.		0.020				
Total Hours 128 or Greater	0.079	0.012				
E - Equal for Teaching and Intellectual Contributions	**3**	**1**	**1**	**2**	**2**	**9**
Exceed Behavioral Rec				0.065		
Exceed Math & Computer Rec.				0.061		
Exceed Quantitative Applications Rec.	0.049					
Require Audit Course	0.097				0.065	
Total Accounting 18 Hours or Greater		0.041	0.071		0.065	
Total Hours 128 or Greater	0.075					
Overall	**4**	**3**	**1**	**2**	**2**	**12**

In summary, among the institutions that were categorized by whether they were accredited by 1995, the institutions that reported they valued teaching and intellectual contributions equally (General Orientation code E) showed 12 significant associations with six measures of output, including an association with requirements for total accounting hours greater than 18 that manifested in 3 different decades. The institutions that placed the highest value on teaching (General Orientation code A) showed three significant associations with two measures

of output, but those associations may have been affected by the limited data set available in the 1970s and to some extent the 1980s. Accordingly, no conclusions are drawn from this analysis.

Accreditation Timing and Carnegie Classifications

Table 36, below, summarizes observations regarding accounting accreditation status and undergraduate accounting program requirements reported by the institutions in the sample in relation to the Carnegie Classification codes of the institutions.

Table 36: Conformity with Beamer Accounting Recommendations - By Accreditation Status and Carnegie Classification

	Not Accredited by 1995						Accounting Accreditation by 1995					
Area	1960s	1970s	1980s	1990s	2000s	Current Decade	1960s	1970s	1980s	1990s	2000s	Current Decade
D/R - E (Doctoral / Research - Extensive)												
Financial Accounting		2	6	6	7	5	8	16	16	23	22	24
Cost Accounting		3	5	4	5	4	5	12	15	20	20	20
Taxes		3	5	5	6	5	6	13	14	23	21	21
Auditing		3	5	4	6	5	5	10	14	23	20	21
Req 3 hours of AIS		3	6	6	7	7	8	16	19	24	24	26
Number of Institutions		**3**	**6**	**7**	**7**	**7**	**8**	**16**	**22**	**24**	**24**	**26**
All Institutions- D/R - E	**7**	**13**	**18**	**24**	**24**	**26**						
D/R - I (Doctoral / Research - Intensive)												
Financial Accounting	2	3	3	6	4	6	5	8	11	14	12	13
Cost Accounting	2	3	3	5	6	7	4	8	13	14	14	14
Taxes	2	3	3	3	5	6	3	7	13	13	14	14
Auditing	2	3	3	4	5	6	2	5	13	13	12	14
Req 3 hours of AIS	2	3	4	6	6	7	5	9	14	15	15	15
Number of Institutions	2	4	4	6	7	7	5	10	14	15	15	15
All Institutions- D/R - I	**7**	**13**	**18**	**24**	**24**	**26**						
Masters I												
Financial Accounting	1	7	9	13	12	14	3	3	4	7	8	8
Cost Accounting	1	7	8	12	12	14	2	4	4	6	7	8
Taxes	1	5	8	12	11	14	3	3	4	7	8	8
Auditing	1	5	8	12	9	12	2	3	4	6	8	8
Req 3 hours of AIS	1	7	11	14	13	14	3	4	4	7	8	8
Number of Institutions	**2**	**8**	**11**	**14**	**13**	**14**	**3**	**4**	**4**	**7**	**8**	**8**
All Institutions- Masters I	**7**	**13**	**18**	**24**	**24**	**26**						

Analysis of accounting accreditation timing in conjunction with Carnegie classification codes using t-tests for differences in means reveals a difference in 1980s Accounting Information

Systems course requirements for those institutions reporting Carnegie classification "Doctoral / Research – Extensive". The 21 earlier-accredited institutions required more coursework than the six institutions with post-1995 accreditation (p value .048). The 15 earlier-accredited institutions reporting Carnegie classification "Doctoral / Research – Intensive" required more Tax coursework in the 1990s (p value .033) and more Accounting Information Systems coursework in the 1990s (p value .001) and 2000s (p value .059) than did the seven institutions with post-1995 accreditation. No significant differences were observed among the 22 institutions reporting Carnegie classification "Masters I".

Accounting accreditation status also made a difference among programs segregated according to whether they offered a doctorate in accounting in 2011. The 19 institutions with earlier accreditation that did not offer doctorates required more Accounting Information Systems coursework in 1980 than did the 18 institutions with post-1995 accreditation that did not offer accounting doctorates (p value .015). The doctoral-granting institutions with earlier accreditation required more Accounting Information Systems coursework in the 1970s (p value .034) and in the 1990s (p value .019) than did the doctoral-granting institutions with post-1995 accreditation. That finding is consistent with the AACSB accounting accreditation requirement during the 1980s of specific coursework in Information Systems. The AACSB coursework requirements were replaced by outcomes-based measurements in the early 1990s, so institutions that attained accounting accreditation after the AACSB changed its requirements would not have been under accreditation pressure to implement specific Information Systems coursework.

Table 37, below, summarizes observations regarding associations among undergraduate accounting program requirements and the accounting accreditation status reported by the institutions in the sample in conjunction with the doctoral-granting status of the institutions.

Table 37: Conformity with Beamer Accounting Recommendations - By Accreditation Status and Doctoral-Granting Status

	Not Accredited by 1995						Accounting Accreditation by 1995					
Area	1960s	1970s	1980s	1990s	2000s	Current Decade	1960s	1970s	1980s	1990s	2000s	Current Decade
Not Doctoral Granting as of 2011												
Financial Accounting	3	9	15	19	17	19	10	14	15	24	22	24
Cost Accounting	3	10	14	16	17	20	8	15	17	24	22	25
Taxes	3	8	14	17	17	20	8	13	17	22	23	25
Auditing	3	8	14	16	15	18	6	11	17	21	21	24
Req 3 hours of AIS	3	10	18	20	19	21	10	16	19	25	26	27
Number of Institutions	**4**	**12**	**18**	**20**	**20**	**21**	**10**	**17**	**19**	**25**	**27**	**27**
All Not Doctoral Granting Institutions	**14**	**29**	**37**	**45**	**47**	**48**						
Doctoral-Granting as of 2011												
Financial Accounting		3	3	6	6	6	6	13	16	21	21	23
Cost Accounting		3	2	5	6	5	3	9	15	17	19	19
Taxes		3	2	3	5	5	4	10	14	21	20	20
Auditing		3	2	4	5	5	3	7	14	21	19	21
Req 3 hours of AIS		3	3	6	7	7	6	13	18	22	22	24
Number of Institutions		**3**	**3**	**7**	**7**	**7**	**6**	**13**	**20**	**22**	**23**	**24**
All Doctoral-Granting Institutions	**6**	**16**	**23**	**29**	**30**	**31**						

Principal component analysis was conducted to identify patterns in undergraduate accounting program requirements; however the limited data set available and issues with making operational the measurement of outcomes led to inconclusive results from principal component analysis. No factors were identified that presented loadings greater than 0.40. Accordingly, principal component analysis was not relied upon in evaluating patterns in undergraduate accounting programs.

Association of Institutional Characteristics and Measures of Conformity

Research Question 4 asks "How do organizational and institutional characteristics relate to changes in accounting program requirements?" Associations between institutional characteristics and undergraduate accounting program measures of compliance with Beamer Committee recommendations ("output measures") were analyzed using cross-tabulations and

Pearson's Chi-Square tests to identify meaningful associations. The limited amount of data available generally causes the analysis to violate the chi-square parameter of at least five expected cases in each cell. Thus, no statistically rigorous conclusions can be drawn. Table 38, below, summarizes the associations observed. It presents the same information sorted two different ways in two panels – Panel A shows associations sorted first by **institutional characteristics** and then by output measures, and Panel B shows associations sorted first by **output measures** and then by institutional characteristics. Only associations with p-values of 0.10 or lower are presented in table 38. Institutional characteristics and measures of output not listed in the table did not show p-values of less than 0.10 in the periods analyzed. The top (boldface) row in each section counts the number of associations observed, and the lower rows show the observed p-value (asymptotic 2-sided significance from Pearson's Chi-Square analysis).

Table 38: Panel A- Significant Associations of 9 Institutional Characteristics and 7 Output Measures

Institutional Characteristics * Output Measures	Significant Associations						
	1960s	**1970s**	**1980s**	**1990s**	**2000s**	**Current Decade**	**Overall**
Accounting Accreditation by 1995		**1**	**1**	**1**			**3**
Meet or Exceed Quantitative Analysis Rec.		0.041					
Meet or Exceed Written Communications Rec.			0.042				
Require Course in AIS				0.043			
Carnegie Classification - 2010						**1**	**1**
Total More than 127 Hours						0.07	
Carnegie Classification - AACSB		**2**		**1**	**1**		**4**
Meet or Exceed Written Communications Rec.				0.039			
Require Course in AIS		0.01			0.024		
Total Accounting More than 17 Hours		0.099					
General Orientation			**1**	**1**		**1**	**3**
Meet or Exceed Behavioral Science Rec.			0.012				
Require Course in AIS				0.067			
Require Course in Auditing						0.031	
Scholarly Orientation	**1**	**1**	**2**			**1**	**5**
Meet or Exceed Behavioral Science Rec.			0.097				
Meet or Exceed Quantitative Analysis Rec.						0.036	
Require Course in AIS	0.095		0.095				
Total Accounting More than 17 Hours		0.000					
Public Institution		**1**			**1**	**1**	**3**
Require Course in Auditing		0.027					
Total More than 127 Hours					0.031	0.029	
School of Accountancy	**1**			**2**	**1**		**4**
Meet or Exceed Quantitative Analysis Rec.				0.021			
Meet or Exceed Written Communications Rec.				0	0.036		
Total More than 127 Hours	0.013						
150 Hour Law by 1995					**1**	**1**	**2**
Meet or Exceed Written Communications Rec.					0.036		
Require Course in Auditing						0.044	
State	**1**			**1**	**1**	**1**	**4**
Meet or Exceed Quantitative Analysis Rec.	0.049						
Meet or Exceed Written Communications Rec.						0.021	
Total More than 127 Hours				0.02	0.014		
Overall	**3**	**5**	**4**	**6**	**5**	**6**	**29**

Table 38: Panel B - Significant Associations of 7 Output Measures and 9 Institutional Characteristics

Output Measures * Institutional Characteristics	**Significant Associations**						
	1960s	**1970s**	**1980s**	**1990s**	**2000s**	**Current Decade**	**Overall**
Total More than 127 Hours	**1**			**1**	**2**	**2**	**6**
Carnegie Classification - 2010						0.07	
Public Institution					0.031	0.029	
School of Accountancy	0.013						
State				0.02	0.014		
Meet or Exceed Written Communications Rec.			**1**	**2**	**2**	**1**	**6**
150 Hour Law by 1995					0.036		
Accounting Accreditation by 1995			0.042				
Carnegie Classification - AACSB				0.039			
School of Accountancy				0	0.036		
State						0.021	
Require Course in AIS	**1**	**1**	**1**	**2**	**1**		**6**
Accounting Accreditation by 1995				0.043			
Carnegie Classification - AACSB		0.01			0.024		
General Orientation				0.067			
Scholarly Orientation	0.095		0.095				
Meet or Exceed Quantitative Analysis Rec.	**1**	**1**		**1**		**1**	**4**
Accounting Accreditation by 1995		0.041					
Scholarly Orientation						0.036	
School of Accountancy				0.021			
State	0.049						
Require Course in Auditing		**1**				**2**	**3**
150 Hour Law by 1995						0.044	
General Orientation						0.031	
Public Institution		0.027					
Meet or Exceed Behavioral Science Rec.			**2**				**2**
General Orientation			0.012				
Scholarly Orientation			0.097				
Total Accounting More than 17 Hours		**2**					**2**
Carnegie Classification - AACSB		0.099					
Scholarly Orientation		0.000					
Overall	**3**	**5**	**4**	**6**	**5**	**6**	**29**

As Panels A and B of Table 38 indicate, no more than six associations were observed in any period or for any institutional characteristic or measure of compliance with the Beamer Committee recommendations ("output measure") for undergraduate accounting programs. A review of the columns in Table 38 reveals that there were six associations with each of three measures of compliance. Institutional characteristics were associated with programs that required

128 or more total hours, with six significant associations including one association in the 1960s, one association in the 1990s, and two associations in the 2000s and in the current decade. Other institutional characteristics were associated with required courses in Accounting Information Systems, with six significant associations including two associations in the 1990s, and one association in each of the 1960s, 1970s, 1980s, and 2000s. The six significant associations with Written Communication appear in the 1980s (one association), 1990s (two associations), 2000s (two associations), and current decade (one association) No strong patterns of association are visually apparent from the information presented in Panels A or B of Table 38. Accordingly, no conclusions are drawn from this analysis.

Master's Program Requirements

Data was collected for programs offering professional graduate degrees in accounting or MBA degrees with accounting concentrations. The 45 program-years in the data originally collected that did not offer degrees with accounting emphasis or that did not have enough information to permit identification of requirements to attain a Master's degree were excluded from the sample, leaving 269 program-years with sufficient data for evaluation. Only one graduate degree was included per year for each institution in the sample

Basis for Comparison

The 1978 Policy Statement of the AICPA endorsed the Beamer Committee coursework recommendations and recommended additional coursework to total 150 hours of education for new entrants to the profession. The difference between the Beamer Committee recommendations and the 1978 AICPA Policy Statement recommendations can be interpreted as recommended coursework for a Master's degree in accounting, providing a reference point for Master's program comparisons analogous to the comparisons to Beamer requirements performed for

undergraduate programs. Similarly, there is no intention to suggest that the 1978 AICPA Policy Statement recommendations necessarily prescribe a graduate curriculum that is appropriate at the present day.

The sample graduate program in the 1978 AICPA Policy Statement included 30 semester hours of education beyond the baccalaureate degree, with 18 recommended hours in accounting and 12 hours of elective coursework. The accounting recommendations consisted of nine hours in Financial Accounting (including Accounting Theory, Applied Problems, and Contemporary Issues), three hours in Managerial / Cost Accounting, three hours of Taxes, three hours of Auditing, and three hours of Accounting Information Systems. The following sections of this dissertation compare observed graduate accounting program requirements to the 1978 AICPA Policy Statement recommendations.

Graduate Accounting Programs during the 1960s

Data is available for nine graduate programs in six states during the 1960s, including Bradley University, Bowling Green State University, the University of Cincinnati, DePaul University, East Tennessee State University, Northern Illinois University, the University of Florida, the University of Mississippi, and the University of Texas – Austin. Table 39, below, summarizes graduate accounting program requirements in the 1960s for institutions in the sample. Tables in this section that summarize graduate accounting program present by state the number of institutions reported with MAcc or other professional degrees, institutions offering only MBA degrees with accounting concentration, and the mean semester hours reported for each of the areas of accounting coursework recommended by the 1978 AICPA Policy Statement. The bottom section of the table indicates the number of institutions that met (exactly) three or

more of the 1978 AICPA Policy Statement recommendations and the number of institutions that required more accounting coursework than the AICPA recommendations in two or more areas.

