

Curricular Study of AACSB Accounting Programs: What Core Accounting Courses are Required to Earn an Accounting Generalist Degree?

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Abstract

This descriptive research studies the set of core undergraduate accounting courses at 175 U.S. universities with separate AACSB accounting accreditation to understand what is required to earn an undergraduate accounting generalist degree and the extent to which innovation is occurring. Faculty considering a change to their set of core courses will find this information relevant. Findings indicate that undergraduate accounting program curricula generally require what might be described as a recognizable, or fairly traditional, set of functional courses including two courses in intermediate accounting, one course each in cost/managerial accounting, tax, auditing, accounting information systems and two other courses on average. Despite this rather traditional structure of the required set of core courses for an accounting degree, significant innovations are popping up including a bridge course between principles and intermediate accounting, accounting control systems, data analytics, ethics, financial statement analysis, fraud examination, information systems security, strategic cost management, and courses that blend areas of accounting such as tax and financial accounting or financial and managerial accounting.

Introduction

Over the past several decades, there have been many calls for change in the structure of accounting education. These calls for change are based on the changes occurring in practice as a result of technological and societal changes that have led to a rapidly changing business world which has, in turn, led to dramatic changes in the accounting profession. These calls for change have come from American Accounting Association (AAA), American Institute of Certified Public Accountants (AICPA), National Association of State Boards of Accountancy (NASBA), Institute of Management Accountants (IMA, formerly National Association of Accountants), major accounting firms (Big Eight, Big Six, Big Five), Financial Executives International (FEI), Institute of Internal Auditors (IIA), and even the U.S. Department of Treasury. Sweeping change has been requested in terms of both the specific courses required and the amount of formal education needed.

Therefore, the purpose of this descriptive study is to discover the extent to which the accounting curricula have changed as a result of the many calls for change. This study also permits faculty who are evaluating their own course requirements to learn about the innovation occurring around the U.S. at AACSB Accounting accredited programs.

The remainder of this paper presents a literature review of major calls for change in accounting education since the 1980's, presents the research questions for this descriptive study, describes the data used for analysis, describes and discusses the findings, and ends with a conclusion.

Literature Review

The accounting profession is changing.

Everywhere we go we hear that society is in a state of accelerating change. We are told that we must respond by revising our ways—revamping the way we educate our young people, providing training programs that can help people keep up with developments in technology, and encouraging and helping them to learn new skills when their old jobs are discontinued. But what is not apparent is that the message we are being bombarded with today has been coming to us for a long time.

This quote was printed in the *Journal of Accountancy* in 1987 as part of a call for change in accounting education. Its sentiment is as true today as it was then. Since the most recent examination of the curricula before this study was in 1983 by Brown and Balke, this literature review outlines the major initiatives for change in accounting education since then.

In 1986 the AAA Committee on the Future Structure, Content and Scope of Accounting Education¹ published their special report which concluded that accounting education as it was approached at the time, “requires major reorientation” (Bedford et al., 1986, p. 169). They noted that during the 60 year period of time from 1925 to 1985 while the accounting profession had expanded in scope of practice and in the nature and content of accounting services, the substance of accounting education remained essentially the same for 50 years.

The expansion of the profession they were seeing at the time was a result of “massive changes taking place in technology and social values, and in social, government and business institutions” (p. 171). In industry and government, these changes included using accountants as consultants to enhance information systems, taxation, budget preparation, internal controls and strategic management. Public accounting firms faced pricing competition and the public becoming aware of audit failures, which lead to legal liability and discussion of professional ethical standards for accountants. The range of services accountants were providing was extending far beyond the rules-based accounting and auditing services that were being taught in Universities. In addition, accounting rules, standards and concepts were increasing in number and complexity. In short, the accounting profession was expanding beyond the curricula offered in an undergraduate education.

As a result, the Committee concluded that accounting education must itself expand in scope, content and structure. The structure they suggested was a three phase program including two years of general education, followed by two years of general professional accounting education, followed by one year of specialized professional accounting education. They were seeking a five-year accounting degree program.

Some change did occur although it did not follow their prescription. Mueller and Simmons (1989) list the accounting education improvements to include (1) establishing separate accreditation for accounting programs by the AACSB, (2) establishing approximately 40 schools of accountancy in the U.S., (3) passing the 150-hour requirement for CPA licensure in several states, and (4) improving individual accounting courses with respect to ethics, communication and applications of information technology. While these changes were not enough, they were steps in the right direction.

In 1987 the National Commission on Fraudulent Financial Reporting², jointly sponsored by the AICPA, AAA, FEI, IIA and IMA published their report. Their recommendations relating to undergraduate accounting curriculum include the following five items. First, the curricula should, “foster knowledge and understanding of the factors that may cause fraudulent financial reporting and the strategies that can lead to a reduction in its incidence” (p. 80). Second, it should promote a better understanding of internal controls. Third, the students should be knowledgeable

¹ This committee was also known as the Bedford Committee.

² Also known as the Treadway Commission.

of the regulations and law enforcement. Fourth, the curriculum should develop the necessary analytical, problem solving, and judgment skills to help prevent, detect and deter fraud. Fifth, the curriculum should emphasize ethics. With respect to the structure of accounting education, they promoted an expansion of the undergraduate degree from four years to five years.

