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Trends in Accounting Student Characteristics: Results from a 15-Year Longitudinal Study at FSA Schools

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ABSTRACT: This article updates the results from a continuing longitudinal study of characteristics of accounting students, sponsored by the Federation of Schools of Accountancy (FSA) since 1991. Specifically, it reports trends in student characteristics between 2000 and 2006 and discusses their implications to the accounting profession and to accounting education. Measures of student quality continue to rise. The percentage of minority students in undergraduate accounting programs increased; however, no similar increase occurred at the graduate level. There was a drop in the percentage of female students in graduate programs. More students are deciding to major in accounting later in their academic careers, with fewer making the decision in high school and more deciding during their sophomore years of college. Job availability is increasingly the most influential factor in students' decisions to major in accounting. Fewer students are taking the GMAT exam, and fewer master's students are joining Beta Alpha Psi. More students are completing internships. Although more are pursuing graduate education, fewer are planning on M.B.A. or Ph.D. degrees. Interest in careers in public accounting is high and increasing, while interest in industry is dropping.

Keywords: accounting students; student quality.

Data Availability: Data used in this study are available upon request from the authors.

INTRODUCTION

In 1989, concerned over anecdotal reports of a decline in the quality of students in undergraduate and graduate accounting programs (e.g., see Collins 1987; Liebttag 1987; Nelson 1989), the Federation of Schools of Accountancy (FSA), the organization of accredited graduate programs in accounting, formed a committee. Its charge was to measure and track accounting student provenance ("Where do our accounting majors come from?") and scholastic rankings. In 1990, the committee designed, tested, and administered a survey instrument to students at FSA schools on a preliminary basis (Graves et al. 1991). Initially, to establish a baseline measure, the FSA administered the survey annually from

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1991 to 1995. Subsequently, to monitor trends, it conducted the survey less frequently—in 2000 and, most recently, in 2006.

Over the years, the committee expanded the instrument to gather data on other student characteristics, including full-time versus part-time student status, extracurricular activities, internship experiences, career plans, post-college examination and certification plans, attitudes toward the 150-hour requirement, attitudes toward accounting, locus of learning motivation, and various demographic information, resulting in a rich longitudinal database of various student characteristics. The most recent survey included questions regarding student perceptions of their educational experiences.¹

Several articles in the accounting education literature report the results from previous survey administrations (Graves et al. 1992; Graves et al. 1993; Nelson and Deines 1995; Nelson and Venzryk 1996; Nelson et al. 2002). This article focuses on trends revealed in the 2000 and 2006 survey results, with occasional references toward earlier studies for comparison purposes.

Much has changed since the survey was last conducted in 2000 including the Enron/WorldCom debacle, the demise of Arthur Andersen, the implementation of Sarbanes-Oxley (SOX), the public accounting firms' divestiture of their consulting businesses, increases in accounting major enrollments, and cultural changes associated with the coming-of-age of the so-called "Generation Y" (also affectionately known by some as "Generation Me" or "The iPod Generation"). What has happened to the quality and other characteristics of accounting majors during these critical years?

In spring 2000 and 2006, the FSA administered the survey instrument to both senior² accounting majors and graduate students in professional accounting master's degree programs. Although FSA member school participation was voluntary, 20 schools participated in both the 2000 and 2006 surveys (see the Appendix). At those schools, 1,384 students responded in 2000 and 1,612 in 2006 (see Table 1). We controlled for differences in school characteristics by limiting the study's results to students enrolled in these 20 institutions.³ At the time of the 2000 survey, 18 of these 20 schools were in states that had passed legislation requiring 150 hours for CPA certification. The legislation was effective in the home state of ten of the schools in the 2000 study and 17 in the 2006 study, including Virginia with an effective date of July 1, 2006.

DEMOGRAPHICS

Table 1 presents demographic-related data (for purposes of discussion, references to data contained in the tables are rounded to the nearest whole percentage). The gender mix of the 2006 undergraduate accounting students is 57 percent female, statistically unchanged from the 55 percent reported in 2000.⁴ This is consistent with results reported in previous longitudinal FSA studies (Nelson and Venzryk 1996; Nelson et al. 2002) and in the most recent AICPA report, *The Supply of Accounting Graduates and the Demand for Public*

¹ Because the additional questions relate more to accreditation issues than to student characteristics, results and implications of these 2006 survey items are the subject of a separate article.

² The survey instrument defines seniors as all students who expect to receive a baccalaureate degree at any time during the current calendar year.

