

## CPAs Explore a Pre-Certification Pathway to Excellence

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### Abstract

What pre-certification preparation is needed to survive and thrive as a CPA in the coming decade? Based on data collected with the help of the California Society of CPAs, this study details the educational views of 30 experienced practitioners collected during a day-long forum. This data is augmented by two focus group sessions and a survey of 85 young emerging professionals. These findings are viewed through the lens of evolving international accounting education standards, shifting employment prospects, and social science research on developing professional expertise. The results reaffirm that communication skills and analytical thinking are more critical than technical accounting knowledge in building a foundation for professional success. A balanced academic program is highly preferred and there is receptivity to alternative faculty models and a questioning of the efficacy of AACSB accreditation in meeting accounting program goals. The practitioners polled prefer quality over quantity, favoring increased pre-certification units, CPA exam rigor, and the lengthening of practice experience requirements. These results corroborate the merit of current international accounting education standards and recent pre-certification changes in California which mandates 150 hours of education.

**Keywords:** Accounting curriculum, CPA pathway, international accounting education

### Introduction

As a prelude to the present American Accounting Association (AAA) and American Institute of Certified Public Accountants (AICPA) sponsored Pathway Commission study of the professions' evolving requirements, the California Society of CPAs (Cal CPA) sponsored a practitioner and educator forum entitled "Pathway to Excellence" to better understand the state of undergraduate accounting education in California and envision a way forward. This paper details the data collected and insights shared from a forum of experienced CPAs augmented by a survey of young emerging professionals (YEPs) and two subsequent focus group discussions. This practitioner feedback is considered in light of the current regulatory environment, the changing nature of accounting work, and research on how to develop professional expertise.

The first section reviews relevant literature: the crisis motivating this study, antecedent organizational efforts, a profile of international accounting certification standards, the workforce trends likely to shape the future of U.S. accounting employment, and a sketch of factors identified with the education of successful professionals. In the second section, the practitioner and educator forum sponsored by Cal CPA and the follow-up focus groups and YEP survey is detailed. Section three explores practitioner and YEP reaction to key items of interest. The concluding sections discuss the implications, limitations, and suggestions for building accounting program strength.

### Background Literature

The data in this study was collected in the wake of the September 2008 financial crisis. As detailed by the Financial Crisis Inquiry Commission (FCIC 2011), the destruction of millions of U.S. jobs and trillions in household wealth will likely be felt for a generation. Furthermore, even after the passage of almost three years, the financial system

remains fundamentally unaltered from the eve of the crisis (FCIC 2011, xxvii). Since CPAs play a key role in the "... transparency and trust that enables our financial markets to function efficiently" (U.S. Treasury 2008, II:1), the quality of the accounting profession is a societal concern extending beyond the stakeholders directly involved. This study focuses on the responses of seasoned CPA practitioners to gain insight on how the pre-certification educational process might be strengthened to increase the effectiveness of the U.S. public accounting profession.

The immediate antecedent of the present effort was a forum sponsored by the New York State Society of CPAs (NYSSCPA 2008a). This forum featured two panels of experienced accounting professionals who shared their views on the opportunities presented by the New York 2009 transition to a 150-credit-hour education requirement for CPAs and the ways in which academics and practitioners can work more effectively to improve the quality of students (NYSSCPA 2008b). This exchange resulted in a surprising consensus regarding educational deficiencies involving communication and problem-solving skills as well as expression of regional concerns regarding the mobility of individuals credentialed in foreign countries. One result of the forum conversations was a white paper detailing six essential pre-certification educational attributes for enhancing the quality of the accounting profession. These six attributes are the ability to think critically, a keen analytical sense, effective communication skills, foundational technical knowledge, research skills, and high ethical standards (NYSSCPA 2008c).

Following the NYSSCPA effort, the U.S. Treasury Department Advisory Committee on the Auditing Profession (2008) held hearings on the role of CPAs in the Wall Street banking crisis. This testimony resulted in U.S. Treasury Secretary Henry Paulson appointing a committee ("Treasury Committee") to make recommendations for improving the effectiveness of the public accounting profession. This committee included industry and accounting firm leaders as well as prominent members of accounting and governmental groups, including Barry Melancon as President of the AICPA, Gary John Previts as President of the AAA, Lynn Turner representing the Securities and Exchange Commission and Paul Volcker representing the Federal Reserve System. The Treasury Committee began by recognizing that improving human capital within the auditing profession is essential to the viability of global capital markets. As the largest multinational accounting firms move towards an integrated, "single-visioned" global network rather than a mere grouping of autonomous firms (U.S. Treasury 2008, V:15), there is a need to fundamentally re-think how accounting expertise is developed. The Treasury Committee called for a major review of current educational processes and structures. Note was made of changing environmental conditions, including substantial portions of U.S. public company audits occurring outside of the United States, the severe shortage of accounting doctoral faculty, the increasing complexity of financial reporting and auditing, and recent technological innovation. Specifically, the Treasury Committee stressed the urgency of implementing "market-driven, dynamic curricula" and suggested using CPA exam changes as a catalyst for curriculum reform (Recommendation 1). On the talent dimension, the Treasury Committee called for enriching the "pool of human capital in the profession" (Recommendation 2) and ensuring a "sufficiently robust supply of qualified accounting faculty" (Recommendation 3). Noting the lack of information for policy-making, the Treasury Committee called for developing consistent higher education program data (Recommendation 4) and forming a "commission to provide a timely study of the possible future structure of higher education for the accounting profession" (Recommendation 5). The subsequent 2010 Pathways Commission initiative by the AICPA and AAA (Pathways 2011) is a direct response to Recommendation 5.

This urgent call to develop more effective accounting professionals comes at a time when there is a severe shortage of accounting faculty (Plumlee et al. 2006; Leslie 2008) and the efficacy of American higher education is under scrutiny (Bok 2006). Review of undergraduate achievement shows a nation of underachievers who are largely unchallenged by faculty (Crumbley and Smith 2009). Although business constitutes the largest academic bachelor's degree major in the country (McKinsey Global Institute 2011, 6), a majority of these students demonstrate no significant improvement in critical thinking, complex reasoning or writing in their undergraduate education (Arum and Roksa 2011).

Given an increasingly multinational audit context and the adoption of International Financial Reporting Standards (IFRS) in the United States, a world view of the human talent pool and the structures for building competency is relevant. There are eight standards established by the International Accounting Education Standards Board (IAESB).

Internationally, remedial education is out. International Education Standard (IES) 1 calls for students to have post-secondary level competencies before undertaking the study of accounting. The next three international education standards address the requisite content after college-ready students begin their post-secondary studies. IES 2 prescribes a minimum of two years of full-time (or the part-time equivalent) study in three main areas: accounting and finance, organizational and business knowledge, and information technology. Specifically, the discussion of this standard stresses that a surface approach to studying a range of areas is not a substitute for two years of core profession-related studies (IFAC 2009, 52). This, however, does not diminish the need to also have a broad knowledge foundation. IES 3 emphasizes this need for a strong base. Explicitly noting the rising societal expectations, IES 3 recognizes the essential role of a good general education in developing, "...the appropriate mix of skills (intellectual, technical, personal, interpersonal and organizational) to function as professional accountants...in an increasingly complex and demanding environment" (IFAC 2009, 59). Underscoring the personal and interpersonal, IES 4 describes the importance of students' mastering professional values, ethics and attitudes. As stated in the discussion of this standard, "Proper ethical behavior is as important as technical competence" (IFAC 2009, 69).

IES 5 addresses the experience needed following the future accounting professional's academic training. IES 5 states that the period of practical experience required to rise to a credible level for presentation to the public as a professional accountant must include a minimum of three years of practical experience. One year of graduate level professional education "with a strong element of practical accounting application" may substitute for a year of practical experience (IFAC 2009, 73). Thus, the first four international education standards are consistent with a competent high school graduate devoting the first few years of intellectual and skill development to general education, followed by two years of accounting and general business studies (including the study of information technology). The fifth standard mandates that the candidate work for three years as a trainee or combine a year of graduate accounting education with two years of trainee experience.