In 1989 the major accounting firms, then the “Big Eight,” prepared their White Paper³ to describe the capabilities necessary for students to succeed in practice throughout their careers, not simply at entry-level. They described the broad array of skills and knowledge required:

- Skills for Public Accounting
 - Communication skills
 - Intellectual skills
 - Interpersonal skills
- Knowledge for Public Accounting
 - General knowledge
 - Organizational and business knowledge
 - Accounting and auditing knowledge

The Big Eight concluded by stating that passing the CPA exam should not be the focus of accounting education, but instead, developing analytical and conceptual thinking should be.

As a result of the criticism of current accounting education, the AAA established the Accounting Education Change Committee (AECC) in 1989 to guide the academic community to reengineer the curricula, backed by a four million dollar pledge from the Big Eight CPA firms to implement its proposal. Grants were awarded to improve accounting education at all levels seeking sweeping changes in accounting education. The grants awarded for undergraduate education went to Brigham Young University, Kansas State University, University of Massachusetts, University of North Texas, Arizona State University, jointly to the Universities of Illinois and Notre Dame, and North Carolina A&T State University in two separate rounds (Williams and Sundem 1990, 1991).

The improvements the AECC grants supported in the core accounting curriculum included the following: deemphasizing the focus on the technical in favor of general education and business organizational knowledge, breaking down the functional area silos in favor of integration, focusing on unstructured problem-solving, emphasizing learning to learn rather than memorizing rules, having a broader objective than passing the CPA exam, increasing emphasis on communication skills, integrating active learning into the pedagogy, and integrating technology throughout the accounting curriculum (Williams 1993).

Kansas State and Brigham Young wrote about their unique changes to course structure as a result of their AECC grants. Kansas State University introduced a new set of core courses to include Accounting Processes and Controls, Accounting Theory and History, Controllership, Financial Reporting and Accounting Research along with Tax and Audit (Ainsworth and Plumlee 1993). Brigham Young University combined their individual junior year functional courses of intermediate, cost/managerial, audit, tax and AIS into a single team-taught, integrated 24-hour core course (Albrecht et al. 1994).

By the mid 1990’s the IMA reaffirmed their interest in accounting education by sponsoring or co-sponsoring a series of practice analysis studies. The 1994 study, *What Corporate America Wants in Entry-Level Accountants*, focused on the gap between accounting graduates’ skills and what corporations need from them. The 1995 study, *The Practice Analysis of Management Accounting*, provided a baseline analysis of the profession in transition. The 1999 study, *Counting More, Counting Less*, documents an accelerating rate of change in the work of corporate accountants. As Russell, Siegel and Kulesza (1999, p. 3) write,

³ The White Paper is also formally titled, “Perspectives on Education: Capabilities for Success in the Accounting Profession.”

Increasing numbers of management accountants spend most of their time as internal consultants or business analysts. Many have moved from the accounting department to be physically located in the operating departments they serve. They work on cross-functional teams and are actively involved in decision making.

Overall, the study finds that accounting education should emphasize strategic planning and process improvement – neither of which was being taught at the time in most accounting curricula.

The 1999 AICPA CPA Vision report recognized that, “Many of the traditional, essential skills of the accountant are being replaced by new technologies.” The report also documented the trends of commerce as, “global, technological, instantaneous and increasingly virtual.” To meet the evolving economy, they predict CPAs, “will expand their ability to gather data from a variety of sources and increasingly provide valuable strategic interpretations for decision making.”

In 2000 Albrecht and Sack, sponsored by AAA, AICPA, IMA and the Big Five, released their report, *Accounting Education: Charting the Course through a Perilous Future*. Their report paints a bleak picture of the current state of accounting education: accounting enrollments were down, those who majored in accounting – even many accounting professors -- would have chosen a different major if they had it to do over, and accounting practitioners viewed the accounting educational model as broken and obsolete.

They note that the major drivers of change in the environment were, (1) technology, (2) globalization, (3) a concentration of power by large investing entities including large mutual and pension funds. Because of these changes, they point out that information is no longer expensive, and competition has dramatically increased. With respect to reward structure, this has led to the, “elimination of or reduction in rewards for services replaced by technology, unchanged rewards for traditional, but needed services, and increased rewards for services that help leverage technology and globalization and that assist in making better strategic decisions” (Albrecht and Sack 2000, p. 11). In short, the business world had changed dramatically whereas accounting education had not kept up. In 2002 NASBA attempted to promote greater uniformity in education of those qualifying to sit for the Uniform CPA exam by mandating the coursework a candidate must complete. They proposed mandating ten specified accounting courses (two courses in financial accounting for business organizations, and one course each in financial accounting for governmental and not-for-profits, assurance services, taxation, managerial accounting, accounting information systems, ethical and professional responsibilities for CPAs, communications in accounting, and research and analysis in accounting) plus twelve specific business courses that all-in-all amounted to requiring the extra 30 hours of coursework for the 150-hour rule to be specified business and accounting courses (Reckers 2006). While their proposal ultimately failed, they made it clear that they wanted to expand and unify the curriculum for all future CPAs.

By 2008 even the US Treasury Department weighed in on the state of accounting education. In their report, *US Treasury Advisory Committee on Auditing Profession*, they suggested ways the various constituents could improve the state of financial statement auditing. The advice they offered to educators was to implement a market-driven dynamic curricula and content for accounting students that continuously evolves to meet the needs of the auditing profession and to help prepare new entrants to perform high quality audits. As a result of this report, AAA and AICPA formed the Pathways Commission (Black 2012).