Table 39: Graduate Accounting Program Requirements in the 1960s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Graduate Programs with Data		1	3	1		2	1	1		9
Data for MACC or Other Professional Degree			1	1				1		3
Data for MBA with Accounting Concentration		1	2			2	1			6
Mean Semester Hours										
Total Program		36.0	30.0	30.0		31.5	32.0	33.0		31.6
Required Accounting - Total		3.0	10.0	9.0		10.0	6.0	6.0		8.2
Financial Accounting		-	2.0	-		8.0	4.0	3.0		3.2
Managerial / Cost		3.0	3.0	3.0			2.0			2.8
Taxes										
Auditing										
Accounting Info. Systems										
Accounting Electives		12.0	4.0	-		-	12.0	12.0		5.3
Outside Required and Elective Courses		21.0	16.0	21.0		21.5	14.0	15.0		18.0
Programs Meeting 3 or More Accounting Recommendations		0	0	1		1	0	0		2
Programs Exceeding 2 or More Accounting Recommendations		1	3	1		2	1	1		9

Six of the institutions in the sample offered MBA programs with concentrations in accounting, while the other three institutions offered Master of Science – Accounting or Master of Professional Accounting degrees. All programs could be completed in one academic year for students who fulfilled the appropriate prerequisites, with required total hours that ranged from four programs (44.4%) with 30 hours to one program with 32 hours to two programs (22.2%) with 33 hours and one program with 36 hours. Required accounting courses ranged from two programs (22.2%) with three hours to one program with 15 hours. No programs required coursework in Auditing, Government or Not-for-Profit, Taxes, or Accounting Information Systems. Three programs (33.3%) required coursework in Financial Accounting and four programs required coursework in Management and Cost Accounting, while three programs

(33.3%) required coursework in Accounting Theory and two programs (22.2%) required a course in Professional Issues. Six programs (66.7%) offered some flexibility in choosing one or more selections from a list of required courses, and ranged from two programs (22.2%) with three hours of unspecified required courses to one program with 12 hours of unspecified required courses, with a median unspecified required component of four hours. Electives in accounting ranged from three programs (33.3%) that allowed zero hours of accounting electives to three programs (33.3%) that allowed 12 hours, with one of the 12-hour elective programs directing that the elective courses come from Accounting Information Systems and the other two 12-hour elective programs offering greater flexibility. Four programs allowed selection of electives from an approved list, hereafter described as "unspecified electives". Mean total hours in accounting were 13.5 hours, with one program that specified only six hours in accounting including required courses and electives, two programs (22.2%) that specified nine hours in accounting, one program that specified 14 hours in accounting, two programs (22.2%) that specified 15 hours in accounting, and three programs (33.3%) that specified 18 hours in accounting coursework.

During the 1960s, graduate coursework requirements outside accounting ranged from 12 hours to 24 hours, with median outside coursework requirements of 16 hours. No program required courses in Operations Research, Risk Management, or Information Systems, and only one program required courses in Business Law or in Written Communications. Two programs (22.2%) required courses in Marketing, while two programs (22.2%) required Organizational Behavior courses and two programs (22.2%) required courses in Quantitative Methods / Statistics. Three programs (33.3%) required courses in Finance, and six programs (66.7%) required courses in Economics or in Management. Two programs (22.2%) permitted three hours

each in unspecified business courses, while three programs (33.3%) required 12 hours in unspecified business courses and one program required 15 hours in unspecified business courses.

Graduate Accounting Programs during the 1970s

Data is available for 18 graduate accounting programs in nine states during the 1970s. Table 40, below, summarizes graduate accounting program requirements in the 1970s for institutions in the sample.

Table 40: Graduate Accounting Program Requirements in the 1970s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Graduate Programs with Data	2		5	1	2	2	1	4	1	18
Data for MACC or Other Professional Degree	1		3	1		1		3	1	10
Data for MBA with Accounting Concentration	1		2		2	1	1	1		8
Mean Semester Hours										
Total Program	30.0		36.9	30.0	47.5	31.0	32.0	33.8	31.0	35.0
Required Accounting - Total	4.5		11.8	-	7.5	15.0	10.0	9.8	3.0	9.2
Financial Accounting	2.0		1.5	-	1.5	3.0	4.0	2.3	3.0	2.0
Managerial / Cost	3.0		5.1				2.0	3.0		3.9
Taxes			2.3		3.0		2.0	12.0		4.3
Auditing			2.6		3.0		2.0	3.0		2.6
Accounting Info. Systems			5.0					3.0		4.3
Accounting Electives	9.5		16.2	18.0	10.5	-	8.0	11.3	9.0	11.2
Outside Required and Elective Courses	16.0		8.9	12.0	29.5	16.0	14.0	12.8	19.0	14.6
Programs Meeting 3 or More Accounting Recommendations	0		1	0	0	0	0	1	0	2
Programs Exceeding 2 or More Accounting Recommendations	2		3	1	2	2	1	4	1	16

The degrees offered during the 1970s reflected a change from the previous decade, as 10 programs (55.6%) offered Master of Accountancy, MS - Accounting or Master of Professional Accountancy degrees and eight programs (44.4%) offered only MBA degrees with accounting concentration. Total hours required for a Master's degree ranged from 30 to 36 hours for students with the equivalent of an undergraduate degree in accounting in 16 of the 18 programs with data.

There were two programs that did not give credit for courses completed as part of an undergraduate program, and those two programs required 54 and 61 hours respectively for their MBA degrees. The hours of accounting coursework needed for a Master's degree spanned a range from two programs (11.1%) that required 12 hours to one program that required 34 hours. This wide range covers 14 programs (77.8%) that required 12 to 21 hours of Accounting, one MBA program that required 27 hours of accounting and 54 hours overall, and four programs (one in Texas and three in Illinois) that required 32 to 34 hours of accounting. Two of the programs (11.1%) at the high end of the range required no coursework outside accounting and the other two programs required only one course outside accounting in their Master's programs. Graduate accounting programs in the 1970s offered substantial choice among accounting courses as the mean for required courses in accounting was 9.2 semester hours, with four programs (22.2%) that did not require any specific courses, three programs (16.7%) that required only three hours of specific courses, and fourteen of the programs (77.8%) that permitted students to choose 50% or more of their accounting courses as electives.

The most frequently required graduate accounting courses were found in seven programs (38.9%) that required Accounting Theory, six programs (33.3%) that required Auditing and six programs that required Cost / Managerial Accounting, and five programs (27.8%) that required Financial Accounting and five programs that required Taxes. Three programs (16.7%) required courses in Accounting Information Systems, two programs (11.1%) required courses covering Professional Issues, and two programs required Governmental / Not-for-Profit Accounting courses. In the 1970s, coursework outside accounting ranged from zero hours (two programs) to 21 hours (one program), excluding the two MBA programs that did not give credit for previously-completed coursework and required either 21 or 40 hours outside accounting for a

Master's degree. Ten programs (55.5%) required courses in Economics and Management, eight programs (44.4%) required courses in Finance, six programs (33.3%) required courses in Marketing, four programs (22.2%) required courses in Organizational Behavior, three programs (16.7%) required courses in Business Law, two programs (11.1%) required courses in Quantitative Methods / Statistics or in Operations Research, and one program required a Written Communications course.

Program requirements in the 1970s show an evolution from MBA degrees to Master's degrees with accounting specialization or emphasis. In the 1970s, 55.6% of programs offered Master's in Accountancy, MS-Accounting, or Master of Professional Accountancy degrees compared to 66.7% of the programs in the 1960s that offered only MBA degrees with accounting concentration or majors. Two of the 19 programs (11.1%) in the 1970s met three or more of the recommendations in the 1978 AICPA Policy Statement (nine hours of Financial Accounting, three hours in each of Cost / Managerial Accounting, Taxes, Auditing, and Accounting Information Systems, 12 hours of electives, and 30 hours in total for a graduate degree in accounting). Only six programs (33.3%) required between 15 and 18 accounting hours. Fourteen programs (77.8%) allowed 50% or more of the accounting coursework to be chosen as electives, and eight programs (44.4%) allowed 50% or more of the business coursework to be chosen as electives. Ten programs (55.6%) required courses in Economics or in Management, and eight programs (44.4%) required courses in Finance.

In summary, graduate accounting programs during the 1970s more closely resembled the sample program described in the 1978 AICPA Policy Statement than did programs in the 1960s. The AICPA recommendation for nine hours of Financial Accounting was the most frequently missed recommendation during the 1970s. In that period, 16 programs (88.9%) exceeded two or

more of the AICPA's recommendations, indicating that there were imbalances in the distribution of coursework during the 1970s.

Graduate Accounting Programs during the 1980s

Data is available for 44 graduate accounting programs in nine states during the 1980s. Table 41, below, summarizes graduate accounting program requirements in the 1980s for institutions in the sample.

Table 41: Graduate Accounting Program Requirements in the 1980s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Graduate Programs with Data	5	5	8	3	6	4	2	8	3	44
Data for MACC or Other Specialized Degree	3	5	5	3	2	4	2	7	3	34
Data for MBA with Accounting Concentration	2		3		4			1		10
Mean Semester Hours										
Total Program	30.6	32.0	32.5	30.0	35.8	32.0	31.0	34.5	30.0	32.6
Required Accounting - Total	9.4	19.6	10.6	16.0	15.3	17.0	12.5	10.9	17.0	13.7
Financial Accounting	3.2	3.0	3.1	8.0	4.3	4.5	3.5	4.5	3.0	4.0
Managerial / Cost	2.7	3.0	2.9	3.0	3.5	3.0	2.5	3.0	3.0	3.0
Taxes	2.5	3.0	2.9	4.5	4.0	3.8	2.5	3.0	3.0	3.3
Auditing	2.5	3.0	2.8	3.0	4.3	3.0	2.5	3.0	3.0	3.1
Accounting Info. Systems	2.5	3.0	2.9	3.0	3.0	3.0	3.0	3.0	3.0	2.9
Accounting Electives	7.4	4.2	8.1	4.0	3.5	6.0	8.5	10.9	6.0	6.9
Outside Required and Elective Courses	13.8	8.2	13.8	10.0	17.0	9.0	10.0	12.8	7.0	12.1
Programs Meeting 3 or More Accounting Recommendations	0	1	1	1	2	2	0	2	0	9
Programs Exceeding 2 or More Accounting Recommendations	5	4	8	3	6	3	2	8	2	41

The degrees offered during the 1980s continued the previously-discussed trend towards specific Accounting degrees, as 34 programs (77.3%) offered Master of Accountancy, MS - Accounting or Master of Professional Accountancy degrees and 10 programs (22.7%) offered only MBA degrees with accounting concentration. Total hours required for a Master's degree ranged from 30 to 39 hours for students with the equivalent of an undergraduate degree in

accounting. Hours of accounting coursework for a Master's degree ranged from one program with nine hours to five programs (11.4%) with 30 or 31 hours, with a median of 21 hours. Four of the five programs at the top of the accounting hour range required no coursework outside accounting in their Master's programs, while the other program required nine hours of coursework outside accounting. The programs in the 1980s did not offer as much choice among accounting courses as in the 1970s, as the median for required courses in accounting was 15 hours, and only seventeen of the programs (38.6%) permitted students to choose 50% or more of their accounting courses as electives. Two programs (4.5%) did not require any specific courses, five programs (11.4%) required only three hours of specific courses, and two programs (4.5%) required six hours of specific accounting courses.

The most frequently required courses during the 1980s were found in 27 programs (61.4%) that required coursework in Cost / Managerial Accounting, 26 programs (59.1%) that required coursework in Accounting Theory, 24 programs (54.5%) that required coursework in Auditing or Taxes, 19 programs (43.2%) that required coursework in Accounting Information Systems, and 12 programs (27.3%) that required coursework in Financial Accounting. Required courses in Professional Issues (including Ethics) increased substantially over previous decades, with 11 programs (25.0%) that required courses in this area compared to 10.5% of the programs in the 1970s. Only two programs (4.5%) required Governmental / Not-for-Profit Accounting courses in the 1980s. In the 1980s, coursework outside accounting ranged from six programs (13.6%) with zero hours to four programs (9.1%) with three hours to five programs (11.4%) with six hours of coursework outside accounting at the low end of the scale to one program with 24 hours and one program with 27 hours at the high end. Mean semester hours of graduate coursework outside accounting totaled 12.1 hours. Sixteen programs (36.4%) required courses in

Economics, 15 programs (34.1%) required courses in Finance and in Management, eight programs (18.2%) required courses in Finance, seven programs (15.9%) required courses in Marketing, six programs (13.6%) required courses in Organizational Behavior, five programs (11.4%) required courses in Business Law and in Operations Research, four programs (9.1%) required a Business course in Computer Information Systems, and once more only one program required a Written Communications course. Quantitative Methods / Statistics requirements increased substantially over the previous decade with 12 programs (27.3%) that required courses in this area compared to 10.5% of the graduate accounting programs in the 1970s.

Comparing program requirements in the 1980s to the 1978 AICPA Policy Statement recommendations reveals a continuation of the previously-discussed evolution from MBA degrees to Master's degrees with accounting specifications or emphasis, with 77.3% of the programs studied offering specific Master's degrees in accounting. Other characteristics of programs in the 1980s also shifted away from the 1960s profile. Nine of the 44 programs (20.5%) in the 1980s met three or more of the 1978 AICPA Policy Statement recommendations, a nine percentage point increase from 11.4% of the programs in the 1970s. The most frequently missed profile characteristic once again was the number of hours in Financial Accounting, as only four programs (9.1%) required nine hours or more of Financial Accounting. However, that represented substantive progress over the 1970s since no programs during the 1970s required 9 hours or more of Financial Accounting. Seventeen programs (38.6%) allowed 50% or more of the accounting coursework to be chosen as electives, a reduction from 77.8% of the programs in the 1970s, and 19 programs (45.2%) allowed 50% or more of the business coursework to be chosen as electives, consistent with the 44.4% level observed in the 1970s. Sixteen programs (36.4%) required courses in Economics, and 15 programs (34.1%) required courses in Finance or

in Management, all reflecting decreases from the levels in the 1970s. Forty-one of the 44 programs (93.2%) during the 1980s exceeded two or more of the 1978 AICPA Policy Statement's graduate program recommendations.

In summary, graduate accounting programs during the 1980s more closely resembled the 1978 AICPA Policy Statement recommendations than did the programs in the 1970s. The mean requirement for outside courses and electives during the 1980s was 12.1 semester hours, close to the 12 hours recommended in the 1978 AICPA Policy Statement.

Graduate Accounting Programs during the 1990s

Data is available for 62 graduate accounting programs in nine states during the 1990s. Table 42, below, summarizes graduate accounting program requirements in the 1990s for institutions in the sample with data available.

Table 42: Graduate Accounting Program Requirements in the 1990s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Graduate Programs with Data	5	8	11	3	8	6	7	9	5	62
Data for MACC or Other Specialized Degree	4	8	10	3	5	6	6	8	4	54
Data for MBA with Accounting Concentration	1		1		3		1	1	1	8
Mean Semester Hours										
Total Program	31.9	32.8	31.7	30.0	36.6	31.7	33.0	37.7	31.2	33.4
Required Accounting - Total	15.1	15.1	11.4	15.0	18.5	13.3	15.0	14.0	14.4	14.5
Financial Accounting	4.1	3.8	3.2	5.0	8.5	2.9	3.0	5.0	2.4	4.3
Managerial / Cost	2.8	3.0	2.8	3.0	3.8	3.0	3.8	4.0	3.0	3.2
Taxes	3.0	4.5	3.3	3.0	4.2	2.9	3.0	3.0	3.0	3.5
Auditing	2.9	3.0	2.7	3.0	3.2	4.3	3.0	3.0	3.0	3.1
Accounting Info. Systems	3.0	3.0	2.7			2.9	3.0	3.0	3.0	2.9
Accounting Electives	3.3	5.6	11.3	7.0	4.5	6.9	6.4	6.3	6.6	6.8
Outside Required and Elective Courses	13.5	12.0	8.9	8.0	14.7	11.5	11.6	17.3	10.2	12.2
Programs Meeting 3 or More Accounting Recommendations	1	2	3	1	2	3	3	2	1	18
Programs Exceeding 2 or More Accounting Recommendations	5	7	7	3	7	6	7	9	4	55

Most of the programs offered specific accounting degrees, as 54 programs (87.1%) offered Master of Accountancy, MS-Accounting, or Master of Professional Accountancy degrees while eight programs (12.9%) offered only MBA degrees with accounting concentration. In the 1990s, total hours required for a Master's degree ranged from 26 programs (41.9%) with 30 hours to two programs (3.2%) with 42 or 43 hours, for students with the equivalent of an undergraduate degree in accounting. That discussion of the range of total hours excludes an MBA program that did not offer credit for previous coursework and required 54 hours in total. Hours of accounting coursework required for a Master's degree ranged from one program with eight hours to five programs (8.1%) that required 34 hours, with a mean requirement of 21.3 hours in accounting. Six programs (9.7%) that required 30 to 34 hours of accounting required no coursework outside Accounting in their Master's programs, while the mean coursework outside accounting was 12.2 hours. Twenty-four of the graduate programs (38.9%) in the 1990s permitted students to choose 50% or more of their accounting courses as electives, consistent with the 1980s level of 37.8% of the programs permitting 50% or more electives in accounting.