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Only after this period of education and training, as detailed in IES 1 – 5, would a candidate be allowed to sit for a comprehensive, broad-based CPA exam (described in IES 6). The minimum competence attained by meeting IES 1–6 then sets the stage for the remaining two IES standards relating to continuing professional development (IES 7) and becoming an audit professional (IES 8). IES 8 reiterates the importance of three years of work experience, with at least two years of financial audit work "under the guidance of an engagement partner" (IFAC 2009, 107).

As he accepted the AICPA chair position, Robert Harris spoke of an imminent and massive sea change, noting that, "...thinking globally is no longer a luxury. It is a necessity. Today, we all live in the same global neighborhood." (Harris 2009). This sea change appears ominous for all but the most prepared. The U.S. Bureau of Labor Statistics Occupational Handbook projections for the accounting profession for 2008 – 2018 anticipates that software improvements and off-shoring will limit wage growth and employment opportunities related to routine accounting work, but projects strong growth for the highly skilled and credentialed segment of the accounting profession (BLS 2010). This government view is bolstered by a recent comprehensive private sector analysis showing an accelerating trend of white-collar job polarization beginning in the early 1990s (Autor 2010, 4). A good example of this trend is legal employment. While lawyers command premium wages, jobs for paralegals and legal assistants have grown 2 ½ times faster than jobs for attorneys over the past decade (McKinsey 2011, p.47).

Elimination of professional mid-level jobs is caused by a relentless drive to increase labor productivity encompassing three modes of change (McKinsey 2011, 46). These forces are: disaggregation (such as a physician using less skilled assistants for routine tasks), virtualization (using remote employees), and flexible supply (using part-time, temporary, or contract workers). Classifying occupations as transactional (with routine exchanges) or interactive (relying on complex communication and independent problem solving), accounting work involving a bachelor's degree or higher is still predominately transactional (McKinsey 2011, 66). The transactional nature, combined with the drive for labor productivity, makes accounting work vulnerable to restructuring. Future U.S. job growth is projected to center on interactive work. As one popular author bluntly states, "That means that your cousin the CPA, if he's doing mostly routine work, faces competition not just from five-hundred-dollar-a-month accountants in Manila, but from tax preparation programs anyone can download for thirty dollars" (Pink 2009, 28).

Given the trend in technological innovation, what type of human skills will be valued? Levy (2010), consistent with the McKinsey (2011) “interactive” classification, describes these skills as involving complex communication and expert thinking. Complex communication, which takes ambiguous information and gives it meaning by imposing a context, is a highly valuable skill precisely because technology makes information so abundant and circumstances so fluid (Levy 2010, 6). Expert thinking stands out because there is no obvious solution path. Like a physician diagnosing a patient, it involves examining a messy set of real-world facts and applying case-based reasoning to arrive at a solution. Both complex communication and expert thinking entail interactive work that “must be preceded by a strong foundation in literacy, numeracy and reading”... and ...“require extensive practice and teacher-student interaction” (Levy 2010, 8). As accounting standards go global and those with the greatest skill and knowledge are recruited, concern mounts whether U.S. processes and structures are adequate for the CPA license to maintain its status and market share (Campbell and Howard 2008).

How are experts developed? An impressive amount of social science research has accumulated which identifies three essential elements necessary to build mastery (Ericsson et al. 2006). To become a master, it takes a dedicated work ethic and a minimum of 10,000 hours (and usually about a decade) of deliberate, intensive practice. This practice must be coupled with skilled coaching at each stage of development (Ericsson et al., 2007). The evidence shows that experts are made, not born (Coyle 2009). Thus, with the right work ethic and mindset (Dweck 2006), plus well-informed teachers and experience (Clark 2008; Ericsson 2009) most individuals can excel in the area to which they have devoted their attention. On a full-time basis, 10,000 hours translates into about five years of concentrated effort in the chosen field.

### **Methodology: Soliciting CPA Feedback**

This is an exploratory study of a qualitative nature, with the aim of better understanding the steps needed to achieve excellence when educating students for the public accounting profession. Thirty invited CPA practitioners (partners and senior managers supervising recent graduates and responsible for client engagements) recorded their reactions using electronic “clicker” response devices during a November 2008 day-long forum. The big screen instant feedback of results after each polling question generated lively discussion and a thoughtful exchange of insights between panelists and audience participants. These seasoned practitioner responses, together with a 2009 web survey and follow-up focus group sessions in May 2009 with YEPs and October 2009 with experienced CPAs, provide the basis for this paper. In addition to prepared remarks, the panelists responded to questions from this CPA audience (60 percent of whom are affiliated with regional and 40 percent with national firms). To stimulate the dialog between academics and those who hire accounting program graduates, a mix of academics drawn from both private and public university accounting programs participated in the day-long conversations (see Appendix A for details). The clicker responses of academics were also recorded, but analysis of this segment of the audience is beyond the scope of this paper.

The objective of the forum was to access the perceived knowledge and skills of graduating students and envision changes to enhance prospects for professional success. The practicing CPAs were invited to the forum because of their work with undergraduate students entering their firms. By isolating issues and measuring the reaction of experts in the field, we benefit from their years of experience (Gladwell 2005; Gigerenzer et al. 1999; Ambady and Rosenthal 1993, 431). To further explore perspectives, in the results section following, these practitioner forum responses are reviewed and compared to the survey responses of YEPs. This contrast allows us to check agreement on key items between those overseeing the work with the entry-level employees closest to experiencing the current state of accounting education. Since the bias in self-reported assessment is toward an inflated perception of one’s own performance (Arum and Roksa 2011, 27), areas of weakness observed by seasoned practitioners and confirmed by YEPs are especially noteworthy.

As detailed in Appendix A, forum panelist included a representative with a leadership role from the AICPA (academic and career development director), AACSB (board member), California Board of Accountancy (CBA board member), National Association of State Board of Accountancy (NASBA education committee member), as

well as partners from national and regional CPA firms. Prior to the forum, conference calls were made between forum organizers, panel moderators and panel participants to design polling questions that would capture issues currently salient to the practice community (see Appendix A). The forum organizers and panelists drafted initial questions based on the 2008 New York Society of CPAs (2008a&b&c) forum, the AICPA core competency framework (Gavin 2005; AICPA 2009). In an effort to rethink necessary competencies and re-envision options, panelists were instructed during the pre-forum conference calls to refine the questions based on their experiences and understanding of the profession. The question construction process stimulated rich discussion with queries added, items deleted, and question wording tweaked to better cover the issues.

Since the practitioner audience at the forum consisted of partners and senior managers involved with hiring and supervising recent college graduates, a question arose when analyzing the forum results as to how the views of recent graduates might differ on key points. A YEP survey was designed based on selected questions from the forum. These questions were generally in a yes/no format, rather than a nine point scale, in order to capture some of the essence of a day-long forum in a short internet-based survey. Since Cal CPA sponsors a YEP conference annually, a web survey was conducted during spring 2009 of the latest conference attendees (who are generally accounting program graduates between the ages of 22 to 35 and within the first five years of their career in public accounting). The survey garnered a 20 percent response rate (see Appendix B).

To help interpret the data and probe the implications of the combined results, two focus groups were conducted. After the compilation of the YEP survey responses, 12 California YEPs identified as especially high-performing employees were invited by Cal CPA to a focus group discussion in May 2009. Lastly, to review the data collected over the past year and the California changes to 150 units, a focus group session with experienced CPAs and academics was conducted in October 2009. These focused conversations supported the reasonableness of the numerical responses recorded during the forum and the results of the YEP survey. In addition, the focus group sessions help draw out the study implications and feasible next-steps towards excellence.

## Results

A wealth of data was collected using the electronic response devices during the forum. The web-based YEP survey added more data. This data could be analyzed in many ways, from many different perspectives. The main purpose of the focus groups was to present the data and gauge sentiment regarding the issues of interest. A consensus emerged among the forum organizers, panel moderators and focus group participants that the practitioner responses during the forum panel sessions and the points of strong agreement or disagreement evident in the YEP survey responses are of primary interest in analyzing the current state of accounting education in California and charting a future course. What follows are five major topics: the challenges facing the public accounting profession over the next decade, essential knowledge and skill coverage in accounting courses, the importance of various elective course options, identifying which educational program attributes are critical when hiring accounting students, and desired regulatory change.