³ Because of the matched-pairs design, data reported in this study for the year 2000 are slightly different than were reported in Nelson et al. (2002), because different institutions participated in 1995, 2000, and 2006. Only schools that participated in both 1995 and 2000 were included in Nelson et al. (2002) and only those that participated in both 2000 and 2006 are included herein.

⁴ We base the percentage breakdowns and averages reported in the tables on the total number of valid responses received for each particular item.

TABLE 1
Demographics
Sample of Students from the Same 20 FSA Schools in 2000 and 2006

| | Seniors | | | Master's Students | | |
|-------------------------------|---------|-------|-----------------------|-------------------|------|--------------------|
| | 2000 | 2006 | χ^2/F -Value | 2000 | 2006 | χ^2/F -Value |
| Number of Respondents | 986 | 1,005 | | 398 | 607 | |
| Gender (%) | | | 0.42 ^b | | | 3.08 ^{ab} |
| Male | 44.6 | 43.2 | | 39.7 | 45.3 | |
| Female | 55.4 | 56.8 | | 60.3 | 54.7 | |
| Ethnic Background (%) | | | 43.75 ^{***c} | | | 6.62 ^c |
| Caucasian/White | 86.7 | 75.8 | | 74.4 | 74.5 | |
| African American/Black | 2.9 | 5.2 | | 2.5 | 2.5 | |
| Native American/Indian | 0.7 | 0.4 | | 0.7 | 0.3 | |
| Mexican American/Hispanic | 3.3 | 5.2 | | 1.8 | 2.6 | |
| Asian American/Pacific Island | 4.1 | 7.9 | | 7.5 | 7.1 | |
| Other American Ethnic Group | 0.6 | 1.5 | | 0.0 | 1.1 | |
| Non-U.S. Citizen/Foreign | 1.7 | 4.0 | | 13.1 | 11.9 | |
| Age (%) | | | 1.75 ^b | | | 2.52 ^b |
| Less than 25 | 82.5 | 84.3 | | 58.0 | 64.3 | |
| 25–30 | 9.9 | 9.2 | | 25.1 | 20.8 | |
| 30–40 | 4.8 | 4.5 | | 12.1 | 10.6 | |
| Over 40 | 2.8 | 2.0 | | 4.8 | 4.3 | |
| Status ^a (%) | | | 0.25 ^b | | | 2.03 ^b |
| Full-time | 94.9 | 94.4 | | 88.7 | 91.4 | |
| Part-Time | 5.1 | 5.6 | | 11.3 | 8.6 | |

*, ** Indicates significance at the .10 and .01 levels, respectively.

^a The wording of the question was, "What has been your student status during most of your accounting program?"

^b F-test statistic.

^c Chi-squared test.

Accounting Recruits—2005 (Sanders 2005).⁵ In fact, the gender mix at the undergraduate level has been remarkably consistent since the first survey administration in 1991 (54 percent female). However, there have been interesting shifts in the gender mix at the graduate level across time, with females dropping from 60 percent in 2000 to 55 percent in 2006 (significant at the .10 level). This finding reverses a trend reported between 1995 and 2000 (Nelson et al. 2002), when the percentage of females increased significantly (in 1995, males outnumbered females at the graduate level).

FSA studies conducted prior to 2000 reported a steady increase in the percentage of minority students enrolled in undergraduate accounting programs. Minority student representation grew from 7 percent in 1991 to 15 percent in 1995, but there was no statistically significant change between 1995 and 2000 (Nelson and Venzryk 1996; Nelson et al. 2002). Excluding international students, the percentage of undergraduate minority students increased dramatically from 12 percent in 2000 to 20 percent in 2006 (significant at the .01

⁵ The AICPA released this report in October 2005. The university-related data in the 2005 report is from 283 surveys returned by administrators of accounting programs in U.S. colleges and universities awarding accounting degrees in the 2003–2004 academic year. The study provides demographic data on gender, ethnicity, and job placement for students earning bachelor's and master's degrees in accounting. A 2008 update of the AICPA's 2005 study was made available in July 2008 and can be obtained electronically from the AICPA at <http://ceae.aicpa.org/Resources/Publications+Reports/2008TrendsReport.2.htm>.

level). Further, partitioning the sample reveals that the largest gains were shown in the African American (from 3 to 5 percent), and Asian American (from 4 to 8 percent) subgroups.