The most frequently required courses in accounting were found at 38 programs (61.3%) that required Auditing, 35 programs (56.5%) that required Cost / Managerial Accounting, 33 programs (53.2%) that required courses in Taxes, and 28 programs (45.2%) that required Accounting Information Systems. The number of programs that required courses in Financial Accounting (23 programs, up from 12 in the 1980s) and Professional Issues (21 programs, up from 11 in the 1980s) nearly doubled from the 1980s. The number of programs in the 1990s that required courses in Accounting Information Systems increased to 21 programs (33.8%) but that was a proportionate decrease from the 42.2% level observed in the 1980s. Only three programs (4.8%) required Governmental / Not-for-Profit Accounting courses in the 1990s. In the 1990s,

coursework outside accounting ranged from six programs (9.7%) with zero hours, to two programs (3.2%) with three hours, to six programs (9.7%) with six hours at the low end of the scale and three programs (4.8%) with 21 hours, to one program with each of 24 hours, 27 hours, and 33 hours. Four of the six programs that required the most coursework outside Accounting offered MBA degrees. Fifteen programs (24.2%) required courses in Economics and in Management, 14 programs (22.6%) required courses in Finance, 11 programs (17.7%) required courses in Quantitative Methods / Statistics, seven programs (11.3%) required courses in Marketing, six programs (9.7%) required courses in Organizational Behavior and in Operations Research, and five programs (8.1%) required courses in Business Law and a Business course in Computer Information Systems. Required Written Communications courses showed the largest proportionate increase during the 1990s, increasing to six programs (9.7%) from only one in the 1980s.

Twenty-four programs (38.7%) allowed 50% or more of the accounting coursework to be chosen as electives, consistent with the reported proportion of 38.6% of the programs in the 1980s, and 36 programs (58.1%) allowed 50% or more of the business coursework to be chosen as electives, up nearly 16 percentage points over the 42.6% level in the 1980s. Fifteen programs (24.2%) required courses in Economics and in Management, and 14 programs (22.6%) required courses in Finance, all reflecting decreases in these requirements from the levels in the 1980s.

In summary, during the 1990s more than 87% of the programs offered Master's degrees with accounting specifications or emphasis. Other characteristics of programs in the 1990s also showed movement towards the 1978 AICPA Policy Statement's recommendations. Eighteen programs (29.0%) in the 1990s met three or more of the AICPA recommendations, while 55 programs (88.7%) exceeded two or more of the AICPA recommendations.

Graduate Accounting Programs during the 2000s

Data is available for 62 graduate accounting programs in nine states during the 2000s. Table 43, below, summarizes graduate accounting program requirements in the 2000s for institutions in the sample.

Table 43: Graduate Accounting Program Requirements in the 2000s

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Graduate Programs with Data	6	7	11	3	4	9	7	10	5	62
Data for MACC or Other Specialized Degree	5	7	10	3	3	9	6	10	4	57
Data for MBA with Accounting Concentration	1		1		1		1		1	5
Mean Semester Hours										
Total Program	31.0	31.3	31.2	30.0	33.0	31.3	30.4	33.5	30.0	31.5
Required Accounting - Total	10.2	13.7	14.7	15.0	14.3	11.4	15.4	16.6	14.4	14.0
Financial Accounting	1.8	3.4	3.7	4.0	4.5	4.1	3.9	3.6	4.2	3.7
Managerial / Cost	2.8	3.0	3.3	4.0	3.0	3.0	3.0	3.8	3.0	3.3
Taxes		4.0	5.9	4.0	3.8	3.0	3.0	4.0	3.0	4.1
Auditing	2.7	3.0	3.1	3.0	4.5	3.9	3.0	3.0	4.0	3.3
Accounting Info. Systems	2.8	3.0	3.1		3.0	3.1	3.0	3.0		3.0
Accounting Electives	11.8	9.0	10.2	6.0	3.8	7.2	3.0	6.1	7.8	7.5
Outside Required and Elective Courses	9.0	8.6	6.3	9.0	15.0	12.7	12.0	10.8	7.8	9.9
Programs Meeting 3 or More Accounting Recommendations	0	2	3	1	2	5	2	5	1	21
Programs Exceeding 2 or More Accounting Recommendations	4	5	6	3	4	9	7	9	3	50

Most of the programs offered specific accounting degrees, as 57 programs (91.9%) offered Master of Accountancy, MS-Accounting or Master of Professional Accountancy degrees while five programs (8.1%) offered only MBA degrees with accounting concentration. Total hours required for a Master's degree ranged from 45 programs (72.6%) with 30 required hours to eight programs (12.9%) with 32 or 33 required hours to eight programs (12.9%) with 35 or 36 required hours, for students with the equivalent of an undergraduate degree in accounting. This discussion of the range of required hours excludes an MBA program that required 42 hours in total and a Master's of Accountancy program that required 39 hours in total. In the 2000s, hours

of accounting coursework for a Master's degree ranged from one program with nine hours to one program with 35 hours, and the mean accounting course requirement was 21.5 hours. Twelve programs (19.4%) that required 30 to 35 hours of accounting required no coursework outside accounting in their Master's programs, while the mean coursework outside accounting was 9.9 hours. Thirty of the programs (48.4%) permitted students to choose 50% or more of their accounting courses as electives, an increase above the 1990s level of 38.6% of the programs permitting 50% or more electives in accounting. Thirty-seven programs (59.7%) permitted 50% or more of the business coursework to be selected by the student, consistent with the 58.1% level reported in the 1990s. In the 2000s, the requirements to attain a Master's degree in accounting appeared more directly centered on the accounting discipline than were the requirement in the 1960s or 1970s, consistent with the recommendations of the 1978 AICPA Policy Statement.

The most frequently required courses in accounting were observed in 33 programs (53.2%) that required coursework in Auditing, 28 programs (45.2%) that required coursework in Accounting Theory, 26 programs (41.9%) that required coursework in Taxes, 24 programs (38.7%) that required coursework in Cost / Managerial Accounting, 21 programs (33.9%) that required coursework in Accounting Information Systems, 20 programs (32.3%) that required coursework in Financial Accounting, and 19 programs (30.6%) that required coursework in Professional Issues. Five graduate accounting programs (8.1%) required Governmental / Not-for-Profit Accounting courses in the 2000s. In the 2000s, coursework outside accounting ranged from twelve programs (19.3%) that required zero hours of outside coursework to one program with three hours to three programs (4.8%) with six hours of outside coursework at the low end of the scale, and two programs (3.2%) that required 21 hours to one program with 27 hours required outside accounting at the high end. Four of the six programs that required the most coursework

outside accounting offered MBA degrees. Ten programs (16.1%) required courses in Finance and in Management, eight programs (12.9%) required courses in Written Communications, seven programs (11.3%) required courses in Quantitative Methods / Statistics, five programs (8.1%) required a business course in Computer Information Systems, four programs (6.5%) required courses in Marketing, three programs (4.8%) required courses in Business Law, and two programs (3.2%) required courses in Organizational Behavior, down from six programs in the 1990s. Operations Research also declined in popularity, with only one program that required courses in the area during the 2000s compared to six programs in the 1990s. Only one graduate accounting program (the University of Texas – Dallas) required a course in Economics during the 2000s.

In summary, during the 2000s more than 92% of the programs offered Master's degrees with accounting specifications or emphasis rather than or in addition to MBA degrees. Other characteristics of programs in the 2000s moved towards the levels set forth in the 1978 AICPA Policy Statement recommendations. Twenty-one of the 62 programs (33.9%) in the 2000s met three or more of the AICPA recommendations, and 50 programs (80.6%) exceeded two or more of the AICPA recommendations.

Graduate Accounting Programs during the Current Decade

Data is available for 74 graduate accounting programs in nine states during the current decade. Table 44, below, summarizes graduate accounting program requirements in the current decade for institutions in the sample.

Table 44: Graduate Accounting Program Requirements in the Current Decade

Description	California	Florida	Illinois	Mississippi	New York	Ohio	Tennessee	Texas	Virginia	Overall
Graduate Programs with Data	7	9	11	3	8	10	7	12	7	74
Data for MACC or Other Specialized Degree	5	8	10	3	8	9	6	12	6	67
Data for MBA with Accounting Concentration	2	1	1			1	1		1	7
Mean Semester Hours										
Total Program	31.2	31.8	31.3	30.0	31.1	31.3	30.4	33.2	30.0	31.4
Required Accounting - Total	10.2	13.8	14.7	15.0	20.3	15.0	14.1	13.8	18.0	15.0
Financial Accounting	1.6	3.6	4.8	5.0	7.0	5.4	6.0	3.0	5.1	4.5
Managerial / Cost	2.8	3.0	3.3	3.0	3.8	2.5	3.0	3.0	4.5	3.3
Taxes		3.7	7.3	4.0	4.2	3.3	3.0	3.8	3.0	4.0
Auditing	2.7	3.0	3.1	3.0	4.2	3.7	3.0	3.8	4.5	3.5
Accounting Info. Systems	2.8	3.0	3.3		3.0	5.3	3.0	3.0	9.0	3.7
Accounting Electives	11.6	7.2	10.2	9.0	3.4	5.9	5.3	7.8	7.3	7.5
Outside Required and Elective Courses	11.0	10.8	6.4	6.0	7.5	10.3	11.0	11.5	4.7	9.1
Programs Meeting 3 or More Accounting Recommendations	0	4	2	1	2	1	2	5	1	18
Programs Exceeding 2 or More Accounting Recommendations	5	7	6	3	6	8	7	10	3	55

Most of the programs offered specific accounting degrees, as shown above. Total hours required for a Master's degree ranged from 50 programs (67.4%) that required 30 hours to nine programs (12.1%) that required 36 hours, for students with the equivalent of an undergraduate degree in Accounting. Hours of accounting coursework for a Master's degree ranged from two MBA programs (2.7%) that required nine hours to one program that required 35 hours, with a mean requirement of 22.5 hours of accounting coursework. Nineteen programs (25.7%) that required 30 to 35 hours of accounting required no coursework outside accounting in their Master's programs, while the mean coursework outside accounting was 9.1 hours. Thirty-five of the programs (47.3%) permitted students to choose 50% or more of their accounting courses as electives, consistent with the 2000s level of 48.4% of the programs permitting 50% or more electives in accounting. Thirty programs (40.5%) permitted 50% or more of the Business

coursework to be selected by the student, a decline of 18 percentage points from the level reported in the 2000s.

The most frequently required courses in accounting were observed in 37 programs (50.0%) that required Auditing, 31 programs (41.9%) that required Financial Accounting, 30 programs (40.5%) that required coursework in Professional Issues (up substantially from 19 programs and 30.6% in the 1990s), 28 programs (37.8%) that required coursework in Accounting Theory, 26 programs (35.1%) that required courses in Taxes, 23 programs (31.1%) that required coursework in Cost / Managerial Accounting, and 22 programs (29.7%) that required coursework in Accounting Information Systems (22 programs, 29.7%). Four programs (5.4%) required Governmental / Not-for-Profit Accounting courses in the current decade. In the current decade, coursework outside accounting ranged from 19 programs (25.7%) with zero outside hours to two programs (2.7%) with three hours to seven programs (9.5%) with six hours at the low end of the scale and four programs (5.4%) that required 21 hours of outside coursework to one program with 23 hours and one program with 27 hours at the high end. Four of the six programs that required the most coursework outside accounting offered MBA degrees. Seventeen programs (23.0%) required courses in Finance, 15 programs (20.3%) required courses in Management, eight programs (10.8%) required courses in Written Communications and in Quantitative Methods / Statistics, seven programs (9.5%) required courses in Business Law, four programs (5.4%) required courses in Economics, Marketing, and in Organizational Behavior, while three programs (4.1%) required a Business course in Computer Information Systems, and only one program required a course in Operations Research during the current decade.

In summary, during the current decade 67 graduate accounting programs (90.5%) offered Master's degrees with accounting specifications or emphasis rather than or in addition to MBA

degrees. Other characteristics of programs in the current decade displayed movement away from the 1978 AICPA Policy Statement recommendations profile when compared to levels reported in the 2000s. Eighteen programs (24.3%) in the current decade met three or more of the AICPA recommendations, a decrease of three programs from the 2000s. The 55 programs (74.3%) that exceeded two or more of the AICPA recommendations was an increase of five programs from the level observed in the 2000s.

Comparison of Current Decade and 1960s Graduate Accounting Programs

In summary, between the 1960s and the current decade graduate accounting programs began offering substantially more professional degrees in accounting rather than MBAs, required more coursework within accounting and less outside accounting, permitted less choice of Accounting elective courses, and substantially reduced requirements for courses in Finance, Economics, and Management. Table 45, below, summarizes the graduate program requirements over the periods analyzed.

Table 45: Overall Graduate Programs Summary

Description	1960s	1970s	1980s	1990s	2000s	Current Decade
Graduate Programs with Data	9	18	44	62	62	74
Data for MACC or Other Professional Degree	3	10	34	54	57	67
Data for MBA with Accounting Concentration	6	8	10	8	5	7
Mean Semester Hours						
Total Program	31.6	35.0	32.6	33.4	31.5	31.4
Required Accounting - Total	8.2	9.2	13.7	14.5	14.0	15.0
Financial Accounting	3.2	2.0	4.0	4.3	3.7	4.5
Managerial / Cost	2.8	3.9	3.0	3.2	3.3	3.3
Taxes		4.3	3.3	3.5	4.1	4.0
Auditing		2.6	3.1	3.1	3.3	3.5
Accounting Info. Systems		4.3	2.9	2.9	3.0	3.7
Accounting Electives	5.3	11.2	6.9	6.8	7.5	7.5
Outside Required and Elective Courses	18.0	14.6	12.1	12.2	9.9	9.1

Table 46, below, summarizes how conformity with the recommendations of the 1978 AICPA Policy Statement changed over the period reviewed.

Table 46: Summary of Conformity with 1978 AICPA Policy Statement

Period	Programs MBA	Programs MACC, others	Total	Meet 3 or more AICPA Recommendations		Exceed 2 or more AICPA Recommendations	
1960s	6	3	9	2	22.2%	9	100.0%
1970s	8	10	18	2	26.3%	16	88.9%
1980s	10	34	44	9	20.5%	41	93.2%
1990s	8	54	62	18	29.0%	55	14.5%
2000s	5	57	62	21	33.9%	50	80.6%
Current Decade	7	67	74	18	24.3%	55	74.3%
Summary	44	225	269	70	26.0%	226	84.0%

The results presented above are consistent with broader institutional acceptance of a professional Master's degree in accounting. Since the 1978 AICPA Policy Statement's recommendations for a 30-hour postbaccalaureate degree were subsequently supplanted by legislative initiatives that required 150 hours of education to qualify for CPA certification but did not require a Master's degree, the evolution towards the professional Master's degree can be interpreted as a reaction to market demands for such degrees. In the current decade, only five of the institutions in the sample do not offer any postbaccalaureate degree in accounting, which is also consistent with the existence of strong market demand for those degrees.

The 150-hour educational requirement can be reached by adding a 30-hour Master's program to an undergraduate program requiring 120 hours or more. The undergraduate accounting programs discussed earlier in this chapter show a general tendency towards 120 hours of total requirements, which could make a 30-hour graduate program feasible and attractive. The observed evolution from MBA programs that required extensive coursework outside accounting to professional Master's of Accountancy programs could contribute to increased attractiveness of a 30-hour graduate degree. To assist in evaluating these possible trends, table 47, below,

tabulates the number of Master's programs requiring exactly 30 hours, and also summarizes the graduate hours that were not committed to required courses in accounting (either electives in or out of accounting, or required courses outside accounting).