In order to introduce the response device technology, outline the topics, and capture initial sentiment without the bias of discussion, overview questions were asked and the ratings recorded (see Appendix A). These introductory questions provide a glimpse of practitioner opinions prior to the panel discussions and show surprising fidelity to the sentiment captured in the ratings later in the day after the detailed exchanges of views. Overall, despite the enormous curriculum redesign efforts within accounting academia (Flaherty and Diamond 1996) and despite technological advances in the classroom (Ahadiat 2008), the CPAs polled perceive the general quality of graduates entering public accounting as comparable to previous generations with a mean rating of 5.5 on a nine point scale (Appendix A, question 2). The strongest quality of recent graduates, however, does reflect recent technological advances, as the overwhelming “greatest strength” choice was information technology skills (Appendix A, question 3). In contrast, out of the nine choices given, three choices dominated the greatest weakness selection, work ethic, communication skills and analytical thinking (Appendix A, question 4). Looking at these same items from a YEP point of view (Appendix B, question 13), the majority feel prepared in all nine areas. This could reflect the superior skills of those in the YEP group or, alternately, the general level of personal confidence associated with the millennial generation (Levine 2005; Twenge 2006; Fogarty 2008).

The remaining four warm-up questions suggest a clear pattern of quality and currency concerns. Over 40 percent of the practitioners choose “keeping current” as the single greatest challenge a young CPA professional will face over the next decade out of nine potential responses (Appendix A, question 5). For the greatest challenge facing the profession, practitioners’ number one choice was maintaining a sufficient supply of qualified accounting academics (Appendix A, question 6). Interestingly, they selected the supply challenge of qualified academics by a wide margin over the challenge of a sufficient supply of entering CPAs. In terms of desired regulatory change, faculty concerns again top the list, with relaxing AACSB faculty mix ratios to accommodate practitioners dominating the response choices (Appendix A, question 7). Consistent with this response, from a list of nine options, almost one-half of the practitioners’ selected the availability of qualified replacement faculty as the major challenge facing accounting academics over the next decade (Appendix A, question 8). The majority of YEPs, in contrast, appear unaware of the impending faculty shortage (Appendix B, question 14).

Responses of the first practitioner panel amplify the challenge theme and are shown in Table 1. The top two challenges deal with generational and rule changes: managing the millennial generation professional staff (7.4 mean on the nine-point scale), and complying with changing regulations (7.3 mean). Interestingly, those items with the highest mean ratings were also among the areas of greatest agreement (as indicated by lower standard deviations). These two top challenges are also concerns shared by YEP respondents (Appendix B, question 15). In contrast, less-than-average concern and more variability of opinion were expressed by experienced practitioners on three items: an adequate quantity of entering CPAs (4.9), recruiting and retaining an ethnically diverse professional staff (4.4), and maintaining an ethical client base (4.3). In terms of quality versus quantity concerns, it is notable that this group of practitioners rated the challenge of recruiting high-quality entry level professionals (at 6.8) substantially higher than the challenge of an adequate quantity of entering CPAs (a 4.9 rating). The majority of YEPs’ concur that the supply of CPAs is unlikely to be a problem, rating this as the least pressing issue facing the profession over the next decade (Appendix B, question 15).

Identifying the skills most important to develop is a constant dilemma faced by accounting instructors. The second set of polling questions during the practitioner panel attempted to gather CPA feedback regarding this ongoing academic concern. During the pre-panel warm up questions, deficient “written communication skills” and “analytical thinking” trailed only “work ethic” as the greatest weakness of recent graduates. This attention on recruits’ communication ability and analytical thinking is further reflected in the session 2 polling results (as shown in Table 2) with “written communication” and “analytical thinking” commanding the top spots for focus in the classroom, followed by “technical accounting knowledge” and “high ethical standards”. In response to the question, “When teaching accounting courses, how much focus should be placed on developing the following attributes?”, it is worth noting that seven of the 13 items scored above 7.0 on a nine-point scale: written communication skills (8.2), analytical thinking (8.0), technical accounting knowledge (7.8), high ethical standards (7.6), quantitative problem solving skills (7.5), oral communication skills (7.3), and research skills (7.1). Four items received mid-range ratings: general business knowledge (6.6), ability to work in teams (6.0), information technology skills (5.8), and work ethic (5.3). Only two items registered low ratings: marketing skills (3.2) and global cultural awareness (2.6).

To gain a better sense of how the desired skills might be packaged into the last two years of an undergraduate degree, practitioners were asked to indicate their preference between three common California university models. In choosing between these three academic program profiles consisting of 22 undergraduate classes, practitioners’ overwhelmingly selected the more balanced program represented by University 3 in Table 3. Only seven percent chose the University 1 model, that is distinguished by a lack of business courses. More surprisingly, only 13 percent picked University 2. This model has the most accounting and business courses. However, the accounting and business concentration of University 2 diminishes coverage in economics, math/statistics, and writing/communications classes. The more equally distributed program of subject coverage in University 3 was preferred by 80 percent of the experienced CPAs. Although somewhat less pronounced, the dominance of University 3 and an identical ranking of the university models emerged in the YEP survey (Appendix B, question 18).

Following the selection of the academic program profile, practitioners were asked how much importance they attached to different areas of undergraduate education when making hiring decisions (see Table 4). Most importance

was accorded the academic rigor of the accounting program (7.9 mean rating) and accounting coursework (7.6), followed by the rigor associated with the university (7.2). The perceived rigor of the university was more important than the general business coursework (6.6), that was considered a more salient feature than the general education coursework (5.4). Thus, although the results in Table 3 suggest that practitioners' value a balanced model of academic preparation, it appears that there is a definite hierarchy of emphasis when scrutinizing the total academic profile of potential candidates.

When students ask for guidance, what elective courses do CPAs suggest? From a list of candidate courses refined by the panelists, CPAs were asked to rate the importance of nine potential elective courses (see Table 5). Again, we see a strong consensus regarding the value of business communication. Continuing the theme, business communication was rated most highly (7.6), followed by ethics (7.3), finance (7.0), and business law (6.9). Three potential electives received average ratings: statistics (5.9), international accounting (5.8), and information systems (5.8). Computer science (4.4) and marketing (3.5) scored the lowest ratings. It is striking that when YEPs were asked whether they would recommend taking an extra elective course from the same list of subject areas, the most affirmative responses were recorded for business communication (93%), followed by finance (81%) and business law (80%). Marketing and computer science were also the least recommended courses, with a majority of YEPs not favoring an extra elective in these areas (Appendix B, question 17).

The polling results shown in Table 6 reveal that the two regulatory changes deemed most desirable are adding rigor to the CPA exam and increasing the practice experience requirement (both received a 6.6 mean rating). Perhaps not surprisingly, the majority of YEPs do not advocate changing the rigor of the CPA exam (Appendix B, question 16). However, they are very affirmative (86%) on the potential of changing practice experience requirements as a way of improving the profession, even to the extent of moderately favoring the three years of practice experience (or two years of experience and a year of graduate accounting studies) entailed in the current international certification standards (Appendix B, questions 16 and 12).

The instructions in the regulatory set of polling questions during the forum specifically anchored a response of five as "no change from the current level" and a lower number on the nine-point scale as indicating a preference for decreasing regulatory requirements. For the majority of items, experienced practitioners appear relatively satisfied with the current rules. As shown in Table 6, relaxing constraints on global hiring (with a 3.9 mean rating) is the one area where these practitioners tend to favor less regulation. Understandably, 71 percent of the YEPs oppose changing such constraints as a way of improving the profession (Appendix B, question 16).