By 2012, the first report of the Pathways Commission was released. The Commission observed that there are two central reasons why many of the recommendations from the earlier reports were not more fully adopted. First, “previous efforts lacked an ongoing mechanism to continue promoting and supporting the implementation of innovation and change,” (The Pathways Commission, 2012 p. 45). Second, most of the previous projects were worked as *study* groups, not *action* groups. While the AECC supported promising projects, once the projects ended, so too did the necessary support structures. The Pathways Commission was formed to overcome these barriers. They began their work by making seven recommendations.

Recommendation 4, pertaining most directly to the curriculum, was to: “develop curriculum models, engaging learning resources, and mechanisms for easily sharing them as well as enhancing faculty development opportunities in support of sustaining a robust curriculum” (The Pathways Commission, 2012, p. 12). This recommendation was supported by three objectives and fifteen action items. The objectives were:

- 4.1 Engage the accounting community to define the body of knowledge that is the foundation for accounting’s curricula of the future.
- 4.2 Implement curricular models for the future.
- 4.3 Develop guiding principles and support for a range of faculty development opportunities through varied career paths and cycles.

The Pathways Commission’s work did not end with their published 2012 report. But instead they continued to work on their recommendations, objectives and action items by focusing on the undergraduate accounting generalist degree. Based upon the Pathways Vision Model shown in Figure 1 (The Pathways Commission Report 2013), they concluded that professional judgment/skepticism is a foundational skill necessary in the accounting profession. This rich model places the accountant in a pivotal role in achieving a prosperous society. To explain it in its simplest manner, this model recognizes that good decisions are necessary to achieve a prosperous society. Making good economic decisions is reliant upon having the availability of useful information which is based on accounting judgments that require critical thinking about economic activity. The consequences of good decisions in turn affect economic activity, which feeds forward throughout the process making the whole process interactive. Hence, accounting judgment is critical throughout this process. Many tend to believe that accounting is a black and white subject. But in reality, it has many shades of gray for which professional judgment must be passed.

In order to support the development of the professional judgment, AECC published their 2015 report in which they developed a graphic depicting the common body of knowledge competencies required to develop professional judgment. The curriculum to develop professional judgment used in high-quality decision making requires accounting knowledge built upon broad management knowledge built upon a professional foundation interspersed with interaction with accounting professionals as depicted in their Figure 2.

Overall, the literature is calling for sweeping curricular change in accounting education, although not all recommendations are consistent with each other. The recommendations include expanding accounting to a five-year degree, focusing on ethics and on preventing and detecting fraud, preparing students for lifelong success, decoupling accounting education from passing the CPA exam, deemphasizing technical education in favor of general education, breaking down functional silos in accounting in favor of integration, increasing emphasis on communication skills, integrating technology throughout the curriculum, preparing students for entry-level skills, preparing students for career-long success, emphasizing strategic planning and process improvement, encouraging more uniformity in accounting curricula, teaching professional judgment/skepticism, interacting with the profession, and more.

Research Questions

With this much momentum for change occurring – and given that plenty of time has elapsed for accounting education to adapt – the purpose of this descriptive study is to ask the following three research questions:

- 1) What are the required core accounting courses to earn an undergraduate accounting generalist degree in the United States?
- 2) Do most accounting programs still require a recognizable traditional set of courses in accounting?
- 3) Because of the momentum calling for change in the accounting curriculum, is there clear evidence of innovation in the curriculum?

Interestingly, none of these questions have been covered since Brown and Balke (1983) found the major accounting curriculum included financial accounting courses (3 or 4), accounting theory, management accounting courses (2), information systems, financial and operational auditing, and taxation (based on modal responses). Related current

literature does exist on how specific topics are incorporated in the curriculum including big data (Sledgianowski et al. 2017), data analytics (Tschakert et al. 2017), enterprise resource planning (SAP) (Blount et al. 2016), ethics (Apostolou et al. 2013), forensics (Kranacher et al. 2008), sustainability (Wong, et al. 2016), and writing (Riley and Simons 2013) to name just a few. There have also been articles on how to improve auditing (Blouch et al. 2015) or taxation (Dennis-Escoffier et al. 2009) or managerial accounting (Brewer 2000), or the accounting curriculum overall (Lawson et al. 2014). Even the curriculum of graduate accounting education has been studied (Frecka and Nichols 2004), but not a single study on what it takes to earn an undergraduate generalist accounting degree in nearly four decades.

Changes in accounting education can be separated into curricular changes (changes in what we teach), and pedagogical changes (changes in how we teach). While change has been demanded in both, this present study only addresses curricular changes. And more specifically, on the curricular changes that can be seen based on course titles required to earn a generalist undergraduate accounting degree. This study does not capture extra-curricular or co-curricular changes. Nor does it study individual course content changes. Nor does it study graduate level coursework.

Data

The data for this study was drawn from the 175 AACSB Universities that have separate accounting accreditation in the U.S. This population was selected for study because it represents the finest accounting programs worthy of emulating which are committed to continuous improvement in accounting education. As stated by the AACSB (2013 standards⁴, updated in 2016), they recognize, “outstanding academic units that produce excellent graduates, impactful scholarship, and high-quality interactions between academia and professional practice.”