Table 47: Trends in Total Hours and Outside Courses

Period	Programs Requiring Exactly 30 Hours		Mean Outside Course Hours	Allow Electives / Outside Courses		Number of Schools
1960s	5	55.6%	18.0	9	100.0%	9
1970s	6	33.3%	14.6	14	77.8%	18
1980s	20	45.5%	12.1	29	65.9%	44
1990s	26	41.9%	12.2	37	59.7%	62
2000s	44	71.0%	9.9	31	50.0%	62
Current Decade	50	67.6%	9.1	30	40.5%	74
Overall	151	56.1%	11.2	150	55.8%	269

The columns under "Programs Requiring Exactly 30 Hours" show (by decade) the number and percentage of institutions that offered Master's programs that could be completed in 30 hours. The column under "Mean Outside Course Hours" shows (by decade) the mean hours of coursework permitted in areas outside accounting. The columns under "Allow Electives / Outside Courses" show (by decade) the number and proportion of institutions that allow either electives in the accounting area or coursework (required or elective) outside accounting.

Pattern Identification for Graduate Accounting Programs

The analysis of patterns in graduate accounting programs during the period studied was conducted within the framework of the research questions identified in Chapter 3 of this dissertation.

Research Question 1b asks "How do changes in legislation that require 150 hours of education to sit for the CPA examination relate to changes in master's program offerings?" A comparison of Master's programs in states that had passed legislation by 1995 that required 150 hours of education to qualify for CPA certification to programs in states that passed their 150-

hour legislation subsequent to 1995 reveals a significant difference in one aspect of the programs during the 1990s. The post-1995 states had a higher proportion of programs that required four or more specific Accounting courses in the 1990s than did the programs in other states. No other significant differences were identified in that comparison.

Research Question 2 asks "How does obtaining accounting accreditation relate to changes in accounting program requirements?" AACSB accounting accreditation was available for the first time in 1983, and by 1985 twenty-two programs had achieved accounting accreditation. Other institutions that did not engage in an AACSB re-accreditation cycle between 1983 and 1985 may have had similar motivations to those institutions who achieved the earliest accounting accreditations, but may have chosen to wait until their next re-accreditation visit to pursue separate accounting accreditation[3]. Accordingly, the institutions that achieved AACSB accounting accreditation by 1995 are compared to the institutions that had not received such accreditation to seek patterns in the characteristics of the institutions. With respect to graduate Accounting program requirements, the only significant result was in the outside course requirements during the current decade. Programs that had not attained accounting accreditation before 1995 required more hours of coursework outside Accounting than did the programs that had received Accounting accreditation by 1995. No other significant results were observed for graduate Accounting program comparisons in the 2010s and in the 1980s. Table 48, below, provides information on the analysis of Accounting program requirements in conjunction with the accounting accreditation status of institutions in the sample.

[3] During the 1980s, most accredited institutions were subject to a ten-year cycle for re-accreditation affirmation. Accordingly, an institution that experienced business re-accreditation in 1981 would not be due for another affirmation until 1991, and such institutions would have to be strongly motivated to attain accounting accreditation for them to choose to seek accounting accreditation prior to their next re-accreditation review visit.

Table 48: Graduate Accounting Requirements - By Accreditation Status and Doctoral-Granting Status

	Not Accredited by 1995					Accounting Accreditation by 1995				
Period	1970s	1980s	1990s	2000s	Current Decade	1970s	1980s	1990s	2000s	Current Decade
Not Doctoral-Granting 2011										
MACC or other specialized	3	10	16	15	18	4	12	12	20	21
MBA only	2	5	4	3	3	4	3	2	1	4
Total Institutions	**5**	**15**	**20**	**18**	**21**	**8**	**15**	**14**	**21**	**25**
Combined Not Doctoral-Granting Institutions	**13**	**30**	**34**	**39**	**46**					
Requirements										
Accounting - More than 15 Hours	4	12	17	18	19	6	13	14	20	23
Financial Accounting	1	5	5	3	5	3	2	6	10	12
Accounting Theory	2	9	11	9	10	2	9	4	8	8
Auditing	1	7	13	9	10	3	9	7	13	12
Professional Issues	1	3	7	6	7	0	3	4	7	11
Taxes	2	8	11	8	6	1	8	6	9	10
Cost / Managerial	1	8	13	7	8	3	11	6	6	2
AIS	0	5	6	7	7	2	8	4	4	2
Doctoral-Granting 2011										
MACC or other specialized		2	3	3	5	3	10	23	19	23
MBA only		1	1			2	1	1	1	
Total Institutions	**0**	**3**	**4**	**3**	**5**	**5**	**11**	**24**	**20**	**23**
Combined Doctoral Granting Institutions	**5**	**14**	**28**	**23**	**28**					
Requirements										
Accounting - More than 15 Hours		3	4	3	5	5	11	23	20	21
Financial Accounting		2	3	3	4	1	3	9	3	10
Accounting Theory		1	1	1	1	2	7	12	10	9
Auditing		2	4	0	3	2	6	14	10	12
Professional Issues		2	3	2	4	1	3	7	4	8
Taxes		2	3	1	3	2	6	13	7	14
Cost / Managerial		2	4	2	4	2	6	12	8	9
AIS		1	1	1	1	1	5	10	8	12

Principal component analysis was conducted to ascertain whether statistically significant patterns were evident in graduate accounting program requirements, but the data set available for those programs was even more limited than the data set for undergraduate programs or for institutional characteristics. The limited data set for graduate accounting programs and issues with making operational the measures of output led to inconclusive results from principal

component analysis, with no factors identified that presented loadings greater than 0.40. Accordingly, principal component analysis was not relied upon in evaluating patterns in graduate accounting programs.

Patterns in Institutional Characteristics and Measures of Graduate Output

Institutional characteristics and measures of graduate accounting program output were analyzed using cross-tabulations and Pearson's Chi-Square tests in order to identify meaningful associations. The small amount of data available in the 1960s and 1970s did not permit statistically valid analysis of those periods as the lack of data causes the analysis to violate the chi-square parameter of at least 5 expected cases in each cell. Associations of institutional characteristics and measures of graduate accounting program output in those periods are presented for completeness, but no statistically rigorous conclusions can be drawn in those periods.

Associations between institutional characteristics and graduate accounting program measures of compliance with 1978 AICPA Policy Statement recommendations ("output measures") were analyzed using cross-tabulations and Pearson's Chi-Square tests to identify meaningful associations. The limited amount of data available generally causes the analysis to violate the chi-square parameter of at least five expected cases in each cell. Thus, no statistically rigorous conclusions can be drawn. Table 49, below, summarizes the associations observed. It presents the same information sorted two different ways in two panels – Panel A shows associations sorted by **institutional characteristic** and output measure, and Panel B shows associations sorted by **output measure** and institutional characteristics. Only associations with p-values of 0.10 or lower are presented in Table 49. Institutional characteristics and measures of output not listed in the table did not show p-values of less than 0.10 in the periods analyzed.

Table 49: Panel A - Significant Associations of Institutional Characteristics and Output Measures

Institutional Characteristics * Output Measures	**Significant Associations**						
	1960s	**1970s**	**1980s**	**1990s**	**2000s**	**2010s**	**Overall**
Acct Accreditation by 1995	**1**	**1**		**1**		**2**	**5**
Meet 3 or more AICPA Rec.	0.047			0.088		0.059	
Cost-Meet or Exceed AICPA Rec.						0.039	
Tax-Meet or Exceed AICPA Rec.		0.099					
Doctoral-granting in 1985			**1**	**1**	**1**	**1**	**4**
AIS-Meet or Exceed AICPA Rec.						0.022	
Overall-Meet or Exceed AICPA Rec.			0.041				
Overall-Meet (not exceed) AICPA Rec.					0.099		
Financial Accounting-Meet or Exceed AICPA Rec.				0.087			
Doctoral-granting in 2005		**1**	**1**	**1**	**3**	**4**	**10**
AIS-Meet or Exceed AICPA Rec.						0.023	
Audit-Meet or Exceed AICPA Rec.		0.070					
Overall-Meet or Exceed AICPA Rec.			0.067		0.088		
Overall-Meet (not exceed) AICPA Rec.					0.048		
Cost-Meet or Exceed AICPA Rec.						0.040	
Electives Allowed per AICPA Rec.					0.066	0.068	
Financial Accounting-Meet or Exceed AICPA Rec.				0.069			
Tax-Meet or Exceed AICPA Rec.						0.096	
General Orientation	**1**				**1**	**1**	**3**
Overall-Meet (not exceed) AICPA Rec.						0.083	
Electives Allowed per AICPA Rec.					0.093		
Total Credit Hours > 30	0.098						
Scholarly Orientation		**1**					**1**
Tax-Meet or Exceed AICPA Rec.		0.087					
Public Institution	**1**	**3**	**2**	**1**		**3**	**10**
Audit-Meet or Exceed AICPA Rec.		0.004					
Overall-Meet or Exceed AICPA Rec.						0.011	
Overall-Meet (not exceed) AICPA Rec.		0.054					
Cost-Meet or Exceed AICPA Rec.						0.095	
Electives Allowed per AICPA Rec.			0.058			0.074	
Financial Accounting-Meet or Exceed AICPA Rec.				0.047			
Tax-Meet or Exceed AICPA Rec.		0.043	0.052				
Total Credit Hours > 30	0.058						

Space limitations require continuation of Panel A on the following page. The top (boldface) row in each section counts the number of associations observed, and the lower rows

show the observed p-value (asymptotic 2-sided significance from Pearson's Chi-Square analysis).

Table 49: Panel A - Significant Associations of Institutional Characteristics and Output Measures (Continued)

Institutional Characteristics * Output Measures	**Significant Associations**						
	1960s	**1970s**	**1980s**	**1990s**	**2000s**	**2010s**	**Overall**
FSA Member	**1**	**2**	**2**		**2**	**1**	**8**
Exceed 2 or more AICPA Accounting Rec.					0.046	0.072	
AIS-Meet or Exceed AICPA Rec.					0.010		
Overall-Meet or Exceed AICPA Rec.			0.096				
Overall-Meet (not exceed) AICPA Rec.		0.054					
Financial Accounting-Meet or Exceed AICPA Rec.	0.003						
Tax-Meet or Exceed AICPA Rec.			0.060				
Total Credit Hours > 30		0.045					
School of Accountancy			**2**	**1**	**3**	**4**	**10**
Meet 3 or more AICPA Rec.						0.043	
AIS-Meet or Exceed AICPA Rec.			0.078				
Audit-Meet or Exceed AICPA Rec.			0.062		0.071		
Overall-Meet or Exceed AICPA Rec.						0.042	
Cost-Meet or Exceed AICPA Rec.					0.090		
Financial Accounting-Meet or Exceed AICPA Rec.						0.081	
Total Credit Hours > 30				0.053	0.014	0.036	
150 Hour Law by 1995			**1**	**2**		**1**	**4**
AIS-Meet or Exceed AICPA Rec.			0.073				
Overall-Meet (not exceed) AICPA Rec.				0.036			
Financial Accounting-Meet or Exceed AICPA Rec.				0.025			
Total Credit Hours > 30						0.089	
Overall	**4**	**8**	**9**	**7**	**10**	**17**	**55**

Among the institutional characteristics presented above, the institution's doctoral-granting status as of 2005 (10 observations) and its membership in the Federation of Schools of Accountancy (8 observations) provide the greatest number of significant associations, with 2005 doctoral-granting status showing more associations in the more recent periods. Designation of the institution as a School of Accountancy also revealed 10 significant associations as shown in Panel A of Table 49, with most of those associations observed in the most recent periods. The current decade presents the greatest number (17 observations) of significant associations of

institutional characteristics and measures of output, indicating that structural influences on graduate accounting programs are more readily apparent from the current information.

Panel B of Table 49, below, is presented using similar formatting conventions to Panel A.

Table 49: Panel B - Significant Associations of Output Measures and Institutional Characteristics

Output Measure * Institutional Characteristics	**Significant Associations**						
	1960s	**1970s**	**1980s**	**1990s**	**2000s**	**2010s**	**Overall**
Total Credit Hours > 30	**2**	**1**		**1**	**1**	**2**	**7**
150 Hour Law by 1995						0.089	
FSA Member		0.045					
General Orientation	0.098						
Public Institution	0.058						
School of Accountancy				0.053	0.014	0.036	
Overall-Meet or Exceed AICPA Rec.			**3**		**1**	**2**	**6**
Doctoral-granting in 1985			0.041				
Doctoral-granting in 2005			0.067		0.088		
FSA Member			0.096				
Public Institution						0.011	
School of Accountancy						0.042	
Overall-Meet (not exceed) AICPA Rec.		**2**		**1**	**2**	**1**	**6**
150 Hour Law by 1995				0.036			
Doctoral-granting in 1985					0.099		
Doctoral-granting in 2005					0.048		
FSA Member		0.054					
General Orientation						0.083	
Public Institution		0.054					
Financial Accounting-Meet or Exceed AICPA Rec.	**1**			**4**		**1**	**6**
150 Hour Law by 1995				0.025			
Doctoral-granting in 1985				0.087			
Doctoral-granting in 2005				0.069			
FSA Member	0.003						
Public Institution				0.047			
School of Accountancy						0.081	
Tax-Meet or Exceed AICPA Rec.		**3**	**2**			**1**	**6**
Acct Accreditation by 1995		0.099					
Doctoral-granting in 2005						0.096	
FSA Member			0.060				
Public Institution		0.043	0.052				
Scholarly Orientation		0.087					

Space limitations require continuation of Panel B on the following page.

Table 49: Panel B - Significant Associations of Output Measures and Institutional Characteristics (Continued)

Output Measure * Institutional Characteristics	**Significant Associations**						
	1960s	**1970s**	**1980s**	**1990s**	**2000s**	**2010s**	**Overall**
Electives Allowed per AICPA Rec.			**1**		**2**	**2**	**5**
Doctoral-granting in 2005					0.066	0.068	
General Orientation					0.093		
Public Institution			0.058			0.074	
AIS-Meet or Exceed AICPA Rec.			**2**		**1**	**2**	**5**
150 Hour Law by 1995			0.073				
Doctoral-granting in 1985						0.022	
Doctoral-granting in 2005						0.023	
FSA Member					0.010		
School of Accountancy			0.078				
Meet 3 or more AICPA Rec.	**1**			**1**		**2**	**4**
Acct Accreditation by 1995	0.047			0.088		0.059	
School of Accountancy						0.043	
Audit-Meet or Exceed AICPA Rec.		**2**	**1**		**1**		**4**
Doctoral-granting in 2005		0.070					
Public Institution		0.004					
School of Accountancy			0.062		0.071		
Cost-Meet or Exceed AICPA Rec.					**1**	**3**	**4**
Acct Accreditation by 1995						0.039	
Doctoral-granting in 2005						0.040	
Public Institution						0.095	
School of Accountancy					0.090		
Exceed 2 or more AICPA Accounting Rec.					**1**	**1**	**2**
FSA Member					0.046	0.072	
Overall	**4**	**8**	**9**	**7**	**10**	**17**	**55**

No strong patterns of association are visually apparent from the information presented in Panel B. The output measure "Total Credit Hours Greater than 30" shows seven significant associations, but three of those associations were observed in the 1960s and 1970s, which were periods with insufficient data for statistical validity. However, the three associations observed with that output measure and the institutional characteristic "School of Accountancy" are the only associations in this analysis that continue for three consecutive periods for the same output measure and institutional characteristic. Three other output measures show 6 significant

associations, but those observations are not consistent in time or in association with institutional characteristics.