In addition to the pre-designed regulatory polling questions, two additional issues arose during the Session 3 discussion (Appendix A, Session 3, questions 2 – 4). To gather more information on the first issue, the perceived value of AACSB accreditation, the audience was asked to rate on a nine-point scale (with nine indicating high importance), "How important is it for an undergraduate accounting program to be AACSB accredited?" The response showed a mean score of 5.0 with a standard deviation of 2.5. During the YEP survey, 76 percent answered "Yes," it is important for an undergraduate accounting program to be AACSB accredited (Appendix B, question 7). Although the scales aren't comparable, it does appear from the focus group discussions that YEPs are less inclined to question the value of AACSB accreditation, while seasoned practitioners' pragmatically weigh cost versus benefit and are only mildly supportive.

The other issue addressed the value of a 150-hour pre-certification educational pathway. The following query was posed on a nine-point scale, "Will requiring 150 hours help meet the need for broader skills such as written communication, etc.?" The results showed a practitioner mean score of 5.3 with a standard deviation of 2.6. In view of the apparent lack of confidence in the educational value of a 150-hour mandate, the audience was then asked a third ("Yes" or "No") question: "Should California make the 150 hour pathway the only pathway to licensure?" Eighty-eight percent of the practitioners polled responded "Yes" to mandating the 150 hour pathway. YEPs also display some ambivalence regarding the 150-hour pathway in that 65 percent favor this pathway, but only 62 percent of these emerging professionals indicate the 150-hour change is likely to help meet the profession's need for broader skills (Appendix B, questions 9 and 8).

Skepticism regarding the educational value of 150 hours may be linked to the way this requirement is presently satisfied in California. Of the YEPs surveyed, 79 percent attained their 150 hours through excess units accumulated during their undergraduate education or taking extra (and often completely unrelated) online or community college classes (Appendix B, question 11). Only 21 percent of the YEPs pursued a graduate degree of any kind. Although the 150-hour mandate was passed in 2009 by the California legislature, the implementation guidelines (taking effect in 2014) allow considerable latitude regarding the additional 30 units, with only three units of upper-division accounting and three units of accounting ethics mandated (CBA 2011). Thus, the utility of the 30 additional hours of education appears largely dependent on the guidance received and the motivation of individual students.

## Implications

The forum discussion and related survey findings center on four major themes. These themes impact the size of accounting programs, the content of accounting programs, the staffing of accounting programs, and the pre-certification structure adopted for future CPAs. First, the CPA's views captured in this study appear fully aligned with the views expressed in the New York CPA white paper and the emerging social science research on developing the expertise needed to thrive in a changing global economy. Like the Treasury Committee and the New York CPAs, the CPAs polled were concerned with the quality of those entering the profession and stress that complex communication and expert thinking skills are essential for interacting with clients and managing work flow in the 21<sup>st</sup> century. A draft paper issued by the NASBA asserts that, "The number of CPA candidates is one of the most important concerns of the profession today" (NASBA 2008, 16), but there has been an ample and increasing supply of accounting graduates in recent years (Nelson et al. 2008; Cohn 2009). This study suggests that quality, not quantity, needs to be the focus.

The second theme is particularly relevant to accounting faculty designing course content. Within accounting classes, seasoned CPAs agree "written communication skills" and "analytical thinking" merit greater focus than "technical accounting knowledge." Consistent with this emphasis, for both CPAs and YEPs, "business communication" scored number one in importance from a list of nine possible elective courses. Furthermore, a stunning 80 percent of the CPAs (and a majority of YEPs) preferred the university model with the fewest accounting classes, but a more balanced emphasis on economics, math/statistics, and writing/communication as the best pre-certification education.

The focus of this second theme on communication and analytical abilities fits with the trend of disaggregating accounting work into tasks that can be automated or performed remotely by lower-cost talent. With the present push towards productivity and flexibility, it will take top-quality communication and thinking skills to span cultures and assign tasks dynamically across a network of virtually connected and specialized workers. This vision of the future leaves the accounting "interaction" jobs (involving direct client contact and independent problem solving) concentrated among fewer individuals who possess greater expertise.

The third major theme echoes the Treasury Committee concern that a "sufficiently robust supply of qualified accounting faculty" is needed (U.S. Treasury 2008 VI:18). As recorded in Table 4, the level of academic rigor associated with an accounting program is of primary importance in the hiring decision. The number of attributes scoring a high-focus rating (shown in Table 2) suggests a Herculean task for accounting academics. Seven of the 13 attributes developed by the practitioner panel garnered a polling mean exceeding seven on the nine-point scale. Experienced CPAs clearly see the need for a variety of quality mentors along the path. CPAs rated a "sufficient supply of qualified accounting academics" as the greatest challenge facing the public accounting profession in California over the next decade and "relax AACSB faculty mix ratios to accommodate practitioners" as the regulatory change most desired to improve entry-level quality. YEPs also appear to appreciate the link between quality mentoring and success. They rated "engagement of practice professionals in the classroom" as having the most potential to increase the quality of accounting undergraduate education out of a list of ten opportunities between academia and practice. Both in the ratings and focus group discussions, practitioners' recognize that a carefully crafted curriculum taught by competent faculty is essential to a high quality accounting education and professional success.

The fourth theme evident in the ratings and discussions is that practicing CPAs, as the Treasury Committee urged, are willing to change processes and structures to fit a changing environment. According to the McKinsey (2011) view of America's labor future, leaders need to be creative and willing to consider solutions they have not tried before. The perceived moderate value of AACSB accreditation evident in the polling results (Table 6 and Appendix B, question 7) suggests receptiveness to alternative academic models. The willingness to increase the rigor of the CPA exam (evident in Table 6) suggests that the CPA exam could be the lever that the Treasury Committee (U.S. Treasury 2008 VI:4) envisions to implement needed curriculum improvements. In addition, respondents appear to explicitly recognize the time dimension of developing expertise by a willingness to increase both academic hours and practice experience requirements. When asked whether California should drop the 120-hour path and make the 150-hour pathway the only route to licensure, a resounding 88 percent of the experienced CPAs and 65 percent of the YEPs responded affirmatively. Likewise, both seasoned CPAs and YEPs favored lengthening work experience requirements.

### Limitations

Two timing considerations may limit the results. First, the forum discussion after the regulatory panel polling and the focus group feedback suggests that most California practitioners are not familiar with the details of the international accounting education standards. Once they become aware that these standards are significantly more rigorous than the California rules, there seems to be a shift in attitude toward raising certification standards. This shift is not reflected in the forum data.

The second timing concern relates to the observations noted in a recent *Journal of Accounting Research* article (Ball 2009). It appears that standards and regulations shaping the accounting profession are inter-dependent with the frequency and magnitude of accounting scandals (Ball 2009). With publicized failures on both the local and global level, the frequency and magnitude of accounting scandals appear to be rising as economic volatility persists (Dugan and Crawford 2009; Timmons and Wessener 2009). The resulting professional ramifications in terms of higher standards and an emphasis on ethics education may not be fully captured in the recorded data.

The forum audience was a knowledgeable group of experienced CPAs, invited from across California because of their expertise. However, this is not a random sample as the Newport Beach location biased participation towards Southern California and the likelihood of an invitation was increased by Cal CPA affiliation. Likewise, the YEP survey respondents and the focus group participants are associated with Cal CPA. So, although the sentiments expressed highly echo findings over the past two decades in the accounting education literature and the views of CPAs expressed during the New York forum (NYSSCPA 2008a&b), the results may not capture the views of unaffiliated CPAs and those from states with significantly different educational requirements. In addition, since the focus of this study is public accounting, the results may not transfer to other accounting career paths.

### Conclusion

The California forum in this study illustrates a mechanism for systematically enriching the Pathway Commission conversation by using the electronic response device technology to gather and measure the feedback of CPAs in a way that engages the respondents. The views shared by these CPA practice partners and managers involved in the hiring and supervision of recent accounting program graduates reveals remarkable alignment with the conceptual literature on developing professional expertise and the projected employment trends. The Treasury Committee call for improving CPA effectiveness, the decline in faculty resources, and the willingness of practitioners to re-examine processes and structures, make this a time of both turbulence and opportunity. By viewing accounting education through a practitioner lens, this study hopes to contribute to the national conversation by both identifying academic skills central to CPA professional success and exploring receptivity to alternative regulatory changes.