Also, they represent a defined population for which online data could be gathered.

These 175 Universities range in size from John Carroll University with a small student body of less than 4,000 students to Arizona State University with a huge study body of over 111,000 students⁵ with an average size of approximately 23,500. Some are public, others are private; some offer doctoral programs, others do not. These AACSB accounting programs are located in 42 states in the union and the District of Columbia⁶.

The dataset for this study consists of the set of required accounting courses to earn a baccalaureate degree in accounting. This information was individually captured from university websites from either the course catalogs or from another online location describing the major requirements typically provided for student advising purposes. Some universities offer a second or third undergraduate accounting degree which requires specialized coursework. This information is not considered because the purpose of this study is to focus on the required major courses for the generalist degree. Another reason for excluding this data is to have just one data point per university studied.

This study captured the set of course titles required to earn an undergraduate accounting degree without going deeper into course descriptions (for the first part of the study). Since course titles vary somewhat across universities, it is relevant that this study grouped similar classes together. For example, the first auditing course may be titled “Auditing,” or “Principles of Auditing,” “Fundamentals of Auditing,” “Auditing I,” “Auditing and Assurance Services,” “Assurance,” among others. These titles are all labeled as the same course. Similarly, the first tax course may be called, “Federal Taxation,” “Tax,” “Individual Taxation,” or “Fundamentals of Taxation” among others. Variation of “Accounting Information Systems,” include “Information Systems,” among others. “Managerial Accounting,” “Managerial Cost” and “Cost Accounting,” and “Decision Making and Control” courses were also

⁴ This study references the updated 2013 standards because the accounting programs in this study were accredited under these standards.

⁵ The sizes of the student bodies were found by a general web search on Wikipedia.

⁶ Hawaii, Maine, Minnesota, New Hampshire, North Dakota, South Dakota, Vermont and Wyoming are the only states that do not have an AACSB–Accounting program located within their borders.

grouped together as “Cost/Managerial” because even though the terms “cost accounting” and “managerial accounting” can be distinguished from each other, there is an overlap between the two based on underlying concepts. This study did not, however, pool the variety of names of intermediate accounting courses under the thought that so many universities use the term intermediate that changing the names of these courses was chosen as a means of signaling that the course had evolved beyond the typical intermediate sequence. Approximately 32% of the programs use a title other than intermediate accounting for their junior level financial accounting course(s).

Because this data was hand collected, significant effort went into verifying the quality of the data collected. Programs with both very short and very long sets of required courses were double checked to ensure accuracy. Those found to be in error were corrected. In addition, the remainder of the database was spot checked for errors. All in all, the database is believed to be representative of the undergraduate curricula at the universities studied.

Findings

Simple descriptive statistics indicate that a range of 5 to 12 major courses are required to graduate as an accounting major in the United States. Some of these courses count for less than 3 credit hours whereas others count for more than 3 credit hours. Most, however, are for 3 credit hours. Some of the courses are from quarter calendar universities whereas others are from semester calendar universities. No attempt was made to capture the credit hour size of each course. Included in these required core accounting courses on some campuses are business law, statistics, spreadsheet skills, multinational finance, management information systems, writing and/or religion which reach beyond the accounting discipline. This finding indicates that there is no standard school of thought in terms of either how many core courses should be required or even the definition of a core course. Therefore, the range in the number of courses required is not deemed to be a concern in terms of the quality of the education of future accountants.

Regardless of the number of upper division accounting courses required, the four-year degree is still being offered despite the calls for five-year programs.

Rooted in History Focusing on Accounting Functional Areas

On average, eight major courses are required. As a means of discovering which 8 courses are most likely, the percentage of the universities requiring each course was tallied. This process indicated that the eight courses included the following: Accounting Information Systems, Auditing, Cost/Managerial, Intermediate I, Intermediate II, Tax, and two other courses as shown in Table 1.

Thus, the typical accounting curriculum is recognizable as similar to the modal curriculum that had been offered in the early eighties (Brown and Balke, 1983). The most striking difference is that today’s typical programs consist of fewer accounting courses than what was previously common⁷. The courses dropped over time are typically accounting theory, a second management accounting, and one or two fewer financial accounting courses. The courses added include two other accounting courses.

To some extent, it is comforting to be able to recognize much of the typical set of accounting courses and to recognize that the important components of the structure of my own 1980’s accounting coursework are still important components of most degrees today. This similarity, however, does not indicate that there have been no changes in the content of the courses because tax laws change almost annually, financial accounting GAAP is regularly updated, accounting information systems have grown technologically more complex to keep up with the

⁷ Perhaps part of the reason there are fewer accounting courses on average required (8 versus 9 or 10) now versus 1983 could be that semester calendars are more popular than they have been in the recent past. As of 2018, 95% of colleges use the semester calendar versus just 87% in 1990 (Bostwick, Fischer and Lang, 2018).

growth in big business and cost/managerial accounting and auditing techniques have also kept up with the evolution to an increasingly sophisticated global business environment.

Innovative Required Courses

In addition to finding similarities across the current accounting curricula, this study also found a significant amount of diversity and innovation. To discover the most unique programs, a huge correlation matrix of programs was formed whereby a unique program was defined as one that was correlated with all other individual accounting programs, each at less than the 80% level. Accordingly, 23 unique programs were identified. For these 23 programs⁸, additional analysis was conducted to read the course descriptions for each unique required course. The unique nature of the programs came in the form of either unique course names for familiar course content or individual unique courses. A single unique course was found on a number of campuses and three unique courses were found at the University of Illinois at Urbana-Champaign.