Overall Themes Identified

The greatest change in accounting programs over the period studied was the proliferation of Master of Accountancy or other professional Master's programs, which is understandable given the advent of 150-hour educational requirements for CPA certification eligibility. Institutions apparently added or re-focused Master's degree offerings instead of requiring an additional year of undergraduate education to attain a Bachelor's degree in accounting. In the current decade, 67 of the 74 institutions offering graduate accounting degrees offer MAcc or other professional degrees, which contrasts with six of nine institutions in the 1960s offering MBA degrees with accounting concentrations or majors. Table 50, below, summarizes undergraduate and graduate requirements for accounting degrees in the current decade, shown according to the Carnegie Classification of the responsible institution.

Table 50: Current Decade Undergraduate and Graduate Program Requirements - by Carnegie Classification

Carnegie Classifications	D/R - E		D/R - I		Masters I		Overall	
Institutions	33		22		24		79	
Public Institutions	28	84.8%	13	59.1%	17	68.2%	58	73.4%
Offer MACC or Other Specialized Master's	29	87.9%	21	95.5%	17	77.3%	67	84.8%
Undergraduate Programs								
Accounting Hours	19.2		22.7		23.7		21.6	
Number of Schools That Meet or Exceed Beamer Committee Recommendations								
Audit (3 hours)	25	75.8%	19	86.4%	22	91.7%	66	83.5%
MIS (3 hours)	31	93.9%	21	95.5%	20	83.3%	74	93.7%
Math & Computer (14 hours)	3	9.1%	4	18.2%	1	4.2%	8	10.1%
Behavioral Science (6 hours)	1	3.0%	1	4.5%	1	4.2%	3	3.8%
Written Communications (6 hours)	13	39.4%	6	27.3%	11	45.8%	30	38.0%
Quantitative Analysis (6 hours	4.0	12.1%	3	13.6%	5.0	20.8%	13.0	16.5%
Graduate Programs								
Schools with Graduate Programs	29		22		23		74	
Schools Requiring Exactly 30 Hours	17	58.6%	17	77.3%	16	69.6%	50	67.6%
Graduate Accounting Hours - Mean	24.2		23.3		18.9		22.3	
Graduate Other Required Hours - Mean	6.0		5.2		10.8		7.2	
Graduate Open Electives - Mean	5.4		10.5		8.4		7.6	
Number of Schools that Meet or Exceed AICPA 1978 Policy Statement Recommendations								
Meet or Exceed 3 or More Recommendations	11	37.9%	10	45.5%	15	65.2%	36	48.6%
Financial Accounting (9 hours)	5	17.2%	7	31.8%	0	0.0%	12	16.2%
Auditing (3 hours)	15	51.7%	14	63.6%	8	34.8%	37	50.0%
Cost/Managerial (3 hours)	10	34.5%	6	27.3%	7	30.4%	23	31.1%
Taxes (3 hours)	15	51.7%	11	50.0%	6	26.1%	32	43.2%
AIS (3 hours)	12	41.4%	6	27.3%	4	17.4%	22	29.7%

As discussed earlier in this chapter, the area of coursework that showed the greatest differences in requirements based on institutional characteristics was Accounting Information Systems, with the timing of accounting accreditation, the doctoral-granting status of the institution, and the general orientation and Carnegie classification of the institution returning significant differences. Accounting accreditation requirements during the 1980s included specific provisions for course distribution, including Accounting Information Systems course requirements, which is consistent with the observations regarding accreditation timing. The size of the institution and its doctoral-granting status made a difference with respect to faculty characteristics, including proportions of faculty members with terminal degrees, tenure-track

faculty members, and faculty members with professional certifications. The observation that doctoral-granting institutions are more prevalent in the largest quartile of faculty size than the smallest quartile is consistent with the scale of resources necessary to support a doctoral program.

Accounting programs have changed since the 1960s at the undergraduate and graduate levels. The recommendations of the Beamer Committee provide a measuring point to evaluate change in undergraduate accounting education, but no conclusion is drawn regarding the appropriateness of the Beamer Committee recommended course requirements to address the needs of current accounting students. Application of Holstrum and Wilson's Beamer Implementation Index to the data reported over the periods analyzed reveals progress towards the Beamer Committee's recommendations in the accounting area, with less progress in general education and general business. The 1978 AICPA Policy Statement provides a measuring point for graduate accounting education. As recommended by the AICPA Task Force on Education Requirements, shifts away from more general MBA programs to professional Master's degrees in accounting, as well as increases in required Accounting coursework can be argued to reflect changes in the markets for accounting education. Research Question 3 asks "How do national calls for changes in accounting practice relate to changes in accounting program requirements?" Too little data is available to address this question in great detail, as the immediate changes in accounting programs in response to calls for reforms in the 1970s (e.g. Metcalf Report and Cohen Commission recommendations) can only be investigated by reference to the 45 undergraduate programs and 18 graduate programs for which data is available from the 1970s, and seven of those undergraduate programs and six of those graduate programs did not have data available from the 1980s for specific comparison. Also, no information is available on the time

required to implement a change in curriculum at the institutions included in the analysis. Furthermore, comparison between the 1970s and 1980s is also subject to the influences of the movements towards accounting accreditation and 150 hours of education to be qualified for CPA certification. To illustrate the confounding influences, consider that Florida was the only state in the sample that had 150-hour education legislation passed by 1985, but four of the five Florida undergraduate programs with data available in both the 1970s and the 1980s also attained accounting accreditation by 1985. Comparing the five Florida undergraduate programs with data available from the 1970s and 1980s shows no clear differences among the four institutions with accreditation by 1985 and the other institution that attained accreditation in 1996. Furthermore, a comparison of Florida programs in the 1980s to the programs in other states also fails to produce statistically significant results.

Similar confounding elements exist in evaluating changes from the 1980s to the 1990s. The Bedford Commission recommendations in 1986 and the Big Eight Managing Partners White Paper in 1989 leading to the establishment of the Accounting Education Change Commission could have exerted some pressure for change, and in fact the University of North Texas, the University of Illinois – Urbana/Champaign, and the University of Virginia received grants from the AECC to develop model programs for change. The University of Virginia grant supported the creation of

> . . .a broad-based four-year accounting degree with the more technical accounting courses moved into the fifth year. The undergraduate programme will no longer qualify students to sit for the CPA examination. Instead, the curriculum will focus on decision-making and the decision-usefulness of accounting information. (Sundem and Williams 1991, p. 60)

This description of an undergraduate accounting program appears essentially consistent with the typical current-day requirements. However, the influences of accounting accreditation

and 150-hour education legislation cannot be separated from the influence of the Virginia AECC model or other AECC-supported initiatives. In fact, the influence of the Virginia AECC model on the University of Virginia curriculum cannot be evaluated since no data is available on the Virginia undergraduate program during the 1980s. Further investigation of the influences of the Virginia AECC model could be an appropriate topic for a subsequent research project. In summary, the analysis in this dissertation related to Research Question 3 did not lead to clear or meaningful results.

Summary

The research presented in this chapter has developed detailed information on undergraduate accounting program requirements, graduate program requirements, and institutional and faculty characteristics for selected points during the past five decades. Analysis has been provided that describes trends, measures change, and identifies significant relationships at different times. The perspective gained from this chapter provides the basis for the discussion in Chapter 5 of implications for accounting education stemming from the findings and analysis in this dissertation. Chapter 5 also discusses contributions from the research, its limitations, and possible future avenues for research related to the subject matter presented here.

CHAPTER 5

IMPLICATIONS FOR ACCOUNTING EDUCATION, CONTRIBUTIONS AND LIMITATIONS, FUTURE RESEARCH

Summary

Roy and MacNeill (1967) called for change in accounting education, reaching a fundamental conclusion that preparations for public accounting should come to include graduate education.

> . . . tomorrow's beginning CPA must have mathematical facility beyond that possessed by his professional forebears; he must also be given fundamental knowledge and skill to understand and use computers and to keep pace with their further development in the years to come. We further believe that these requirements, when added to the qualitative factors previously postulated, indicate that preparation for public accounting should come to include graduate study (Roy and MacNeill 1967, 5).

The call for more education continued throughout the ensuing decades, including efforts to require 150 hours of education in order to qualify for CPA licensure. The 1978 AICPA Policy Statement called for graduate education for new entrants to the accounting profession, extending the 1968 Beamer Committee recommendations to encompass 30 additional hours of education including substantially more accounting courses. While the 150-hour legislative efforts led by the AICPA beginning in the 1980s ultimately did not mandate a graduate degree as part of the educational requirement, the essential concept of additional education involving something more than simply two more semesters of undergraduate work underlies the academic impetus for

change. The Accounting Education Change Commission, in *Objectives of Education for Accountants* (1990), stated the underlying rationale for extending accounting education as follows:

> Specialized accounting education should follow only after attainment of general accounting, organizational, and business knowledge. Therefore it should be offered primarily at the post-baccalaureate level and via continuing education.

The 2008 *Final Report of the Advisory Committee on the Auditing Profession to the U.S. Department of the Treasury* ("ACAP") expressed a belief that "the accounting curricula in higher education are critical to ensuring that individuals have the necessary knowledge, mindset, skills, and abilities to perform quality public company audits" (ACAP 2008, VI: 2-3), and noted that the accounting profession and others acknowledge that there is still room for improvement. The ACAP report also observed that curricula are characteristically slow to change. Recommendation No. 5 in the Human Capital section of the ACAP report called for "timely study of the possible future structure of higher education for the accounting profession" (ACAP 2008, VI: 25), which led to the formation of the Pathways Commission.

The Pathways Commission consideration of the possible future structure of accounting higher education was informed by an historical analysis of the development of accounting education (Black 2009), provided to Commissioners and constituent representatives to give them a comprehensive perspective on previous efforts for change in accounting education. That historical analysis led to the appointment of William H. Black as "Official Historian" on the staff of the Pathways Commission to facilitate reference to the work of predecessors who addressed issues relevant to Pathways deliberations. One of the outcomes derived from the historical perspective was recognition by the Pathways Commission that a consistent barrier to successful implementation of previous recommendations was the absence of an entity charged with

monitoring and sustaining progress in recommended initiatives. A description of the early activities and report of the Pathways Commission and the historical context of change in accounting education is addressed in *Issues in Accounting Education* (Black 2012).

Both the ACAP and Pathways Commission provide direction for change in accounting education, and both efforts recognized the importance of making decisions based on reliable, consistent data. The research to support this dissertation required the collection and organization of data to represent the structure of accounting education and how it has changed over time. The data provide a basis for understanding the effects on accounting education of previous influences for change. It should be noted that the Perry Commission's educational recommendations and the Pierson and Gordon & Howell recommendations for accounting and business education were published in the 1950s, in an era when most states did not even require a bachelor's degree to take the CPA examination (Trueblood 1963). Those recommendations, and the subsequent Beamer Committee endorsement of the Roy and MacNeill specifications in *Horizons*, shaped the expansion of accounting education through the present day. This dissertation documents and examines that expansion and identifies patterns in education that may prove instructive for accounting educational policy.

Similarly, the 1978 AICPA Policy Statement and subsequent efforts in support of 150-hour educational requirements have further shaped accounting education. The research in this dissertation shows that specialized graduate accounting education has become widespread during the period reviewed, with Master's of Accountancy or other professional programs becoming generally available. Those professional accounting degrees largely replaced the MBA with a concentration in accounting that was prevalent in the 1960s. While the Roy and MacNeill recommendation for mathematical facility and computer skill (reiterated in the Beamer

Committee recommendations) was typically not achieved in the undergraduate accounting programs studied, the graduate accounting programs of the more recent past and the current decade generally require substantive course work in Quantitative Analysis and in Accounting Information Systems. The shift from the MBA model to the current Master's of Accountancy model has resulted in less exposure of graduate students to general business subjects, with the implicit assumption that general business is adequately covered in undergraduate programs. Focusing on specialized skill areas in the post-baccalaureate educational program may produce more technically adept accountants, but calls into question whether they have all the necessary comprehension of business to be effective contributors as accountants.

Institutional Characteristics

In addition to the documentation of accounting program requirements, the research in this dissertation included collection of information on institutional characteristics, including the structure, mission, and faculty composition and qualifications. The analysis of faculty characteristics in this dissertation confirms a broad shift to faculty members possessing doctorates or other terminal degrees. The AACSB business accreditation requirements in 1969 and thereafter explicitly required a substantial proportion of faculty members to possess terminal degrees, a requirement that was predicted by Roy and MacNeill:

> If this transition in the graduate direction is to come about, it will no doubt be predominantly at the master's level but, almost as a matter of necessity, there must also be an increase in accounting research, accompanied by significant increases in the number of students progressing to the doctorate. (Roy and MacNeill 1967, 5)

While the proportion of faculty members with terminal degrees has increased as expected over the periods studied, the analysis of other faculty characteristics revealed some trends that have not been widely discussed. The proportion of faculty members with tenure-track

appointments has decreased at doctoral-granting institutions since the 1970s, while it has increased at master's institutions over the same period. The proportion of faculty members with professional certifications has decreased since 1995 after an increase from 1980 through 1995. The finding that the doctoral-granting institutions utilized faculty with more advanced academic credentials than did the non-doctoral granting institutions suggests an increased stratification between institutions with primarily research-oriented missions and those with greater focus on accounting practice. The influence of the terminal degree as a research-oriented credential rather than a practice-oriented credential can be observed in the lower proportion of faculty with professional certifications at doctoral-granting institutions in 2005 and 2011 compared to the non-doctoral-granting institutions in the sample. While a thorough discussion of the implications of those findings is beyond the scope of this dissertation, the observations summarized above provide a basis for future research. There are opportunities for future investigation to identify the causes of identified structural differences between doctoral-granting institutions and other institutions in the sample, which may include influences from faculty salary structure differences, selectivity of hiring, or difficulty in locating faculty with sufficient qualifications to warrant a tenure-track appointment at a Doctoral/Research institution.

With respect to the graduate curriculum, the research in this dissertation shows that larger institutions supported a higher proportion of elective accounting courses in the 2000s than the institutions in the smallest quartile, perhaps due to greater institutional resources at the larger institutions. The investigation of this difference and related institutional characteristics may prove to be a productive area for future accounting research.

Analysis of Impacts on the Curriculum

After considering the scope and influence of possible items that could have an effect on the accounting curriculum over the period studied, the factor with the greatest impact can be argued to be the advent of 150-hour educational requirements to qualify for CPA licensure. That legislation affects all institutions in the United States that produce accounting graduates interested in CPA licensure, and has inspired most institutions to expand their Master's programs or begin offering a Master's of Accountancy or other professional Accounting degree. Florida was the first state in the sample to adopt 150-hour educational legislation, followed by Tennessee, Texas, and Mississippi through 1990, with New York and California the last two states to adopt such legislation. In the 1990s, the first four states reported higher proportions of Master's of Accountancy or other professional degrees from graduate institutions (Florida 100% - five institutions with data, Tennessee 100% - two institutions, Texas 87.5% - eight institutions, and Mississippi 100% - three institutions) than did the last two states (New York 33.3% - six institutions, and California 60% - five institutions). This observation is consistent with greater emphasis on accounting graduate education in the states that achieved 150-hour legislation earlier than the comparison group.

Interpretation of observations during the 1980s and 1990s is made more difficult by the emergence of separate AACSB accounting accreditation beginning in 1982. Although differences in timing of re-accreditation cycles may have led some institutions to delay accounting accreditation, by 1995 the institutions who demonstrated the earliest interest in separate accreditation would all have completed at least one re-accreditation cycle. The timing of initial accounting accreditation overlaps with the timing of the initial movement to 150-hour educational legislation. While the patterns of graduate accounting requirements (as summarized

in Panel A of Table 49 in Chapter 4) do not include enough data for rigorous interpretation, it can be noted that the institutional characteristic of "150-Hour Law by 1995" has a marginally greater number of significant associations with measures of program output (in the periods from the 1980s to the current decade) than does the institutional characteristic related to the attainment of "Accounting Accreditation by 1995". That observation marginally suggests a greater influence from 150-hour educational legislation, although both institutional characteristics mentioned above are dominated by the characteristics "Public Institution", "School of Accountancy", "Doctoral-Granting in 2005", and "FSA Member". That dominance indicates that the structure of the institution and its commitment to graduate education may provide a more useful explanation of changes in the most recent decades than either the timing of 150-hour legislation or the timing of accounting accreditation.