Peter Drucker reportedly warned, "The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday's logic" (McKinsey 2011, 55). What is the conceptual framework for current accounting education standards? Recently, New York and California joined the majority of other states in mandating 150 credit hours and one year of practice experience as pre-certification requirements. However, this amounts to only about 70 percent of the 10,000-hour threshold of concentrated, deliberate study and practice of accounting needed to develop professional competency suggested in the social science research literature. An over-arching challenge of the Pathways Commission will be to contribute to the advancement of the profession by articulating curriculum and

practice experience standards that reflect the research literature on developing expertise in conjunction with the evolving workforce needs of the global economy.

Although processes and structures can be improved on a national level, the bottom line implementation occurs at the accounting program level. It takes experts to make experts. This study reveals that high importance is attached to accounting program rigor when evaluating graduates for employment. Accounting faculty and local practitioners can augment student prospects by examining program features to implement the “market-driven, dynamic curricula” envisioned by the Treasury Commission. The lack of confidence respondents expressed in the benefits of moving to 150 academic hours is supported by research which suggests that students generally lack the maturity or insight to select courses most strongly associated with long-term, professional achievement (Crumbley and Smith 2009; Milliron 2008) and that state boards of accountancy only broadly articulate minimum requirements (NASBA 2008). Thus, the program guidance to navigate an increasingly competitive and complex profession lies with school faculty and dedicated practitioners focused on student success.

## Appendix A

### Forum Agenda

#### Educator Practitioner Forum—Pathway to Excellence November 14, 2008, 8:30a.m.–4:00 p.m.

Opening remarks and warm-up questions: C. Osaki – RBZ LLP

Demographic and pre-session warm-up questions (except for question 1, only CPA responses are shown following):

1a. What best describes you?

1. Practicing CPA	54%
2. Academic/Other	46%

1b. A more detailed look

1. Practicing CPA - regional or local firm	30%
2. Practicing CPA - national or global firm	20%
3. Accounting Academic - Teaching oriented institution	21%
4. Accounting Academic - Research oriented institution	8%
5. Regulator / other	3%

2. Overall, how do you perceive the quality of graduates entering the public accounting profession compared to those in prior decades? (On a 9-point scale with 9 as the highest level of challenge) (Mean 5.5, Standard deviation 1.5)

3. What do you think is the greatest strength of recent graduates?

(1) Analytical thinking	4%
(2) Communication skills	0%
(3) Technical accounting knowledge	2%
(4) Information technology skills	56%
(5) Work ethic	2%
(6) Energy level	4%
(7) Global cultural awareness	9%
(8) Ability to work in teams	23%
(9) Ethical standards	0%

4. What do you think is the greatest weakness of recent graduates?

(1) Analytical thinking	26%
(2) Communication skills	32%
(3) Technical accounting knowledge	3%
(4) Information technology skills	0%
(5) Work ethic	37%
(6) Energy level	2%
(7) Global cultural awareness	0%
(8) Ability to work in teams	0%
(9) Ethical standards	0%

5. What is the greatest challenge a young CPA professional will face over the next decade?

(1) Keeping current	42%
(2) Global competition	21%
(3) Compensation keeping pace with cost of living	0%
(4) Stable work environment	14%
(5) Maintaining healthy work life balance	18%
(6) Adherence to ethical standards	5%
(7) Advancement opportunities	0%

6. What is the greatest challenge facing the public accounting profession in California over the next decade?

(1) Sufficient supply of qualified entering CPAs	16%
(2) Sufficient supply of qualified accounting academics	27%
(3) Global competition	6%
(4) Maintaining reputation of the profession	7%
(5) Managing millennial generation professional staff	9%
(6) Liability exposure	4%
(7) Leadership transition	9%
(8) Regulatory environment	6%
(9) Adapting to IFRS	16%

7. What regulatory change appears most desirable to improve entry level quality?

(1) Strengthen exam standards	2%
(2) Increase specific course requirements to sit for CPA exam	17%
(3) Increase experience standards	11%
(4) Permit greater diversity in educational preparation	17%
(5) Remove impediments to global hiring	4%
(6) Relax reciprocity requirements for practice in California	9%
(7) Increase AACSB undergraduate course requirements	7%
(8) Relax AACSB faculty mix ratios to accommodate practitioners	33%

8. What is the major challenge facing the accounting academic over the next decade?

(1) Availability of qualified replacement faculty	46%
(2) Collegial work environment	0%
(3) Integrating IFRS into the curriculum	15%
(4) Maintaining an optimum balance between full-time and part-time academics	2%
(5) Alignment of academic promotion standards with needs of public accounting	19%
(6) Attractive compensation	12%
(7) Job security	0%
(8) Attracting capable ethical students	2%
(9) Maintaining rigorous grading standards	4%

9:00–10:30 a.m.

### Session 1: Practitioner Perspective

**What are the biggest challenges facing the accounting profession over the next decade?**

K. Schaum – KPMG LLP – Panel Moderator

P. Holthouse – Holthouse Carlin & Van Tright – Santa Monica  
 H. Perlmutter – Deloitte & Touche – Los Angeles  
 J. Pearson – Burr Pilger & Mayer LLP – San Francisco  
 G. Valentine – RSM McGladrey, Inc. – Irvine

**Session 1 Polling Questions:**

1. What challenges does the public accounting profession face in California over the next decade? (On a 9-point scale with 9 as the highest level of challenge)

	<u>Mean</u>	<u>(Std Dev)</u>
(1)The challenge of recruiting high quality entry level professionals	6.8	(1.1)
(2) The challenge of an adequate quantity of entering CPAs	4.9	(2.2)
(3) The challenge of managing millennial generation professional staff	7.4	(1.4)
(4) The challenge of recruiting and retaining an ethnically diverse staff	4.4	(2.2)
(5) The challenge of leadership transition to younger generations	6.9	(1.9)
(6) The challenge of maintaining an ethical client base	4.3	(2.0)
(7) The challenge of coping with liability exposure	6.9	(1.8)
(8) The challenge of complying with changing regulations	7.3	(1.6)
(9) The challenge of adapting to IFRS	5.6	(2.3)
(10) The challenge of fair value accounting	6.8	(1.8)
(11) The challenge of growing your practice in CA business environment	6.9	(1.8)
(12)The challenge of practicing across multiple states	5.1	(2.7)
(13)The challenge of maintaining professional reputation	5.9	(1.9)

10:45 – 12:00 p.m. **Session 2: Re-Convened Practitioner Panel**

**In terms of knowledge, skills and abilities of students entering public accounting, in what area is the greatest need of improvement?**

**Session 2 Polling Questions:**

1. When teaching accounting courses, how much focus should be placed on developing the following attributes? (On a scale of 1–9, with 9 indicating high focus)

	<u>Mean</u>	<u>(Std.Dev.)</u>
(1) Analytical thinking	8.0	(1.2)
(2) Written communication skills	8.2	(0.9)
(3) Oral communication skills	7.3	(1.5)
(4) Technical accounting knowledge	7.8	(1.2)
(5) Quantitative problem solving skills	7.5	(1.0)
(6) Information technology skills	5.8	(1.6)
(7) Work ethic	5.3	(2.2)
(8) Research skills	7.1	(1.4)
(9) Global cultural awareness	2.6	(1.7)
(10) Ability to work in teams	6.0	(1.8)
(11) High ethical standards	7.6	(1.7)
(12) General business knowledge	6.6	(1.1)
(13) Marketing skills	3.2	(2.2)

2. Practitioner Panel: Academic Preparation Profiles

<u>Number of Classes</u>	<u>Univ 1</u>	<u>Univ 2</u>	<u>Univ 3</u>
Accounting	9	10	8
Economics		7	2
Math/Statistics		3	2
Writing/Com.		2	1
Business		<u>1</u>	<u>7</u>
Total		22	22

Which university profile appears most likely to prepare a student for a successful public accounting career? (Select 1, 2, or 3)

Responses	7%	13%	80%
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3. When evaluating undergraduates applying for a position with your firm, how much importance is attached to the following? (On a scale of 1–9, with 9 indicating high importance.)