Table 2 shows the set of traditional and innovative courses to fill out the set of major requirements. The traditional courses include accounting research, advanced accounting, auditing II, cost/managerial II, energy accounting, financial accounting (not using “intermediate” in its name), intermediate III, not-for-profit, special topics, tax II, and theory and history. In terms of new or unique undergraduate course requirements, the evidence of innovation includes requiring undergraduate courses such as capstone, ethics, financial statement analysis, fraud examination, strategic cost management, and using creative course titles.

The individually innovative new required courses were found with the following names: Accounting Analytics at Oregon State University, Accounting Control Systems at University of Illinois at Urbana-Champaign, Accounting Institutions and Regulations at University of Illinois at Urbana-Champaign, Accounting Measurement and Disclosure at University of Illinois at Urbana-Champaign, Data Analytics in Accounting at Northern Illinois University, Information Systems Security at University of Akron, Multiple-Entity Accounting and Tax Planning at Ohio University, and Recording Financial Transactions at Santa Clara University. See Table 3 for the complete course descriptions.

It is now useful to examine each one of these courses individually to share the most apparently unique courses with the readers of this article. “Accounting Analytics,” required at Oregon State University is a course that covers the analysis of data as it pertains to accounting professionals. This hands-on course focuses on analytic techniques for decision making and the examination of “big data” involving accounting information.⁹ Certainly data analytics is one of the biggest new innovations to affect the accounting profession. To require a full course devoted to this topic in the required undergraduate accounting curriculum is indeed innovative and in line with the calls for change to enhance technology education in accounting programs (AICPA Vision Report 1999, Albrecht and Sack 2000).

“Accounting Control Systems,” required at University of Illinois at Urbana-Champaign gives students a broad perspective on accounting and control that considers the attainment of all goals of an organization, including those concerned with financial objectives. This course covers the conceptual foundations of control and the application of practical, analytical tools to evaluate an organization's control environment.¹⁰ This managerial accounting course goes beyond the junior-level managerial course and emphasizes independent thinking, group processes and

⁸ The twenty three programs identified include Arizona State University, Case Western Reserve University, College of William and Mary, Eastern Illinois University, James Madison University, Kansas State University, North Carolina A&T State University, Northern Illinois University, Ohio University, Oregon State University, Rider University, Saint Joseph's University, San Diego State University, Stetson University, Texas Tech University, University of Albany, University of Arkansas, University of Dayton, University of Denver, University of Illinois at Urbana-Champaign, University of Iowa, University of Kansas, and University of Washington.

⁹ <http://catalog.oregonstate.edu/CourseList.aspx?subjectcode=ACTG&level=undergrad&campus=corvallis> .

¹⁰ <http://catalog.illinois.edu/courses-of-instruction/accy/> .

communication. Focusing on thinking, working and communicating skills is in line with the Pathways Commission (2015) and the NASBA proposal (2002).

“Accounting Institutions and Regulations,” also required at University of Illinois at Urbana-Champaign teaches regulation theory and practice as applied to accounting information with applications to reporting, taxation, and regulated business activities.¹¹ This course straddles financial accounting and tax accounting with its focus on the regulation of both thus working on breaking down the silos of the functional accounting topics (as requested by AECC 1989).

“Accounting Measurement and Disclosure,” also required at University of Illinois at Urbana-Champaign provides an introduction to measurement and reporting of organizational performance for strategic and operational purposes with a focus on a variety of financial and non-financial performance measures suitable for both internal and external decision-making.¹² This course straddles financial and managerial accounting focusing on measurement and disclosure which is again crossing functional boundaries as well as focusing on strategic issues (since the reward structure for accountants with this skill is increasing, Albrecht and Sack 2000).

“Data Analytics in Accounting,” required at Northern Illinois University, is a study of the use of accounting data to identify, analyze and solve business problems. This course examines the processes needed to develop, report and analyze accounting data and the business risks related to data collection, storage and use.¹³ This is the second “data analytics” course offered indicating that this may become a trend to look for in the future at the undergraduate level. “Information Systems Security,” required at University of Akron, focuses on information systems risk and security in distributed business environments. This course also focuses on developing policies, practices, and systems for security of computers and data in business.¹⁴ While this course is related to accounting information systems, it is offered in addition to a course in AIS. With the importance of the integrity of computer systems and computer data and the proliferation of distributed environments, this topic is a genuine concern of the integrity of the accounting system and technology.

“Multiple-Entity Accounting and Tax Planning,” required at Ohio University focuses on business combinations and consolidations. The course includes financial accounting reporting, foreign currency transactions and translation, and tax implications of business combinations. As the capstone course for the accounting major, the course will include discussions of the accountant’s role in society.¹⁵ While the fundamental topics in this class are not especially unique, combining tax topics and financial accounting topics together in a single course with its innovative and formative focus is unique and creative.