Unfortunately, minority representation in graduate accounting programs does not report the same gains. Excluding international students, the percentage of minority students in master's programs changed from 13 percent in 2000 to 14 percent in 2006, an insignificant increase. Although previous longitudinal studies report no significant changes in minority representation in graduate programs (Nelson and Vendrzyk 1996; Nelson et al. 2002), there may be a small, silver lining; it is heartening to note that the 14 percent reported in 2006 is twice as large as that reported in 1991 (7 percent). It would be very good news if this apparent doubling represents a significant increase, although we cannot substantiate it statistically, given the limitations of our data. What is known is that the percentage of American minorities in graduate programs is lagging behind the percentage in undergraduate programs (this has been consistent in every FSA survey since 1991). Of particular concern is the fact that, while the percentage of African American students at the undergraduate level increased from 3 to 5 percent between 2000 and 2006, the percentage of African American students at the graduate level stayed flat at 2.5 percent.

The AICPA (Sanders 2005) reports slightly higher minority student representation at both the bachelor's (23 percent) and master's levels (21 percent) with African American (or black) students comprising 8 percent of the accounting graduates earning bachelor's degrees in 2003–2004. The AICPA also reports higher graduate student representation by both African Americans (5 percent) and Asian/Pacific Islanders 13 percent (compared to our study's 3 and 7 percent, respectively). Note that the statistics are not directly comparable since the AICPA does not exclude foreign students from its ethnic classifications. In addition, accounting program administrators (not the students) respond to the AICPA survey.

We find no statistically significant change in the ages of either undergraduate or graduate students between 2000 and 2006. However, between 1995 and 2000 the percentage of younger (below age 25) students at the graduate level increased from 48 to 62 percent. Although not directly comparable, the fact that this group remained above 60 percent in 2006 suggests that this trend may continue. Similarly, we report no significant change in the percentage of students who are attending school part-time versus full-time, at either the graduate or undergraduate level. At the graduate level, approximately 90 percent of the students report attending full-time in both 2000 and 2006. Again, the data reports no reversal from the significant increase in the percentage students who were full-time at the graduate level reported in the 1995–2000 study.

STUDENT QUALITY

Table 2 reports student quality, as measured by self-reported GPAs and standardized entrance exam scores. The change in GPAs for senior students is clearly upward. The percentage of seniors who reported high school GPAs of 3.6 or higher rose from 59 percent in 2000 to 64 percent in 2006 (significant at the .05 level). Concurrently, those who had undergraduate college GPAs of 3.6 or higher increased from 28 percent in 2000 to 33 percent in 2006 (significant at the .01 level). Both of these trends are consistent with those reported in prior studies (e.g., in 1993 the percentages of students reporting high school and college GPAs of 3.6–4.0 were 45 and 19 percent, respectively; see Nelson and Vendrzyk 1996; Nelson et al. 2002). Unlike past studies, however, which also reported increases in undergraduate accounting GPAs, the 2000–2006 data finds no corresponding increase in

TABLE 2
Student Quality

| | Seniors | | | Master's Students | | |
|------------------------------|-------------|-------------|----------|-------------------|-------------|----------|
| | 2000 (%) | 2006 (%) | F-Value | 2000 (%) | 2006 (%) | F-Value |
| High School GPA | | | 6.04** | | | 10.07*** |
| 3.6–4.0 | 58.8 | 63.7 | | 64.7 | 72.0 | |
| 3.2–3.5 | 23.1 | 21.5 | | 19.6 | 18.5 | |
| 2.8–3.1 | 14.1 | 11.9 | | 10.9 | 7.3 | |
| Below 2.8 | 4.0 | 2.9 | | 4.8 | 2.2 | |
| Undergraduate GPA | | | 16.67*** | | | 3.42* |
| 3.6–4.0 | 27.7 | 32.9 | | 40.7 | 44.8 | |
| 3.2–3.5 | 32.9 | 34.7 | | 36.4 | 37.5 | |
| 2.8–3.1 | 26.0 | 24.6 | | 19.6 | 15.1 | |
| Below 2.8 | 13.4 | 7.8 | | 3.3 | 2.6 | |
| Undergraduate Accounting GPA | | | 2.01 | | | 0.20 |
| 3.6–4.0 | 37.2 | 28.5 | | 44.0 | 45.2 | |
| 3.2–3.5 | 24.9 | 26.5 | | 31.7 | 31.6 | |
| 2.8–3.1 | 32.0 | 31.7 | | 16.1 | 14.9 | |
| Below 2.8 | 15.9 | 13.3 | | 0.7 | 2.0 | |
| No undergraduate accounting | NA | NA | | 7.5 | 6.3 | |
| SAT Total or ACT Composite | | | 1.55 | | | 12.39*** |
| 1320–1600 or 30–36 | 10.5 | 15.0 | | 15.3 | 25.2 | |
| 1170–1310 or 26–29 | 40.6 | 37.4 | | 41.9 | 41.5 | |
| 1020–1160 or 22–25 | 35.8 | 33.6 | | 33.5 | 26.1 | |
| Below 1010 or below 22 | 13.1 | 14.0 | | 9.3 | 7.2 | |
| GMAT | | | 1.41 | | | 25.38*** |
| >650 | 1.3 | 0.7 | | 3.3 | 5.0 | |
| 610–650 | 9.1 | 6.1 | | 29.2 | 30.5 | |
| 560–600 | 8.9 | 6.5 | | 27.7 | 18.7 | |
| 510–550 | 7.9 | 8.7 | | 20.3 | 19.4 | |
| Below 510 | 6.3 | 6.6 | | 14.4 | 10.2 | |
| Have not taken | 66.5 | 71.4 | | 5.1 | 16.2 | |
| Graduate GPA | | | | | | 0.40 |
| 3.6–4.0 | NA | NA | | 50.4 | 51.8 | |
| 3.2–3.5 | NA | NA | | 27.7 | 28.2 | |
| 2.8–3.1 | NA | NA | | 10.8 | 11.5 | |
| Below 2.8 | NA | NA | | 0.8 | 0.5 | |
| In first semester | NA | NA | | 10.3 | 8.0 | |
| Graduate Accounting GPA | | | | | | 1.85 |
| 3.6–4.0 | NA | NA | | 50.9 | 50.8 | |
| 3.2–3.5 | NA | NA | | 21.7 | 26.3 | |
| 2.8–3.1 | NA | NA | | 12.1 | 11.7 | |
| Below 2.8 | NA | NA | | 0.7 | 0.7 | |
| No graduate accounting yet | NA | NA | | 14.6 | 10.5 | |