	<u>Mean</u>	<u>(Std Dev)</u>
(1) The topical coverage and rigor of the accounting coursework taken	7.6	(1.5)
(2) The topical coverage and rigor of the general business coursework taken	6.6	(1.2)
(3) The topical coverage and rigor of the general education coursework	5.4	(1.5)
(4) Level of academic rigor associated with the university	7.2	(1.4)
(5) Level of academic rigor associated with the accounting program	7.9	(1.2)
(6) The rigor of course coverage in emerging business issues like IFRS	5.8	(1.6)
(7) The rigor of course coverage in ethics	6.5	(1.6)

4. Rate the importance of taking an elective course in the following areas. (On a scale of 1–9, with 9 indicating high importance.)

	<u>Mean</u>	<u>(Std Dev)</u>
(1) Business Law	6.9	(1.8)
(2) Business Communication	7.6	(1.4)
(3) Computer Science	4.4	(2.4)
(4) Ethics	7.3	(1.9)
(5) Finance	7.0	(1.4)
(6) Information Systems	5.8	(2.1)
(7) International Accounting	5.8	(2.3)
(8) Marketing	3.5	(2.2)
(9) Statistics	5.9	(2.3)

Luncheon Presentation: D. Reigle – AICPA  
**Is the Pipeline Half Full or Half Empty?**

12:45–2:15 p.m. **Session 3: Regulator Perspective**

**What regulatory changes appear desirable in terms of helping to sustain and support the public accounting perspective?**

- C. Freed – University of Southern California – Panel Moderator
- R. Davila – NASBA and the University of Southern California
- G. Naughton – AACSB and San Diego State University
- D. Reigle – AICPA
- D. Swartz – California Board of Accountancy (CBA)

**Session 3 Polling Questions:**

1. What regulatory change appears most desirable to improve entry level quality?  
(On a 9-point scale with 5 as the “no change from the current level” and a lower number indicating decreasing requirements and a higher number indicating increasing requirements.)

	<u>Mean</u>	<u>(Std Dev)</u>
(1) Prerequisites for CPA exam	5.7	(1.7)
(2) Rigor of CPA exam	6.6	(1.7)
(3) Practice experience required for CPA certificate	6.6	(1.6)
(4) Reciprocity requirements for practice in California	4.8	(2.8)
(5) AACSB accreditation standards	4.7	(2.1)
(6) Continuing education requirements	5.4	(1.4)
(7) Constraints on global hiring	3.9	(2.4)
(8) Diversity of educational preparation	5.4	(2.3)

2. Will requiring 150 hours for new licenses help meet the professions need for broader skills, such as written communications, etc.? (Mean 5.3; Std. Dev. 2.6)

3. How important is it for an undergraduate accounting program to be AACSB accredited? (Mean 5.0; Std. Dev. 2.5)

4. Should California make the 150 hour pathway the only pathway to licensure in CA?  
(Yes 88%, No 12%)

*Beyond the scope of this paper Session 4 below:*

2:30–4:00 p.m. **Session 4: Academic Perspective**

What are the biggest challenges that academics face?

What partnering opportunities between academia and practice have the most potential?

## Appendix B

### Young and Emerging Professionals (YEPs) Survey Questions and Results

#### 1. Background Information

(Results shown in parenthesis following the query.)

This survey is sponsored by the Accounting Education Committee of the California Society of CPAs. Your response will take about 10 minutes to complete and will provide vital information to accounting practitioners and academics as they seek to work together to improve the public accounting profession. Please respond by following the directions accompanying each question.

1. What is your gender? (Response choices for practitioners shown.)

- |            |       |
|------------|-------|
| (1) Male   | (34%) |
| (2) Female | (66%) |

2. What is your age?

- |             |       |
|-------------|-------|
| (1) 22-25   | (31%) |
| (2) 26-29   | (40%) |
| (3) 30-35   | (19%) |
| (4) Over 35 | (10%) |

3. What best describes you? Please select the number which best corresponds to your work situation.

- |  |       |
|--|-------|
| (1) Practicing CPA –regional or local firm         | (51%) |
| (2) Practicing CPA –national or global firm        | (8%)  |
| (3) Practicing accountant –regional or local firm  | (26%) |
| (4) Practicing accountant –national or global firm | (15%) |
| Other (Please describe)                            |       |

4. How long have you been practicing accounting since receiving your undergraduate degree?

- |                       |       |
|-----------------------|-------|
| (1) Less than 1 year  | (12%) |
| (2) 1-3 years         | (35%) |
| (3) 3-5 years         | (28%) |
| (4) More than 5 years | (25%) |

5. What was your major?

- |                         |       |
|-------------------------|-------|
| (1) Accounting          | (79%) |
| (2) Economics           | (15%) |
| (3) General Business    | (5%)  |
| (4) Finance             | (1%)  |
| (5) Information Systems | (0%)  |
| Other (Please describe) |       |

6. From which university system did you graduate?

(1) CSU system	(51%)
(2) UC system	(21%)
(3) Private University	(28%)
Other (Please describe)	

7. Do you think it is important for an undergraduate accounting program to be AACSB accredited?  
(Answer: "yes" or "no" by checking the appropriate box)

<b><u>YES</u></b>	<b><u>NO</u></b>
76%	24%

8. Will requiring 150 hours for new licenses help meet the public accounting profession's need for broader skills?

<b><u>YES</u></b>	<b><u>NO</u></b>
62%	38%

9. Currently, California allows two pathways to CPA licensure: Pathway 1 or Pathway 2 (i.e. 150 hour requirement). Should California make the 150 hour pathway the only pathway to licensure in California?

<b><u>YES</u></b>	<b><u>NO</u></b>
65%	35%

10. If you are already licensed, did you use Pathway 1 (120 hours) or Pathway 2 (150 hours)? (If you are not yet licensed, indicate which Pathway you plan to use.)

<b><u>Pathway 1</u></b>	<b><u>Pathway 2</u></b>
37%	63%

11. If you chose Pathway 2 in the previous question, how did you obtain (or how are you planning to obtain) the additional units?

(1) Through a graduate degree	(21%)
(2) Completed enough units through my undergraduate degree	(44%)
(3) Took extra classes through a variety of mediums (e.g. online classes, community college courses.)	(35%)

12. The recently issued International Educational Standards for certification calls for three years of post-undergraduate degree work experience in public accounting or two years of work experience and a year of accounting graduate studies. Do you think California should move toward adopting this higher standard for obtaining a CPA license?

<b><u>YES</u></b>	<b><u>NO</u></b>
61%	39%

13. Did you feel prepared immediately after graduation in each of the following areas: (Answer: "yes" or "no" by checking the appropriate box)

<b><u>YES</u></b>	<b><u>NO</u></b>	<b><u>Item Description</u></b>
93%	7%	Ability to work in teams
92%	8%	Ethical standards
87%	13%	Work ethic
86%	14%	Energy level
78%	22%	Communication skills
75%	25%	Information technology skills
67%	33%	Analytical thinking
58%	42%	Global cultural awareness
57%	43%	Technical accounting knowledge

14. Do you feel the following challenges will be a problem for you over the next decade? (Answer: "yes" or "no" by checking the appropriate box)

<b><u>YES</u></b>	<b><u>NO</u></b>	<b><u>Item Description</u></b>
87%	13%	Maintaining healthy work/life balance
76%	24%	Compensation keeping pace with cost of living
60%	40%	Stable work environment
49%	51%	Advancement opportunities
48%	52%	Global competition
46%	54%	Keeping current
13%	87%	Adherence to ethical standards

15. Do you feel the following issues will emerge as a significant problem facing the public accounting profession in California over the next decade? (Answer: "yes" or "no" by checking the appropriate box)

<b><u>YES</u></b>	<b><u>NO</u></b>	<b><u>Item Description</u></b>
80%	20%	Adapting to IFRS
79%	21%	Reconciling generational differences in perspective
76%	24%	Liability exposure
75%	25%	Maintaining reputation of the profession
74%	26%	Leadership transition
74%	26%	Regulatory environment
55%	45%	Global competition
49%	51%	Sufficient supply of qualified accounting academics
43%	57%	Sufficient supply of qualified entering CPAs