“Recording Financial Transactions,” required at Santa Clara University provides insight into the basic principles and mechanics behind the preparation of financial statements. This course focuses on the accounting model, accrual versus cash accounting, and the accounting processing cycle.¹⁶ This class is offered after their introductory accounting courses and concurrent with the first intermediate accounting course and is what I would call a bridge course between the accounting that all business majors obtain, and the courses designed strictly for accounting majors. This course is necessary at Santa Clara because their introduction to financial accounting course focuses solely on the use of financial information instead of its preparation.

¹¹ Ibid.

¹² Ibid.

¹³ <http://catalog.niu.edu/content.php?catoid=43&navoid=2041> .

¹⁴ http://www.uakron.edu/academics_majors/class-search/#/course-detail/6200:554:800:4187 .

¹⁵ <http://www.catalogs.ohio.edu/content.php?catoid=53&navoid=4019> .

¹⁶ <https://www.scu.edu/bulletin/undergraduate/chapter-4/Accounting.html> .

Discussion of Innovation

These findings indicate that innovation in the accounting curricula is occurring at some undergraduate accounting programs, but that most accounting programs are still following a fairly traditional functional model overall for their accounting generalist students.

Some of the innovations have spread beyond the innovator programs. These innovations include offering courses in ethics, financial statement analysis, fraud examination and strategic cost management. Some of the innovations have not spread yet. For example, there are two new analytics courses, but the focus of each is unique indicating that the two universities independently created their new courses. There are also two new systems courses, both designed as the second systems class in the major, but here again the focus of each indicates that the two innovators created very unique courses. Perhaps the would-be followers are waiting for evidence that the innovations are truly improvements and perhaps they are waiting for the development of textbooks and/or other instructional tools to assist the teachers to become available.

Some may argue that there has not been enough innovation yet; others will argue that the innovation is not widespread enough; still others will argue that unique accounting course innovation is best left for graduate education after students have formed their foundational knowledge.

Some at colleges across the nation may believe their undergraduate course(s) or program is(are) unique enough to warrant mention here, but the limitation of this study is that it is based on course titles and only those descriptions from those accounting accredited programs deemed to be innovative by way of correlation analysis. Interestingly, all individually unique course titles were found in the identified unique programs as a result of correlation analysis.

As it turns out, both Kansas State and Brigham Young Universities, which had changed the structures of their accounting courses dramatically as a result of AECC grants in the 1990's, have since evolved back to traditional course structures by accounting functional areas. Interestingly, Lawson, et al. (2014) present a framework for accounting education in their report from a joint AAA and IMA Task Force that is somewhat consistent with the specific set of traditional functional coursework requirements found by this study, as depicted in Figure 3 as the accounting competencies. That is, the recommendations of the Task Force can be implemented without changing the titles of the accounting courses required to earn an accounting degree. Their Foundational Competencies (Communication, Quantitative, Analytical Thinking and Problem Solving, Interpersonal and Technological) are, as the Task Force explains, needed by all business school graduates but do not necessarily require the development of new stand-alone courses. Their Broad Management Competencies (Leadership, Ethics & Social Responsibility, Process Management Improvement, Governance, Risk & Compliance and Additional Core Business Competencies) will allow accountants entering the workforce to work with various levels of managements to create value and help them gain the skills to make them more promotable throughout the organization. Again, developing these competencies does not necessarily require the development of new stand-alone accounting courses. What is most important is the integration of these competencies with the foundational competencies permeating this integration (Lawson, et al. (2014)). Thus, innovation in accounting education does not in and of itself require changing accounting course titles away from the functional areas.

For those faculty considering changing their course offerings or evaluating their current course offerings, for the evolving needs of the profession, Albrecht and Sack's (2000) advice is still sound. First, evaluate your environment and resources. Evaluate who your students and employers are. Second, evaluate what types of programs you should have and if you should form strategic alliances with other programs or disciplines. Third, from this determine what your course content should look like and how you should structure your curriculum. Fourth, determine what kinds of delivery methods should be used and how to develop your faculty. Finally, determine how to measure your performance. Within this strategic-planning process, consider the innovation currently occurring in AACSB accredited accounting programs if any of it fits your mission, vision and strategy.

Conclusion

In conclusion, this descriptive research finds that accounting program curricula generally follow a recognizable, or fairly traditional, set of functional courses including two courses in intermediate accounting, one course each in cost/managerial accounting, tax, auditing, accounting information systems and two other courses on average. Other than no longer requiring an accounting theory course and after considering the further migration to the semester calendar from the quarter calendar, this finding is little changed from Brown and Balke (1983).

On the one hand, this finding goes against the calls for change by AAA, AICPA, FEI, IIA, IMA, NASBA major accounting firms and the U.S. Department of Treasury to include additional coursework and shows a clear reticence to change the structure of undergraduate accounting coursework. On the other hand, all of the functional areas of accounting are covered. This way of structuring accounting education is somewhat consistent with the recommendations of Lawson et al. (2014) who identified the accounting competencies as financial accounting, managerial accounting tax, information systems, auditing – which are all covered by the curriculum found – plus one extra competency: professional values, ethics and attitudes, which can be embedded in other curricular or co-curricular activities. These overall findings can be viewed as meeting the “necessary” components of the accounting functions, although not explicitly “sufficient” to satisfy our critics based on focusing strictly on course titles. But there is more to the overall education Universities provide than what can be conveyed in course titles. Perhaps the requirements for the CPA exam are driving University curricula as the Big Eight (1898) warned against. Or, perhaps Beaver (1992, p. 142) was right when he concluded, “We are not going to change accounting education in a fundamental way unless we also alter the incentives.”