The information analyzed regarding undergraduate accounting program requirements and institutional characteristics is statistically inconclusive because the limitations imposed by the size of the data set do not permit definitive answers regarding the strength or relative impact of the influences considered.

Specific Curricular Observations

The Beamer Committee endorsed the curricular recommendations proposed by Roy and MacNeill in *Horizons for a Profession*, and subsequent authoritative statements on accounting education continued to rely on the Beamer Committee report as the description of the desirable undergraduate accounting curriculum (e.g., the 1978 AICPA Policy Statement). The research in this dissertation compares actual accounting program requirements to the Beamer Committee recommended levels of education in the specified areas. The most frequently unachieved Beamer Committee recommendation is the four semester credit hours recommended for Accounting

Information Systems coursework. As many as 135 observations met all the other Beamer Committee recommendations but only required three hours of Accounting Information Systems rather than four hours. When these "near misses" are included in the summary as "substantial conformity", the proportion of undergraduate accounting programs meeting the Beamer Committee's recommendations increases substantially.

Written Communication was another area where observed requirements repeatedly fell short of the Beamer Committee recommendations. Communication has been identified as a necessary skill for success in accounting for many years (e.g., Perry 1956, Roy and MacNeill 1967, Ingram and Frazier 1980, Bedford 1986, Arthur Andersen & Co. et al. 1989, AECC 1990, Siegel and Sorensen 1994, Albrecht and Sack 2000). Surveys have indicated that effective communication skills contribute to success in accounting, and further indicate that communications skills are highly valued by employers of accounting graduates (Stowers and White 1999, Gray 2010). "Entry-level professionals are expected to perform effectively from the onset of their employment as professional accountants" (Stowers and White 1999), and communications skills can be a distinguishing factor when seeking employment (Gray 2010). Despite the importance of communications skills for the success of accountants, at no point during the periods studied did more than 30% of the undergraduate accounting programs meet or exceed the Beamer Committee recommendations on Written Communications.

With respect to graduate accounting programs, the research documented a shift away from broad elective requirements for a master's degree towards specified accounting courses. The evolution towards the 30-hour graduate program, comparable to the 1978 AICPA Policy Statement recommendations and consistent with AACSB Accounting Accreditation Standards, was widely evident during the periods studied. It was observed that most graduate programs

required courses in Financial Accounting, Managerial / Cost Accounting, Taxes, Auditing, and Accounting Information Systems. In general, over the periods studied the flexibility permitted in course selection decreased as more accounting courses were required rather than electives. The number of graduate accounting programs requiring courses in Governmental or Not-for-Profit Accounting declined over the period studied even though the total number of programs increased. The change towards specified accounting courses and away from electives, and the reduction of emphasis on Governmental or Not-for-Profit are widespread, and merit explicit consideration in subsequent evaluation of graduate accounting education policy.

Contributions

The research makes several contributions to the academic and professional literature. This dissertation is a comprehensive examination and documentation of accounting curriculum requirements at the undergraduate and graduate levels over an extended period, covering the time periods when several substantial changes have affected accounting education. Moving from a time when the vast majority of states only required high-school education for CPA candidates (Trueblood 1963) to the current day when all jurisdictions have 150-hour education requirements in place is a substantial change, and this dissertation provides a consistent structure to consider the changes that have taken place in accounting education. To the extent that accounting educational policy discussions will benefit from a clear understanding of program requirements in place today, this dissertation provides a compilation of information that can inform those discussions.

This dissertation developed and analyzed data as evidence to document and explain the pace of curriculum change in accounting programs over an extended period of time, and confirms a common perception that curriculum change requires long periods for successful

implementation. It identifies institutional characteristics (e.g., research orientation, accreditation, structure of the institution, doctoral-granting status) that relate to the accounting curricula in place at selected points over the past half-century, and provides insights regarding the effects of differences in those characteristics on the accounting curriculum. It measures the impact of the adoption of the 150-hour educational requirement on the curricula of institutions in key affected states. Further, the research illuminates some of the effects of the move towards graduate accounting programs on the undergraduate accounting curricula in educational institutions. The identification of changes in graduate accounting education, for example the reduction of emphasis on Governmental or Not-for-Profit Accounting courses, is another contribution from the research in this dissertation.

One of the collateral benefits from the research in this dissertation is the accumulation of information on faculty characteristics and qualifications in a database that supports examination and analysis of those characteristics over time. The scope of this faculty database is not limited to the institutions included in the sample used in this dissertation, but includes information from institutions throughout the United States and all over the world. Accordingly, that database will permit identification of broad trends in faculty characteristics and support discussion of wide-ranging policy questions relating to accounting faculty credentials and qualifications.

Limitations

The principal limitation of the analysis is its reliance upon summary course captions or broad course categories to capture the graduation requirements. Course titles do not always represent the substantive content presented in the class. Different universities and different teachers may include substantially different material in a particular class offering than another institution or teacher using the same course title, and the course content may indeed change over

time. However, the assumption in this dissertation that the inclusion in the degree requirements of a new course with a new title represents change in the curriculum is reasonable for purposes of the analysis performed.

Other limitations include reliance upon an original and uniquely developed data set of accounting programs in selected states rather than all accounting programs. This facilitated examining only selected years rather than a full history of the programs under analysis. Further it may be that programs with AACSB accounting accreditation have characteristics substantively different than programs lacking such accreditation and such differences may limit the generalizability of any findings from the research. Alternatively, the diversity in size, location, structure, and research focus of the institutions included in the analysis supports insights that are applicable to a broad range of colleges and universities. Kung, Yang, and Zhang (2006) found consistency with respect to core course content among the 140 institutions in their sample with AACSB business accreditation and the 92 institutions that did not possess such accreditation. The inclusion of institutions from the Holstrum and Wilson (1974) sample without AACSB accreditation provided an opportunity to examine possible differences between accredited and non-accredited institutions. Examining institutions who achieved accounting accreditation late in the period under study expanded the base for comparison between accredited and non-accredited institutions in the early part of the period.

Reliance upon college catalogues to represent accounting program requirements may also be a limitation of this study, if the catalogue does not present a complete depiction of the accounting program. However, no alternative data source is known that could provide data for analysis in the early years of the proposed research yet allow consistent interpretations throughout the research period. The college catalogue is in essence a contract between the

institution and the student, indicating the requirements that the student must fulfill in order to receive a degree from the institution. Cherry and Geary (1992) found that courts appear to agree that the student-college relationship is contractual in nature and that the relevant contractual terms are set forth in the catalogues. Further, in the academic literature, Kung, Yang, and Zhang rely upon published college catalogues in their 2006 survey of undergraduate information systems curricula, following the tradition of reliance upon college catalogues for curriculum information evident in Allen (1927), Briggs (1930), Noble (1950), and the Horizons Report (1967).

The information obtained on faculty credentials and characteristics from the Hasselback *Accounting Faculty Directories* is subject to the limitations of that data source, including possible omissions or errors in information self-reported by the institutions, possible inconsistencies or differences in interpretation of interest codes, and transcription errors by the data compiler. However, the process by which the data has been accumulated, classified, and presented by the data compiler is believed to have been consistently applied over the periods examined in this dissertation. The Hasselback directory has been published for more than 35 years, and has had ample opportunity to be updated and corrected as needed, and accordingly the faculty information is assumed to be consistently presented over the period reviewed.

The amount of data available regarding the undergraduate and graduate curricula was insufficient to support statistically rigorous analysis, and diligent efforts to acquire more data from alternative sources resulted in only modest improvements to the sample. There is enough data to outline patterns of the requirements to attain undergraduate and graduate degrees in accounting over the period studied, and the limited data collected from the 1960s and 1970s did permit comparison to the recommendations of the Beamer Committee for undergraduate

accounting programs from those periods going forward. Similarly, graduate accounting program requirements were compared to the recommendations in the 1978 AICPA Policy Statement from the 1970s going forward. Those comparisons supported the development of several findings regarding accounting education.

Definitively separating the influences of AACSB accounting accreditation beginning in the 1980s from the effects of 150-hour educational requirement legislation that began to be pursued at approximately the same time would require more data than is available, limiting the inferences that can be drawn regarding the relative strength of each movement in bringing about changes in accounting education. Accordingly, no policy prescriptions or recommendations regarding the most efficient way to bring about change in accounting education can be developed from the analysis of accounting accreditation and educational legislation. However, the development or promotion of such recommendations is not the purpose of this dissertation. The findings from the research and the data developed and tested in this dissertation are now available to support future research to explore the implications of the processes documented herein. Finally, it should be observed that in combination these two influences provide strong impetus for the documented changes that have been studied.

Impacts on Future Research

The historical perspective presented in this dissertation has already informed the deliberations of the Pathways Commission regarding change in accounting higher education, and has been accepted for publication in a high-quality accounting journal. The documentation developed concerning undergraduate and graduate program requirements over time can be used as the basis for a profile for comparison to other institutions and programs. This research may

assist future prescriptive or diagnostic activities that could benefit from the orderly longitudinal examination developed in this research.

Also as to future research, it may be instructive to explore the influence of the Virginia AECC model on the University of Virginia curriculum or other affected institutions (Chapter 4). Doing so would require more information on year-by-year changes in the accounting curriculum at graduate and undergraduate levels, and may require going beyond course listings in college catalogs to investigate instructional content. Such institution-specific research may benefit from the information collected and classified in the dissertation as a starting point for such an investigation or similar projects.

The information collected regarding faculty qualifications, including certifications and terminal degrees offers abundant possibilities for productive future research, both in relation to the characteristics of the institutions reporting the faculty data and the career paths of faculty members. Such research could increase our understanding regarding faculty qualifications desired by institutions with other common characteristics. Such research could inform the accreditation process in such matters as Accounting Standard No. 36, which establishes expectations for faculty professional engagement. To date an analysis of faculty certification credentials over time, included as part of the analysis in this dissertation, has supported the development of a scholarly article, intended for a high-quality accounting journal, which will be presented at two regional conferences.

A related analysis, concerning the mobility over time of accounting faculty between institutions, is the subject of another article targeting similar avenues for publication and discussion. Future exploration of educational policy issues relating to accounting faculty qualifications can be supported through analysis of the data developed for this dissertation.

LIST OF REFERENCES

REFERENCES

AACSB International – The Association to Advance Collegiate Schools of Business, "A Statement About Curriculum Management and Content: Standard No. 15", *Eligibility Procedures and Accreditation Standards for Business Accreditation*, revised January 31, 2011

AACSB International – The Association to Advance Collegiate Schools of Business, "Accounting Faculty Professional Credentials, Qualifications, or Certifications; Standard No. 34", *Eligibility Procedures and Accreditation Standards for Accounting Accreditation*, AACSB, revised July 1, 2009

AACSB International – The Association to Advance Collegiate Schools of Business, "Accounting Faculty Professional Interaction and Experience; Standard No. 36", *Eligibility Procedures and Accreditation Standards for Accounting Accreditation*, revised July 1, 2009

AACSB International – The Association to Advance Collegiate Schools of Business, "Assurance of Learning; Standard No. 37", *Eligibility Procedures and Accreditation Standards for Accounting Accreditation*, revised July 1, 2009

American Assembly of Collegiate Schools of Business (AACSB), "Accreditation Structure and Standards Revised by AACSB", *Journal of Accountancy*, (June 1983), vol. 155, no. 6; 10

American Assembly of Collegiate Schools of Business (AACSB), *Achieving Quality and Continuous Improvement through Self-Evaluation and Peer Review: Standards for Business and Accounting Accreditation*. St. Louis, MO: AACSB, (1991)

Accounting Education Change Commission (AECC), *Annual Report*, (1989-1990)

Accounting Education Change Commission, "Objectives of Education for Accountants: Position Statement Number One" *Issues in Accounting Education* (Fall 1990), vol. 5, no. 2; 307-312

Advisory Committee on the Auditing Profession, *Final Report of the Advisory Committee on the Auditing Profession to the U.S. Department of the Treasury*, (2008)

Albers, Wayne J. (Chairman), Task Force on the Report of the Committee on Education and Experience Requirements for CPAs, "Education Requirements for Entry into the Accounting Profession: A Statement of AICPA Policies", *Journal of Accountancy,* (March 1979), vol. 147, no. 3; 121-128

Albers, Wayne J. (Chairman), Commission on Professional Accounting Education, *A Postbaccalaureate Education Requirement for the CPA Profession*, New York, AICPA (1983)

Albrecht, W. S., and R.J. Sack, *Accounting Education, Charting the Course Through a Perilous Future*, Sarasota, Florida: American Accounting Association, (2000)

Aldenderfer, Mark S. and Roger K. Blashfield, *Cluster Analysis*, Newbury Park, Sage Publications (1984)

Allen, C. E., "The Growth of Accounting Instruction Since 1900", *The Accounting Review*, (June 1927), vol. 2, no. 2; 151-166

American Accounting Association Committee on the Future Structure, Content, and Scope of Accounting Education, "Future Accounting Education: Preparing for the Expanding Profession." *Issues in Accounting Education* (Spring 1986), vol. 1, no. 1; 168-195

American Institute of Certified Public Accountants Task Force on the Report of the Committee on Education and Experience Requirements for CPAs*, Education Requirements for Entry into the Accounting Profession: A Statement of AICPA Policies*, New York, AICPA (1978)

American Institute of Certified Public Accountants Education Executive Committee, *Education Requirements for Entry into the Accounting Profession: A Statement of AICPA Policies – Second Edition, Revised*, New York, AICPA (1988)

Anderson, Henry R., "The 150-Hour Requirement: Florida's Experience", *The CPA Journal* (July, 1988), vol. 58, no. 7; 56-62

Anderson, William T. and Gary J. Previts, "Accounting Accreditation and Schools of Accountancy in the United States", *Advances in Accounting* (1984); 89-104

Arthur Andersen & Co., Arthur Young, Coopers & Lybrand, Deloitte Haskins & Sells, Ernst & Whinney, Peat Marwick Main & Co., Price Waterhouse, and Touche Ross. *Perspectives on Education: Capabilities for Success in the Accounting Profession.* (April 1989)

Bailey, Allan R. and William F. Bentz, "Accounting Accreditation: Change and Transition", *Issues in Accounting Education*, (Fall 1991), vol. 6, no. 2; 168-177

Bailey, George D. (Chairman), William H. Holm, C.A. Moyer, John C. Potter, and T. Dwight Williams, "Education and Experience for CPAs: The Report to Council of the American Institute of CPAs by the Special Committee on the Report of the Commission on Standards of Education and Experience for CPAs", *Journal of Accountancy*, (June 1959), vol. 107, no. 6; 67-71

Ball, Ray, and Philip Brown, "An Empirical Evaluation of Accounting Income Numbers", *Journal of Accounting Research*, (Autumn 1968), vol. 6, no. 2; 159-178

Beamer, Elmer G. (Chairman), Committee on Education and Experience Requirements for CPAs, *Report of the Committee on Education and Experience Requirements for CPAs*, New York, AICPA (1969)

Bedford, Norton M. (Chairman), AAA Committee on the Future Structure, Content, and Scope of Accounting Education. "Future Accounting Education: Preparing for the Expanding Profession." *Issues in Accounting Education* (Spring 1986): 168-195

Bedford, Norton M. and William Shenkir, "Reorienting Accounting Education", *Journal of Accountancy*, (August 1987), vol. 164, no. 2; 84-91

Behn, Bruce K., Gregory A. Carnes, George W. Krull, Jr., Kevin D. Stocks, and Philip M. J. Reckers, "Accounting Doctoral Education – 2007, A Report of the Joint AAA/APLG/FSA Doctoral Education Committee." *Issues in Accounting Education*, (2008), vol. 23, no. 3; 357-367.