16. Do you think change in the following areas has significant potential to improve the public accounting profession? (Answer: "yes" or "no" by checking the appropriate box)

<b><u>YES</u></b>	<b><u>NO</u></b>	<b><u>Item Description</u></b>
86%	14%	Practice experience required for CPA certificate
80%	20%	Continuing education requirements
80%	20%	Reciprocity requirements for practice in California
70%	30%	Diversity of educational preparation
67%	33%	AACSB accreditation standards

58%	42%	Prerequisites for CPA exam
48%	52%	Rigor of CPA exam
34%	66%	Tort reform
29%	71%	Constraints on global hiring

17. For an undergraduate accounting student, would you recommend taking an extra elective course in the following areas? (Answer: "yes" or "no" by checking the appropriate box)

<u>YES</u>	<u>NO</u>	<u>Item Description</u>
93%	7%	Business Communication
81%	29%	Finance
80%	20%	Business Law
72%	28%	Information Systems
70%	30%	International Accounting
68%	32%	Ethics
48%	52%	Statistics
47%	53%	Marketing
46%	54%	Computer Science

18. Which university profile appears most likely to prepare a student for a successful public accounting career? (Select 1, 2, or 3)

**Hypothetical university accounting program profiles:**

<u>Number of Classes</u>	<u>Univ 1</u>	<u>Univ 2</u>	<u>Univ 3</u>
Accounting	9	10	8
Economics	7	2	4
Math/Statistics	3	2	3
Writing/Communication	2	1	2
Business	<u>1</u>	<u>7</u>	<u>5</u>
<b>Total</b>	<b>22</b>	<b>22</b>	<b>22</b>

<b>YEPs Responses</b>	<b>6%</b>	<b>39%</b>	<b>55%</b>
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19. Do you believe the following opportunities between academia and practice have the potential to significantly increase the quality of accounting undergraduate education? (Answer: "yes" or "no" by checking the appropriate box)

<u>YES</u>	<u>NO</u>	<u>Item Description</u>
92%	8%	Engagement of practice professionals in the classroom
91%	9%	Engagement of practice professionals on college
88%	12%	Professional conference opportunities for sharing between practitioners and academics
87%	13%	Creation by practitioners of more practical classroom tools
82%	18%	Faculty internships in public accounting
81%	19%	Advisory boards
80%	20%	Collaborative research efforts between practice and academic professionals
76%	24%	Practitioner recognition of teaching excellence
74%	26%	Scholarship support for undergraduate students
69%	31%	Scholarship support for doctoral accounting students to become professor

### References

- Ahadiat, N. 2008. Technologies used in accounting education: A study of frequency of use among faculty. *The Journal of Education for Business* 83 (3): 123–134.
- American Institute of Certified Public Accountants (AICPA). 2009. Core competency framework for entering into the accounting profession. Available at <http://www.aicpa.org/edu/corecomp>
- Ambady, N., and R. Rosenthal. 1993. Half a minute: Predicting teacher evaluations from thin slices of nonverbal behavior and physical attractiveness. *Journal of Personality and Social Psychology* 64 (3): 431–441.
- Arum, R., and J. Roksa. 2011. *Academically Adrift: Limited Learning on College Campuses*. The University of Chicago Press. Chicago, IL.
- Autor, D.H. 2010. *The Polarization of Job Opportunities in the U.S. Labor Market*. Center for American Progress (The Hamilton Project). April.
- Ball, R. 2009. Market and Political / Regulatory Perspectives on the Recent Accounting Scandals. *Journal of Accounting Research* 47 (2): 277-323.
- Bok, D. 2006. *Our Underachieving Colleges*. Princeton University Press. Princeton, NJ.
- Bureau of Labor Statistics (BLS). 2010. *U.S. Department of Labor Occupational Outlook Handbook, 2010-11 Edition*. Available at: <http://www.bls.gov/oco/ocos001.htm>
- California Board of Accountancy (CBA). 2011. Available at: [http://www.dca.ca.gov/cba/misc\\_notices/not11-19.pdf](http://www.dca.ca.gov/cba/misc_notices/not11-19.pdf)
- California Society of CPAs (CalCPA). 2008. Educator Practitioner Forum – Pathway to Excellence (November 14). Available at: [www.calcpa.org/Content/educator\\_forum.aspx](http://www.calcpa.org/Content/educator_forum.aspx) (non-members can obtain site access from John Angelo at [john.angelo@calcpa.org](mailto:john.angelo@calcpa.org)).
- Campbell, M. C., and C. R. Howard. 2008. Threats to the CPA credential in the international marketplace. *The CPA Journal* (March). Available at: [www.nysscpa.org/cpajournal/2008/308/perspectives/p6.htm](http://www.nysscpa.org/cpajournal/2008/308/perspectives/p6.htm)
- Clark, R.C. 2008. *Building Expertise: Cognitive Methods for Training and Performance Improvement*. John Wiley & Sons, Inc. San Francisco, CA.
- Cohn, M. 2009. Accounting students face tough job market. *WebCPA* (January). Available at: [www.webcpa.com/article.cfm?articleid=30377](http://www.webcpa.com/article.cfm?articleid=30377)
- Coyle, D. 2009. *The Talent Code: Greatness Isn't Born. It's Grown. Here's How*. Random House, Inc. New York, NY.
- Crumbley, D.L., and G.S. Smith. 2009. The games professor's play in the dysfunctional performance evaluation system used in higher education: Brainstorming some recommendations. *Measure Learning Rather than Satisfaction in Higher Education*, edited by R.E. Flinn and D.L. Crumbley. Teaching, Learning and Curriculum Section of the American Accounting Association. Sarasota, FL.
- Dugan, I.J., and D. Crawford. 2009. Accounting firms that missed fraud at Madoff may be liable. *The Wall Street Journal* (February 18). Available at: <http://online.wsj.com/article/SB123491638561904323.html>
- Dwek, C. 2006. *Mindset: The New Psychology of Success*. Random House Inc. New York, NY.

- Ericsson, K. A. 2009. *Development of Professional Expertise: Toward Measurement of Expert Performance and Design of Optimal Learning Environments*. Cambridge University Press. New York, NY.
- Ericsson, K. A., N. Charness, R. Hoffman, and P. Feltovich. 2006. *The Cambridge Handbook of Expertise and Expert Performance*. Cambridge University Press. New York, NY.
- Ericsson, K.A., M. Prietula, and E. Cokely. 2007. The Making of an Expert. *Harvard Business Review* July-August: 115-121.
- Financial Crisis Inquiry Commission (FCIC). 2011. *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*. U.S. Government Publication Office. January.
- Flaherty, R.E., and M.A. Diamond. 1996. *Position and Issues Statements of the Accounting Education Change Commission*. Accounting Change Commission and American Accounting Association. Accounting Education Series 13. Sarasota, FL.
- Fogarty, T.J. 2008. The millennial lie. *Issues in Accounting Education* 23 (3): 369-371.
- Gavin, S.K. 2005. *Accounting Curriculum Revision: Stakeholder Perceptions Regarding Prioritization of AICPA Core Competencies in Nebraska*. ProQuest Dissertations & Theses. Publication 3206227 (August). Available at <http://gradworks.umi.com/32/06/3206227.html>
- Gigerenzer, G., P. M. Todd, and the ABC Research Group. 1999. *Simple Heuristics That Make Us Smart*. New York, NY: Oxford University Press.
- Gladwell, M. 2005. *Blink: The Power of Thinking Without Thinking*. New York, NY: Little, Brown and Company.
- Harris, R.R. Changes in Latitude, Changes in Attitude. Inaugural Speech AICPA Chairman 2009-2010. Available at [http://www.aicpa.org/about/leadership/downloadabledocuments/bobharris\\_inauguralspeech.pdf](http://www.aicpa.org/about/leadership/downloadabledocuments/bobharris_inauguralspeech.pdf)
- International Federation of Accountants (IFAC). 2009. *International Accounting Education Standards Board: International Education Standards 1–8*. Available at: <http://web.ifac.org/publications/international-accounting-education-standards-board/handbook>
- Leslie, D.W. 2008. Accounting Faculty in U.S. Colleges and Universities: Status and Trends, 1993 – 2004. A Report of the American Accounting Association.
- Levine, M. 2005. *Ready or Not, Here Life Comes*. New York, NY: Simon & Schuster.
- Levy, F. 2010. How Technology Changes Demands for Human Skills. *OECD Education Working Papers, No 45*. OECD Publishing.
- McKinsey Global Institute. 2011. *An Economy that Works: Job Creation and America's Future*. McKinsey & Company. June.
- Milliron, V.C. 2008. Exploring millennial student values and societal trends: Accounting course selection preferences. *Issues in Accounting Education* 23(3): 405-419.
- National Association of State Boards of Accountancy (NASBA). 2008. Education and Licensure Requirements for CPAs: 120/150 Discussion Draft (November). Available at: [www.nasba.org/nasbaweb/NASBAWeb.nsf/wplrp?openform](http://www.nasba.org/nasbaweb/NASBAWeb.nsf/wplrp?openform)