In addition to finding a functional structure to most AACSB Accounting programs, the other significant contribution of this paper is in identifying the innovative undergraduate courses that are popping up as required courses including a bridge course between principles and intermediate accounting, accounting control systems, data analytics, ethics, financial statement analysis, fraud examination, information systems security, strategic cost management, and courses that blend areas of accounting such as tax and financial accounting or financial and managerial accounting. Another innovation is renaming intermediate accounting as a financial reporting course perhaps indicating a modification to course content. Highlighting these innovations enables others to follow. Future research should be conducted on these innovations to test their effectiveness with respect to students, future employers and other constituents.

Future research should study the relationship between current course offerings and accounting practices of today. Another avenue for future research is to study how state requirements to sit for the CPA exam may be driving the structure of accounting curricula.

There are at least three major limitations to this study. First, course titles and even descriptions do not fully describe the curricula. Second, this study did not capture the sequencing the courses students take. Third, by excluding non-U.S. universities, the findings are not generalizable world-wide. Despite its limitations, this study offers a description of how U.S. AACSB Accounting programs are responding to the calls for change in accounting education by modifying the curricula consisting of the set of major courses required to earn a generalist undergraduate accounting degree.

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Figure 1

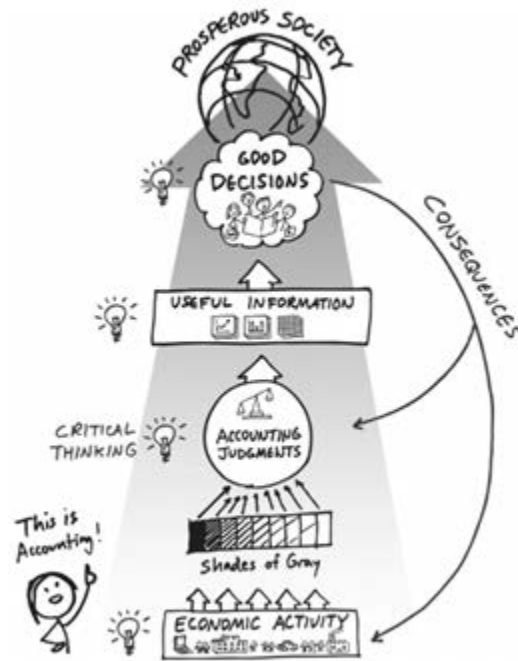


Figure 1: The Pathways Vision Model. (This work is by the Pathways Commission and is licensed under a Creative Commons Attribution-NoDerivs 3.0 unported license).

Figure 2

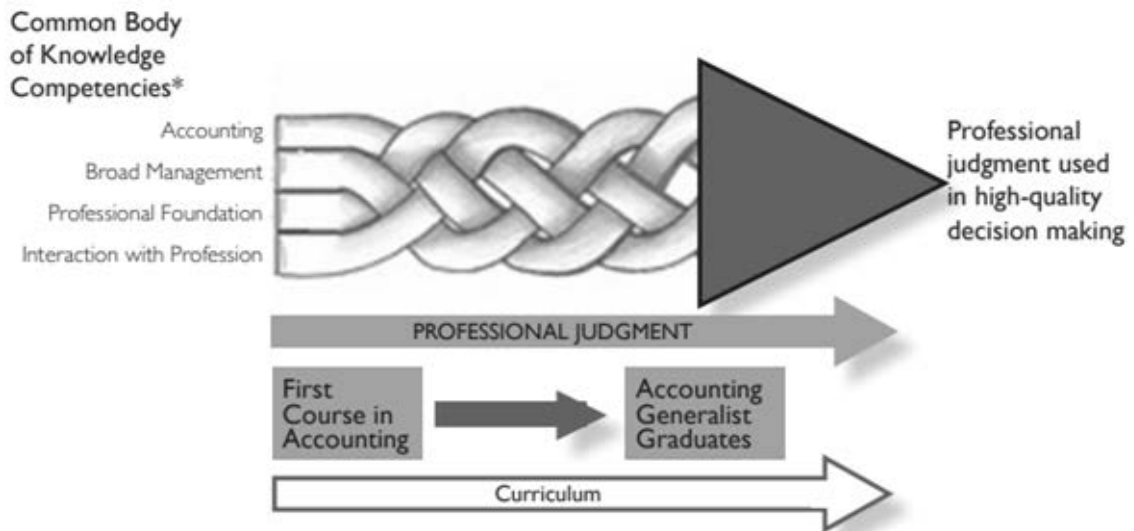


Figure 3: Professional Judgment Learning Process. *Conceptual model is based on an evaluation of multiple accounting organizations' models and adapted from "Focusing Accounting Curricula on Students' Long-Run Careers: Recommendation for an Integrated Competency-Based Framework for Accounting Education (*Issues in Accounting Education*, May 2014), incorporating the AICPA Core Competency Model.