Billiot, Mary Jo, Sid Glandon, and Randy McFerrin, "Factors Affecting the Supply of Accounting Graduates", *Issues in Accounting Education,* (November 2004), vol. 19, no. 4; 443-467

Black Jr., Martin L., Richard Claire, Arnold W. Johnson, R.M. Mikesell, Lloyd F. Morrison, R.H. Van Voorhis, and Rufus Wixon, "Undergraduate Curriculum Study: Report of the Task Committee on Standards of Accounting Instruction", *The Accounting Review***,** (January 1956), vol. 31, no. 1; 35-42

Black, William H., "The Development of Accounting Education", Working Paper (2009)
---------- "The Activities of the Pathways Commission and the Historical Context for Changes in Accounting Education", *Issues in Accounting Education*, forthcoming (2012)

Board on Standards for Professional Programs and Schools of Professional Accounting, *Final Report*, New York, AICPA (1977)

Boyd, F. Virgil, James W. Edwards, Paul Kircher, Catherine E. Miles, G. Kenneth Nelson, Willis C. Stevenson, and A.W. Patrick, "Report of the Committee on Masters' Programs in Accounting", *The Accounting Review*, (1970 Supplement), vol. 45, no. 4; 45-51

Bremser, Wayne G., Vincent C. Brenner, and Paul E. Dascher, "The Feasibility of Professional Schools: An Empirical Study", *The Accounting Review*, (April 1977), vol. 52, no. 2; 465-473

Briggs, L. L., "Accounting in Collegiate Schools of Business", *The Accounting Review*, (June 1930), vol. 5, no. 2; 175-181

Brown, James F. and Thomas E. Balke, "Accounting Curriculum Comparison by Degree Program of Schools Intending to Seek Accounting Education", *Issues in Accounting Education,* (1983), vol. 1, no. 1; 50-59

Budd, Thomas A., "The Selection and Educational Training of Cost Accountants", *The Accounting Review*, (April 1948), vol. 23, no. 2; 183-192

Burton, John C., "An Educator Views the Public Accounting Profession", *Journal of Accountancy*, (September 1971), vol. 132, no. 3; 47-53

Burton, John C., "The Need for Professional Accounting Education", *Schools of Accountancy: A Look at the Issues*, Allen H. Bissell and Kermit D. Larson, editors, New York, AICPA (1975); 6-7

Carnegie Foundation, *The Carnegie Classification of Institutions of Higher Education*, The Carnegie Foundation for the Advancement of Teaching (2010), http://classifications.carnegiefoundation.org/ (visited February 9, 2011)

Carr, Shirley and M.R. Mathews, "Accounting Curriculum Change and Iterative Programme Development: A Case Study", *Accounting Education*, (December 2004), vol. 13, supplement 1; 91-116

Chenok, Philip B. with Adam Snyder, *Foundations for the Future: The AICPA from 1980 to 1995*, Stamford, CT, JAI Press Inc. (2000)

Cherry, Robert L., Jr. and John P. Geary, "The College Catalog as a Contract", *Journal of Law and Education*, (Winter 1992), vol. 21, no. 1; 1-32

Coe, Martin and John Delaney, "The Impact of Certifications on Accounting Education", *Strategic Finance*, (July 2008), vol. 90, no. 1; 47-51

Cohen, Manuel F. (Chairman), Commission on Auditors' Responsibilities, *Report, Conclusion, and Recommendations of the Commission on Auditors' Responsibilities*, New York, AICPA, (1978)

Commission on Accounting Higher Education, "Pathways to a Profession: Charting a National Strategy for the Next Generation of Accountants", Established by the American Accounting Association (AAA) and the American Institute of CPAs (AICPA), August 3, 2010

Committee on Education, American Association of Public Accountants, "Report of Committee on Education" in "Proceedings of the American Association of Public Accountants, Twentieth Annual Meeting", *Journal of Accountancy,* (December 1907), vol. 5, no. 2; 151-156

Council of the AICPA, "Official Releases: Resolutions on Education and Experience for CPAs", *Journal of Accountancy*, (June 1959), vol. 107, no. 6; 66

Eaton, Marquis G., "The Lifelong Education of the CPA", *The Ohio Certified Public Accountant*, (Summer 1957), vol. 16, no. 3; 114-120

Edwards, James Don, *History of Public Accounting in the United States*, East Lansing, Michigan State University (1960)

Ellyson, Robert C., A. Tom Nelson, and James H. MacNeill, "Educating Tomorrow's CPAs: Planning Education for a Changing World", *Journal of Accountancy*, (October 1985), vol. 160, no. 4; 95-102

Elwell, F. H., "A 1924 Survey of Accounting Courses", *Papers and Proceedings of the Ninth Annual Meeting*, American Association of University Instructors in Accounting, (1925) vol. IX, no. 1; 69-78

Emblen, Donald J., "Accounting in the Professional Business Curriculum", *The Accounting Review*, (October 1949), vol. 24, no. 4; 403-408

Federation of Schools of Accountancy, *Articles of Incorporation*, (May 1, 1978), http://www.thefsa.org/appendix/art.htm, visited February 17th, 2011

Federation of Schools of Accountancy, *Mission Statement*, http://www.thefsa.org/mission.htm, visited February 9th, 2011

Flesher, Dale L., *The History of AACSB International: Volume 2*, Tampa, Florida, AACSB International (2007)

Fogarty, Timothy J. and Kevin C. Carduff, "The God That Failed: Accounting Information Systems within the Accounting Academy", Working Paper (2011)

Fogarty, Timothy J. and Garen Markarian, "An Empirical Assessment of the Rise and Fall of Accounting as an Academic Discipline", *Issues in Accounting Education*, (May 2007), vol. 22, no. 2; 137-161

Garner, S. Paul, Russell H. Hassler, Ernest A. Heilman, John A. White, Rufus Wixon, Jr., and Hermann C. Miller. "Report of the Standards Rating Committee – American Accounting Association", *The Accounting Review*, (January 1954), vol. 29, no. 1; 38-44

Gordon, Robert A. and James E. Howell, *Higher Education for Business*, New York, Columbia University Press (1959)

Gray, F. Elizabeth, "Specific Oral Communication Skills Desired in New Accountancy Graduates", *Business Communication Quarterly*, (March 2010), vol. 73, no. 1, 40 – 67

Hasselback, James R., *A Directory of Accounting Faculty, 2011-2012 Academic Year*, 34th edition, Tallahassee, Florida, James R. Hasselback (2011)
---------- also 1975-1976, 1980-1981, 1985-1986, 1990-1991, 1995-1996, 2000-2001, and 2005-2006 editions

Hatfield, Henry R., "An Historical Defense of Bookkeeping", *Journal of Accountancy*, (April 1924), vol. 37, no. 4; 241-253

Heimbucher, Clifford V., "Fifty-three Jurisdictions", *Journal of Accountancy*, (November 1961), vol. 112, no. 5; 42-50

Heniel, Philip H., "Constructive Accounting (Book Review)", *The Accounting Review*, (June 1931), vol. 6, no. 2, 155-156

Hermanson, Roger H., and Joseph V. Carcello, "An Analysis of Current Accounting Programs in the Context of the Anderson, Bedford, and Treadway Reports", *Journal of Accounting Education*, (Spring 1989), vol. 7, no. 1; 93-105

Holstrum, Gary L., and David A. Wilson, "Recent Changes in U.S. Accounting Curriculums: A Move toward the Beamer Recommendations?", *Journal of Accountancy*, (April 1974), vol. 137, no. 4; 90-94

Hutchinson, Paul D., and Gary M. Fleischman, "Professional Certification Opportunities for Accountants", *The CPA Journal*, (March 2003), vol. 73, no. 2; 48-51

Ingram, Robert W. and Charles R. Frazier, *Developing Communications Skills for the Accounting Profession,* Sarasota, Florida AAA, 1980

Johnson, Grace F. and Abdel K. Halabi, "A Citation Analysis Measuring the Impact of Albrecht & Sack (2000)", *Journal of Modern Accounting & Auditing*, (September 2009), vol. 5, no. 9; 21-29

Kistler, Linda H., and Joseph F. Guy, "An Evaluation of Professional Certification in Accounting", *Journal of Accountancy*, (September 1975), vol. 140, no. 3; 104-108

Kren, Leslie, Kay W. Tatum, and Lawrence C. Phillips, "Separate Accreditation of Accounting Programs: An Empirical Investigation", *Issues in Accounting Education*, (Fall 1993), vol. 8, no. 2; 260-267

Kullberg, Duane R., "A New Stimulus to Fight Fraudulent Financial Reporting", *Directors & Boards*, (Fall 1987), vol. 12, no. 1; 21-24

Kung, Mabel, Samuel C. Yang, and Yi Zhang, "The Changing Information Systems (IS) Curriculum: A Study of Undergraduate Programs in the United States", *Journal of Education for Business*, (July/August 2006), vol. 81, no. 6; 291-300

Langenderfer, Harold Q. and Ernest H. Weinwurm, "Bringing Accounting Curricula Up-to-date", *The Accounting Review*, (October 1956), vol. 31, no. 3; 423-430

Mahalanobis, P., "On the Generalized Distance in Statistics", *Proceedings of the National Institute of Science*, Calcutta (1936), vol. 12; 49-55

Meyer, Harvey G., "The Systems Course", *The Accounting Review*, (December 1933), vol. 8, no. 4; 350-351

National Association of State Boards of Accountancy, *Draft Education and Licensure Requirements for Certified Public Accountants* (2008)

Nelson, A. Tom, "Accounting Education's Coming Crisis", *Journal of Accountancy*, (April 1983), vol. 155, no. 4; 70-80

Nelson, Irvin T., James A. Bailey, and A. Tom Nelson, "Changing Accounting Education with Purpose: Market-based Strategic Planning for Departments of Accounting", *Issues in Accounting Education*, (May 1998), vol. 13, no. 2; 301-326

Newell, Gale and Sheldon Langsam, "Accounting Faculty Profiles: Demographics and Perceptions", *Journal of Education for Business*, (November/December 1996), vol. 72, no. 2; 87-94

Noble, Paul L., "A Quantitative Evaluation of Accounting Curricula", *The Accounting Review*, (April 1950), vol. 25, no. 2; 163-169

Paton, William A., "Accounting's Educational Eclipse", *Journal of Accountancy*, (December 1971), vol. 132, no. 6; 35-37

Perry, Donald P. (Chairman), "Work of the Commission on Standards", *The Accounting Review*, (April 1955 a), vol. 30, no. 2; 183-193

Perry, Donald P., *Public accounting practice and accounting education*, Boston: Graduate School of Business Administration, Harvard University, (1955 b)

Perry, Donald P. (Chairman), Commission on Standards of Education and Experience for Certified Public Accountants, *Standards of Education and Experience for Certified Public Accountant*, Bureau of Business Research, University of Michigan, 1956

Pierson, Frank C., *The Education of American Businessmen: A Study of University-College Programs in Business Administration*, New York, McGraw-Hill Book Company, Inc., (1959)

Porter, Lyman W. and Lawrence E. McKibbin, *Management Education and Development: Drift or Thrust into the 21st Century?*, New York, McGraw-Hill Book Company, (1988)

Previts, Gary J., and Merino, Barbara D., *A History of Accountancy in the United States: The Cultural Significance of Accounting*, Columbus, Ohio: Ohio State University Press, (1998)

PricewaterhouseCoopers, *Educating for the Public Trust: The PricewaterhouseCoopers Position on Accounting Education*, New York; PricewaterhouseCoopers, (March 2003)

Reckers, Philip M. J., "Perspectives on the Proposal for a Generally Accepted Accounting Curriculum: A Wake-Up Call for Academics", *Issues in Accounting Education*, (February 2006), vol. 21, no. 1; 31-43

Revzan, David A., "What Is A Balanced Curriculum in Accounting?" *The Accounting Review*, (October 1949), vol. 24, no. 4; 409-413

Rohlf, F. James, "Adaptive hierarchical clustering schemes", *Systematic Zoology*, (1970) vol. 19; 58-82

Roy, Robert H., and MacNeill, James H., *Horizons for a Profession: The Common Body of Knowledge for Certified Public Accountants*, New York: AICPA, (1967)

Russell, Keith A., C. S. Kulesza, W. Steve Albrecht and Robert J. Sack, "Charting the Course Through a Perilous Future", *Management Accounting Quarterly*, (Autumn 2000), vol. 2, no. 1; 4-11

Savoie, Leonard M., "The Professional School of Accountancy", *Journal of Accountancy*, November 1971), vol. 132, no. 2; 33-35

Schmidt, Leo A. (Chairman), Committee on the Study of the Ford and Carnegie Foundation Reports, "Report of the Committee on the Study of the Ford and Carnegie Foundation Reports", *The Accounting Review*, (April 1961), vol. 36, no. 2; 191-196

Siegel, Gary, James E. Sorensen, Thomas Klammer, and Sandra B. Richtermeyer (2010a), "The Ongoing Preparation Gap in Management Accounting Education: A Call to Action", *Management Accounting Quarterly*, (Spring 2010), vol. 11, no. 3; 41-51

---------- (2010b), "The Ongoing Preparation Gap in Management Accounting Education: A Guide for Change", *Management Accounting Quarterly*, (Summer 2010), vol. 11, no. 4; 29-38

Siegel, Gary, and James E. Sorensen, "What Corporate America Wants in Entry-Level Accountants", *Management Accounting*, (September 1994), vol. 76, no. 3, 26 – 31

Stone, Willard E., "Accounting Doctoral Programs in AACSB Colleges of Business Administration", *The Accounting Review*, (January 1965) vol. 40, no. 1: 190-195

Stowers, Robert H., and G. Thomas White, "Connecting Accounting and Communication: A Survey of Public Accounting Firms", *Business Communication Quarterly*, (June 1999), vol. 62, no. 2, 23 – 40

Subcommittee on Reports, Accounting, and Management of the Committee on Government Operations, United States Senate, *The Accounting Establishment: A Staff Study*, Washington, U.S. Government Printing Office (1976)

Summers, Edward L., "Accounting Education's New Horizons", *Journal of Accountancy*, (September 1974) vol. 138, no. 3; 56-63

Sundem, Gary, *The Accounting Education Change Commission: Its History and Impact*, AECC and AAA (1999), http://aaahq.org/aecc/history/cover.htm

Taylor, Jacob H., "A Program for Graduate Study of Accounting", *The Accounting Review*, (March 1932), vol. 7, no. 1; 42-47

Trueblood, Robert M., "Education for a Changing Profession", *Journal of Accounting Research*, (Spring 1963), vol. 1, issue 1; 86-94

Van Wyhe, Glenn, *The Struggle for Status: A History of Accounting Education*, New York: Garland Publishing (1994)

Van Wyhe, Glenn, "A History of U.S. Higher Education in Accounting, Part II: Reforming Accounting within the Academy", *Issues in Accounting Education*, (August 2007), vol. 22, no. 3; 481-501

Velayutham, Sivakumar and Asheq Razaur Rahman, "Professional Schools of Accountancy (PSAs): If We Need Them, How Do We Make Them Effective?", Working Paper (2011)

White, Gary E., "Organizational Structures of Schools of Accounting", *Proceedings of the Sixth National Conference of the Federation of Schools of Accountancy*, (1982); 39-50

Williams, Doyle Z., "Schools of Accounting: Anatomy of a Movement", *Issues in Accounting Education*, (1984), vol. 1, no. 2; 13-31

Zeff, Stephen A., "Does Accounting Belong in the University Curriculum?", *Issues in Accounting Education*, (Spring 1989), vol. 4, no. 3; 203-210