- Nelson, I., V., Vendirzyk, J. Quirin, and S. Kovar. 2008. Trends in accounting student characteristics: Results from a 15-year longitudinal study at FSA schools. *Issues in Accounting Education* 23 (August): 373–389.
- New York State Society of CPAs (NYSSCPA). 2008a. Meeting of the minds: Dialogue between practitioners, educators, and regulators. *The CPA Journal* (March). Available at: [www.nysscpa.org/cpajournal/2008/308/index.htm](http://www.nysscpa.org/cpajournal/2008/308/index.htm)
- \_\_\_\_\_. 2008b. Meeting of the minds: Preparing future accounting professionals. *The CPA Journal* (April). Available at: [www.nysscpa.org/cpajournal/2008/408/infocus/p20.htm](http://www.nysscpa.org/cpajournal/2008/408/infocus/p20.htm)
- \_\_\_\_\_. 2008c. Examination of pre-certification education: An NYSSCPA white paper and additional commentary. *The CPA Journal* (August). Available at: [www.nysscpa.org/cpajournal/2008/808/infocus/p26.htm](http://www.nysscpa.org/cpajournal/2008/808/infocus/p26.htm)
- Pathways Commission. 2011. Available at: <http://commons.aahq.org/groups/2d690969a3/summary>
- Pink, D.H. 2009. *Drive: The Surprising Truth about What Motivates Us*. New York, NY: Riverhead Books.
- Plumlee, R.D., S.J. Kachelmeir, S.A. Madeo, J.H. Pratt, and G. Krull. 2006. Assessing the shortage of accounting faculty. *Issues in Accounting Education* 21 (May): 113-125.
- Timmons, H., and B. Wessener. 2009. Satyam chief admits huge fraud. *The New York Times* January 7). Available at: <http://www.nytimes.com/2009/01/08/business/worldbusiness/08satyam.html>
- Twenge, J. M. 2006. *Generation Me*. New York, NY: Free Press.
- U.S. Treasury. 2008. *Final Report of the Advisory Committee on the Auditing Profession to the U.S. Department of the Treasury*. October 6.

**Table 1**  
**Practitioner Panel: Challenges**

**What challenges does the public accounting profession face in California over the next decade?** (On a 9-point scale with 9 as the highest level of challenge)

<u>Item Description</u>	<u>Mean</u>	<u>(Std Dev)</u>
The challenge of managing millennial generation professional staff	7.4	(1.4)
The challenge of complying with changing regulations	7.3	(1.6)
The challenge of leadership transition to younger generations	6.9	(1.9)
The challenge of coping with liability exposure	6.9	(1.8)
The challenge of growing your practice in CA business environment	6.9	(1.8)
The challenge of recruiting high quality entry level professionals	6.8	(1.1)
The challenge of fair value accounting	6.8	(1.8)
The challenge of maintaining professional reputation	5.9	(1.9)
The challenge of adapting to IFRS	5.6	(2.3)
The challenge of practicing across multiple states	5.1	(2.7)
The challenge of an adequate quantity of entering CPAs	4.9	(2.2)
The challenge of recruiting and retaining an ethnically diverse staff	4.4	(2.2)
The challenge of maintaining an ethical client base	4.3	(2.0)

**Table 2**  
**Practitioner Panel: Skills**

**When teaching accounting courses, how much focus should be placed on developing the following attributes?**  
 (On a scale of 1–9, with 9 indicating high focus)

<b><u>Item Description</u></b>	<b><u>Mean</u></b>	<b><u>(Std Dev)</u></b>
Written communication skills	8.2	(0.9)
Analytical thinking	8.0	(1.2)
Technical accounting knowledge	7.8	(1.2)
High ethical standards	7.6	(1.7)
Quantitative problem solving skills	7.5	(1.0)
Oral communication skills	7.3	(1.5)
Research skills	7.1	(1.4)
General business knowledge	6.6	(1.1)
Ability to work in teams	6.0	(1.8)
Information technology skills	5.8	(1.6)
Work ethic	5.3	(2.2)
Marketing skills	3.2	(2.2)
Global cultural awareness	2.6	(1.7)

**Table 3**  
**Practitioner Panel: Academic Preparation Profiles**

<u>Number of Classes</u>	<u>Univ 1</u>	<u>Univ 2</u>	<u>Univ 3</u>
Accounting	9	10	8
Economics	7	2	4
Math/Statistics	3	2	3
Writing/Com.	2	1	2
Business	<u>1</u>	<u>7</u>	<u>5</u>
<b>Total</b>	<b>22</b>	<b>22</b>	<b>22</b>

**Which university profile appears most likely to prepare a student for a successful public accounting career?**  
(Select 1, 2, or 3)

<b>Responses</b>	<b>7%</b>	<b>13%</b>	<b>80%</b>
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**Table 4 Practitioner Panel: Hiring staff**

**When evaluating undergraduates applying for a position with your firm, how much importance is attached to the following?** (On a scale of 1–9, with 9 indicating high importance.)

<u>Item Description</u>	<u>Mean</u>	<u>(Std Dev)</u>
Level of academic rigor associated with the accounting program	7.9	(1.2)
The topical coverage and rigor of the accounting coursework taken	7.6	(1.5)
Level of academic rigor associated with the university	7.2	(1.4)
The topical coverage and rigor of the general business coursework taken	6.6	(1.2)
The rigor of course coverage in ethics	6.5	(1.6)
The rigor of course coverage in emerging business issues like IFRS	5.8	(1.6)
The topical coverage and rigor of the general education coursework	5.4	(1.5)

**Table 5 Practitioner Panel: Electives**

**Rate the importance of taking an elective course in the following areas.** (On a scale of 1–9, with 9 indicating high importance.)

<b><u>Item Description</u></b>	<b><u>Mean</u></b>	<b><u>(Std Dev)</u></b>
Business Communication	7.6	(1.4)
Ethics	7.3	(1.9)
Finance	7.0	(1.4)
Business Law	6.9	(1.8)
Statistics	5.9	(2.3)
International Accounting	5.8	(2.3)
Information Systems	5.8	(2.1)
Computer Science	4.4	(2.4)
Marketing	3.5	(2.2)

**Table 6 Regulator Panel****What regulatory change appears most desirable to improve entry level quality?**

(On a 9 point scale with **5 as the “no change from the current level”** and a lower number indicating decreasing requirements and a higher number indicating increasing requirements.)

<b><u>Item Description</u></b>	<b><u>Mean</u></b>	<b><u>(Std Dev)</u></b>
Rigor of CPA exam	6.6	(1.7)
Practice experience required for CPA certificate	6.6	(1.6)
Prerequisites for CPA exam	5.7	(1.7)
Diversity of educational preparation	5.4	(2.3)
Continuing education requirements	5.4	(1.4)
Reciprocity requirements for practice in California	4.8	(2.8)
AACSB accreditation standards	4.7	(2.1)
Constraints on global hiring	3.9	(2.4)