Figure 3

**Competency Integration: A General Framework for Accounting Education
(from Lawson et al. 2014)**

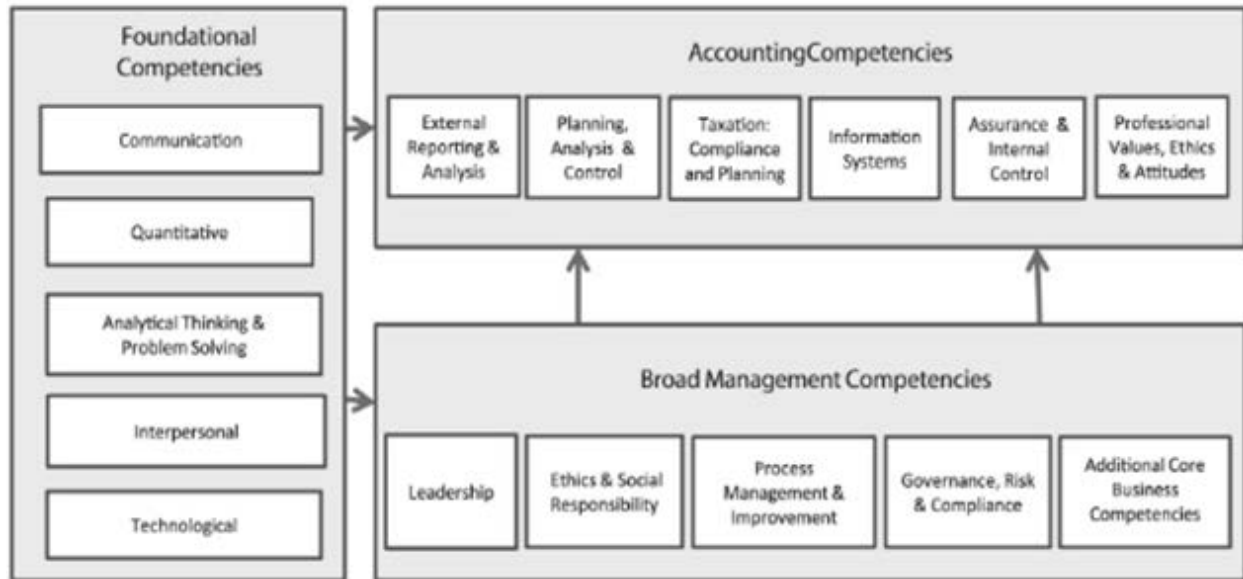


Table 1
Eight Required Core Courses

Course Name	Percentage Requiring
Accounting Information Systems	82%
Auditing	91%
Cost/Managerial	90%
Intermediate I	68%
Intermediate II	65%
Tax	94%
Two other courses	

Table 2
Other Required Courses

<u>Traditional Course Titles</u>	
Accounting Research	2%
Advanced Accounting	30%
Auditing II	2%
Cost/Managerial II	1%
Energy Accounting	<1%
Intermediate III	11%
Not-for-Profit	5%
Special Topics	3%
Tax II	10%
Theory and History	1%
<u>Innovative Course Titles</u>	
Capstone	3%
Ethics	5%
Financial Statement Analysis	3%
Fraud Examination	1%
Strategic Cost Management	3%

Table 3 Individually Innovative New Required Courses

Course Title and University:	Course Description:
Accounting Analytics, Oregon State University	Covers the analysis of data as it pertains to accounting professionals. The focuses include analytic techniques for decision making and the examination of “big data” involving accounting information. Hands-on experiences will develop skills with select software tools used in data analytics for accounting professionals.
Accounting Control Systems, University of Illinois at Urbana-Champaign	Broad perspective on accounting and control that considers attainment of all goals of an organization, including those concerned with financial objectives. Topics include the conceptual foundations of control and application of practical, analytical tools to the evaluation of an organization's control environment. Cases, class discussion and field research projects emphasize independent thinking, group processes, and communication.
Accounting Institutions and Regulations, University of Illinois at Urbana-Champaign	Regulation theory and practice as applied to accounting information. A general framework for regulation of accounting procedures is developed. This framework is applied to reporting, taxation, and regulated business activities. Projects facilitate self-discovery of knowledge and the development of professional attitudes and skills with emphasis on professional research.
Accounting Measurement and Disclosure, University of Illinois at Urbana-Champaign	Introduction to measurement and reporting of organizational performance for strategic and operational purposes with a focus on a variety of financial and non-financial performance measures suitable for both internal and external decision-making. Projects, together with a series of practical workshops, facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes.
Data Analytics in Accounting, Northern Illinois University	Study of the use of accounting data to identify, analyze and solve business problems. Examines the processes needed to develop, report and analyze accounting data and the business risks related to data collection, storage and use.
Information Systems Security, University of Akron	Focus on information systems risk and security in distributed business environments; develop policies, practices, and systems for security of computers and data in business. Includes a research component.
Multiple-Entity Accounting and Tax Planning, Ohio University	Focuses on business combinations and consolidations. It will include financial accounting reporting, foreign currency transactions and translation, and tax implications of business combinations. As the capstone course for the accounting major, we will include discussions of the accountant’s role in society. In particular, the accountant’s role in ethical conduct, civility, leadership and sustainability will be an integral part of this course. The course is designed to motivate students for the accounting profession, promote technical competency, develop life-long research skills, advance critical thinking, and foster the development of communication skills. The primary references for this class are the Accounting Standards Codification and handouts posted on the class forum.
Recording Financial Transactions, Santa Clara University	Insight into the basic principles and mechanics behind the preparation of financial statements. Focus is on the accounting model, accrual versus cash accounting, and the accounting processing cycle.