APPENDICES

APPENDIX: A

List of Institutions Selected for Detailed Analysis

Institution Name	State
Cal State Long Beach	California
Cal State Los Angeles	California
Cal State University – Fullerton	California
San Diego State University	California
Santa Clara University	California
University of San Diego	California
University of Southern California	California
Florida International University	Florida
Florida State University	Florida
Stetson University	Florida
University of Central Florida	Florida
University of Florida	Florida
University of Miami	Florida
University of North Florida	Florida
University of South Florida	Florida
University of South Florida - St. Petersburg	Florida
Bradley University	Illinois
DePaul University	Illinois
Eastern Illinois University	Illinois
Illinois State University	Illinois
Loyola University Chicago	Illinois
Northern Illinois University	Illinois
Southern Illinois University Carbondale	Illinois
Southern Illinois University Edwardsville	Illinois
University of Illinois at Chicago	Illinois
University of Illinois at Urbana-Champaign	Illinois
Western Illinois University	Illinois
Mississippi State University	Mississippi
University of Mississippi	Mississippi
University of Southern Mississippi	Mississippi
Baruch College-City University of New York	New York
CUNY – Brooklyn	New York
Hofstra University	New York
Long Island University - Brooklyn	New York
New York University	New York
Pace University	New York
St. John's University	New York
State University of New York at Albany	New York

State University of New York at Buffalo	New York
Bowling Green State University	Ohio
Case Western Reserve University	Ohio
Cleveland State University	Ohio
John Carroll University	Ohio
Kent State University	Ohio
Miami University	Ohio
Ohio State University	Ohio
Ohio University	Ohio
University of Akron	Ohio
University of Cincinnati	Ohio
University of Dayton	Ohio
Wright State University	Ohio
Belmont University	Tennessee
East Tennessee State University	Tennessee
Middle Tennessee State University	Tennessee
Tennessee Tech University	Tennessee
University of Memphis	Tennessee
University of Tennessee at Chattanooga	Tennessee
University of Tennessee at Knoxville	Tennessee
Baylor University	Texas
Texas A&M University	Texas
Texas A&M University-Corpus Christi	Texas
Texas Christian University	Texas
Texas Tech University	Texas
University of Houston	Texas
University of Houston-Clear Lake	Texas
University of North Texas	Texas
University of Texas at Arlington	Texas
University of Texas at Austin	Texas
University of Texas at Dallas	Texas
University of Texas at El Paso	Texas
University of Texas at San Antonio	Texas
College of William and Mary	Virginia
George Mason University	Virginia
James Madison University	Virginia
Old Dominion University	Virginia
University of Richmond	Virginia
University of Virginia	Virginia
Virginia Commonwealth University	Virginia
Virginia Polytechnic Inst and State University	Virginia

APPENDIX: B

General and Scholarly Orientation Codes

General Orientation

Code	High Emphasis	Medium Emphasis	Low Emphasis
A	Teaching	Intellectual Contributions	Service
B	Intellectual Contributions	Teaching	Service
C	Teaching	Service	Intellectual Contributions
D	Intellectual Contributions	Service	Teaching
E	Equal for Teaching and Intellectual Contributions		Service
F	Teaching	Equal for Intellectual Contributions and Service	
G	Equal for Teaching, Intellectual Contributions, and Service		

Scholarly Orientation

Definitions

- **Learning & Pedagogical Research** - The enhancement of the educational value of instructional efforts of the institution or discipline
- **Contributions to Practice** - The application, transfer and interpretation of knowledge to improve management practice and teaching
- **Discipline-based Scholarship** - The creation of new knowledge

Code	High Emphasis	Medium Emphasis	Low Emphasis
A	Discipline-based Scholarship	Contributions to Practice	Learning & Pedagogical Research
B	Contributions to Practice	Learning & Pedagogical Research	Discipline-based Scholarship
C	Learning & Pedagogical Research	Discipline-based Scholarship	Contributions to Practice
D	Discipline-based Scholarship	Learning & Pedagogical Research	Contributions to Practice
E	Learning & Pedagogical Research	Contributions to Practice	Discipline-based Scholarship
F	Contributions to Practice	Discipline-based Scholarship	Learning & Pedagogical Research
G	Equal Emphasis on Discipline-based Scholarship and Contributions to Practice		Learning & Pedagogical Research
H	Equal Emphasis on Contributions to Practice and Learning & Pedagogical Research		Discipline-based Scholarship
I	Equal Emphasis on Discipline-based Scholarship and Learning & Pedagogical Research		Contributions to Practice
J	Learning & Pedagogical Research	Equal Emphasis on Discipline-based Scholarship and Contributions to Practice	
K	Discipline-based Scholarship	Equal Emphasis on Contributions to Practice and Learning & Pedagogical Research	
L	Contributions to Practice	Equal Emphasis on Discipline-based Scholarship and Learning & Pedagogical Research	
M	Equal Emphasis on Discipline-based Scholarship, Contributions to Practice and Learning & Pedagogical Research		

2000 Carnegie Classification Descriptions

Doctoral/Research Universities

Doctoral/Research Universities—Extensive:

These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. During the period studied, they awarded 50 or more doctoral degrees per year across at least 15 disciplines.

Doctoral/Research Universities—Intensive:

These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. During the period studied, they awarded at least 10 doctoral degrees per year across three or more disciplines, or at least 20 doctoral degrees per year overall.

Master's Colleges and Universities

Master's Colleges and Universities I:

These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the master's degree. During the period studied, they awarded 40 or more master's degrees per year across three or more disciplines.

Master's Colleges and Universities II:

These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the master's degree. During the period studied, they awarded 20 or more master's degrees per year.

2005 Carnegie Classification Descriptions

Doctorate-granting Universities. Includes institutions that awarded at least 20 research doctoral degrees during the update year (excluding doctoral-level degrees that qualify recipients for entry into professional practice, such as the JD, MD, PharmD, DPT, etc.). Excludes Special Focus Institutions and Tribal Colleges.

- RU/VH: Research Universities (very high research activity)
- RU/H: Research Universities (high research activity)
- DRU: Doctoral/Research Universities

Master's Colleges and Universities. Generally includes institutions that awarded at least 50 master's degrees and fewer than 20 doctoral degrees during the update year (with occasional exceptions – see Methodology). Excludes Special Focus Institutions and Tribal Colleges.

- Master's/L: Master's Colleges and Universities (larger programs)
- Master's/M: Master's Colleges and Universities (medium programs)
- Master's/S: Master's Colleges and Universities (smaller programs)

VITA

William H. Black, CPA/ABV, ABAR, CFE, CFF, CVA

Office:
Department of Accountancy
Weatherhead School of Management
Case Western Reserve University
Cleveland, Ohio 44106

Academic Experience

Case Western Reserve University, Cleveland, Ohio
Weatherhead School of Management
Department of Accountancy
Visiting Adjunct Professor of Accounting, August 2010 – May 2011
Visiting Assistant Professor of Accounting, July 2011 – June 2012

University of Mississippi, Oxford, Mississippi
Patterson School of Accountancy
Graduate Teaching Assistant, August 2007 – July 2010

Penn State University, University Park, Pennsylvania
Smeal College of Business
Department of Accounting
Graduate Teaching Assistant, August 1977 – July 1978

Education

University of Mississippi, Oxford, Mississippi
Patterson School of Accountancy
Candidate for PhD in Accounting

Penn State University, University Park, PA
Smeal College of Business
M.S. in Accounting, 1979

University of North Carolina, Chapel Hill, NC
Kenan-Flagler Business School
B.S.B.A – Accounting, 1976

Professional Interests

Research: Intellectual Property identification, measurement, and valuation, Forensic Accounting and Fraud Assessment, Ethics and management behavior

Teaching: Managerial / Cost Accounting, Financial Accounting, Forensic Accounting, Business Valuation, Accounting Ethics, Corporate Governance

Courses Taught

Case Western Reserve University, Weatherhead School of Management

Advanced Accounting Theory (Graduate, ACCT 520 co-instructor)
Advanced Auditing Theory and Practice (Graduate, ACCT 444 co-instructor)
Contemporary Accountancy Policy (Graduate, ACCT 540 co-instructor)
Effective Business Communication (Project coordinator)

University of Mississippi, Patterson School of Accountancy

Introduction to Accounting Principles II, Managerial and Cost Accounting (Undergraduate, ACCY 202)

University of Michigan, Ross School of Business

Financial Accounting Principles (Undergraduate)

Penn State University, Smeal College of Business

Financial Accounting Principles (Undergraduate)

Continuing Professional Education courses

Developed and delivered CPE courses to numerous professional audiences, including:

- Georgia Society of CPAs
- Institute of Business Appraisers
- Academy for Ethics in Financial Reporting
- Institute for Continuing Legal Education in Georgia
- Association of Certified Fraud Examiners
- North Carolina Bar Association
- National Association of Certified Valuation Analysts
- Florida Bar
- Deloitte & Touche
- Pricewaterhouse Coopers
- National Institute for Trial Advocacy

Professional Experience

William H. Black, PC, Atlanta, Georgia
President 1991-present
Business valuation and forensic accounting services

Deloitte & Touche, Atlanta, Georgia
Director of Litigation Consulting 1989-1991

Price Waterhouse & Co., Miami, Florida
Senior Manager, Litigation Consulting 1986-1989

Deloitte Haskins & Sells, Miami, Florida
Manager 1984, Senior Manager 1984-1986

Automation Industries, Inc., Greenwich, Connecticut
Compliance Coordinator 1981-1982, Manager of Financial Planning and Special Projects 1982-1984

Financial Accounting Standards Board, Stamford, Connecticut
Research Assistant on Conceptual Framework projects, 1979-1981

Coopers & Lybrand, Miami, Florida
Staff Auditor 1976-1977

Professional Certifications

- Certified Public Accountant (CPA) since 1977
- Certified Management Accountant (CMA), since 1991
- Certified Fraud Examiner (CFE) since 1993
- Certified Valuation Analyst (CVA) since 1993
- Accredited in Business Valuation (ABV) since 2004
- Certified in Financial Forensics (CFF) since 2008
- Accredited in Business Appraisal Review (ABAR) since 2009

Professional Memberships

- American Accounting Association, Management Accounting and Forensic & Investigative Accounting sections
- American Institute of Certified Public Accountants, Forensic and Valuation Services section
- Association of Certified Fraud Examiners, Georgia Chapter

- Georgia Society of Certified Public Accountants, Forensic & Valuation Services and Information Technology sections
- Institute of Business Appraisers
- Institute of Management Accountants
- National Association of Certified Valuation Analysts
- Academy of Accounting Historians

Research – Publications

Official Historian for the AAA/AICPA Pathways Commission (Charting a National Higher-Education Strategy for the Next Generation of Accountants), 2010-2011, funded by grants from the AAA and AICPA. Previous research with Gary Previts and the AAA/AICPA Task Force on "Developments in Accountancy Higher Education: Horizons to Date" in 2009 was also funded by grants from the AAA and AICPA.

The Activities of the Pathways Commission and the Historical Context for Changes in Accounting Education.
Issues in Accounting Education, forthcoming 2012

Ethical Prompts and Their Effects on the Individual's Evaluation of Acceptable Business Practices: Considerations for Accountants
with Barbara White, Huntingdon College
Research on Professional Responsibility and Ethics in Accounting, forthcoming 2012

Valuing Professional Practices: Thorny Challenges
published by Business Valuation Resources in 2007

How Can You Value a Contingent-fee Law Firm?
Business Appraisal Practice, Winter 2005

Research – Working Papers

A Longitudinal Analysis of Changes in Accounting Curriculum Requirements since the Perry Commission Report
Dissertation research supervised by Dale Flesher, University of Mississippi

Integrating Business Communications Instruction into the Accounting Curriculum – Considerations for International Students
with Gary Previts, Case Western Reserve University

Further Tales of the Schism: US Accounting Faculty and Practice Credentials
with Tim Fogarty, Case Western Reserve University

Stuck in the Middle with You: The Mid-Career Mobility of Accounting Faculty
with Tim Fogarty, Case Western Reserve University

Alternative Valuation Metrics in Private Company Transaction Databases
with Mark Walker, University of Mississippi.

An Empirical Test of Industry Groupings and Size in Privately-Held Company Valuation

The Unintended Consequences of Tax Policy: A Historical Perspective on Mississippi's Ad Valorem Tax Structure and Its Effects on the Environment

Six Decades of Attempts to Change Accounting Education – A Retrospective Summary of Selected AICPA, AAA, and Other Commissions and Initiatives

Validating Your Analysis: How Do You Confirm the Right Answer?

Proving Fraud with Incomplete Information: A Case Study

Best Practices in Valuing Intangible Assets

Building an Analytical Database: Lessons from a $600 Million Ponzi Scheme

Professional Service

American Accounting Association

- Litigation Support Committee, Forensic & Investigative Accounting Section, 2011 – present
- Ohio Regional Coordinator, Forensic & Investigative Accounting Section, 2011 – present

Case Western Reserve University

- Accountancy Department Coordinator, AACSB reaffirmation of accounting accreditation (review visit scheduled October 2012), 2011 – 2012
- Acquisition and Retention of Library Materials Task Force, 2010 – 2011

Georgia Society of Certified Public Accountants

- Vice-chairman, Forensic and Valuation Services Section 2005 – 2007
- Director, Forensic and Valuation Services Section 2007 – 2010

National Association of Certified Valuation Analysts

- Team Leader, Database Development Project 2010 – present
- Chairman's Advisory Group on Curriculum Content 2010
- Business and Intellectual Property Damages Instructor Team 2009 – present

- State Chapters Committee 2005 – 2009
- Ideas and Technology Committee 2005 – 2009
- Practice Development Committee 2005 – 2009
- President, Georgia chapter: 1994 – 1998

Institute of Business Appraisers

- Accredited In Business Appraisal Review - Curriculum Committee 2009 – present

Conference Participation and Presentations

- AAA Annual Meeting 2012, Presenter, Reviewer
- Ethics Research Symposium, AAA Annual Meeting 2012, Reviewer
- AAA Forensic and Investigative Accounting Section Meeting 2012, Presenter
- AAA Southeast Regional Meeting 2012, Presenter
- AAA Ohio Regional Meeting 2012, Track Coordinator – Litigation and Forensic Section, Reviewer
- AAA Managerial Accounting Section Doctoral Consortium 2012
- AAA Southeast Regional Meeting 2011, Presenter
- Faculty Development Workshop, Mercer University, 2011, Presenter
- AAA Ohio Regional Meeting 2011, Presenter
- Academy of Accounting Historians Research Conference 2011, Presenter
- Ethics Symposium, AAA Annual Meeting 2011, Reviewer
- AAA Annual Meeting 2011, Presenter
- NACVA/IBA National Consultants' Conference 2011, Presenter
- AAA Managerial Accounting Section Doctoral Consortium 2011
- Accounting Hall of Fame and Academy of Accounting Historians Research Conference 2010, Presenter
- AAA Midwest Regional Meeting 2010, Presenter
- AAA Southeast Regional Meeting 2010, Presenter and Moderator
- AAA Western Regional Meeting 2010, Reviewer
- Ethics Research Symposium, AAA Annual Meeting 2010, Presenter
- AAA Annual Meeting 2010, Presenter
- Institute of Business Appraisers Southeastern Consultants' Conference 2010, Presenter
- Mid-South Doctoral Colloquium, 2010
- AAA Managerial Accounting Section Doctoral Consortium 2010
- AAA Southeast Regional Meeting 2009, Presenter and Moderator
- Ethics Research Symposium, AAA Annual Meeting 2009
- AAA Annual Meeting 2009, Presenter, Moderator, and Discussant
- GSCPA Regional Forensic Accounting Colloquium 2009, Presenter
- Mid-South Doctoral Colloquium, 2009
- AAA Southeast Regional Meeting 2008
- Institute of Business Appraisers Southeastern Consultants' Conference 2008, Presenter

- Annual Ethics Research Symposium, AAA Annual Meeting 2008
- AAA Annual Meeting 2008, Presenter, Moderator, and Discussant
- Mid-South Doctoral Colloquium, 2008
- AAA Southeast Regional Meeting 2007
- AAA Annual Meeting, 2007
- IBA National Consultant's Conference 2005, Presenter
- North Carolina Bar Association Y2K Conference 1999, Presenter
- NACVA National Consultants' Conference 1997
- Georgia Certified Fraud Examiner Annual Conference 1998, Presenter
- AAA Southeast Regional Meeting 1993, CPE Instructor
- AAA Southeast Regional Meeting 1992, CPE Instructor
- AAA Southeast Regional Meeting 1978