*, **, *** Indicate significance at the .10, .05, and .01 levels, respectively.
NA indicates the data is not applicable.

accounting course grades. In fact, while not statistically significant, the percentage with accounting GPAs of 3.6 or higher actually dropped from 37 percent in 2000 to 29 percent in 2006.

An inherent weakness in the use of GPA measures of student quality is that general grade inflation across time is a confounding factor.⁶ For this reason, the survey also collected self-reported information on standardized entrance examination scores. These data also indicate some increases in student quality between 2000 and 2006. Although not statistically significant, the percentage of accounting seniors reporting SAT scores of 1320 or above (or ACT scores of 30 or above) rose from 11 in 2000 percent to 15 percent in 2006, apparently continuing a statistically significant increase reported for 1995–2000 (Nelson et al. 2002).

The results for master's students are similar to those of seniors. We find significant increases in high school GPA (at the .01 level), as well as undergraduate college GPA (at the .10 level). The percentage of master's students with high school GPAs of 3.6 and above increased from 65 percent in 2000 to 72 percent in 2006. Those with undergraduate college-level GPAs in the 3.6 and above range rose from 41 percent in 2000 to 45 percent in 2006. Again, as with seniors, there was no statistically significant change in undergraduate accounting GPAs among master's students.

The change in master's students' graduate-level GPAs was not statistically significant. The raw data indicates that the percentage with graduate GPAs of 3.6 and higher was 50 percent in 2000 and 52 percent in 2006. The overall change in master's students' graduate-level accounting GPAs was also insignificant at any level, indicating that the apparent huge grade inflation in graduate accounting courses reported in 1993–2000 has leveled off. (Graduate accounting GPA of 3.6 and higher was reported as 37 percent in 1993, 46 percent in 1995, and 57 percent in 2000; see Nelson and Vendrzyk 1996; Nelson et al. 2002.)

Changes in standardized entrance exam scores are consistent with a rise in student quality for master's students. For the SAT/ACT exams, the percentage of students scoring 1320 or higher (ACT 30 or higher) increased dramatically from 15 percent to 25 percent between 2000 and 2006 (significant at the .01 level). A review of the other, lower-scoring categories reveals a drop in all of them during the 2000 to 2006 period. Similarly, top GMAT scores (610 and above) rose from 33 percent in 2000 to 36 percent in 2006 (also significant at the .01 level). However, the most interesting result pertaining to the GMAT score was a large increase in the percentage of students who had not taken the GMAT. In 2000, only 5 percent of master's students had not taken the GMAT, whereas in 2006, 16 percent reported not having taken the GMAT. This finding suggests that some schools may be dropping the GMAT as a requirement for entrance into their programs. Unfortunately, this marked increase in the number of graduate students not having taken the GMAT causes difficulty in interpreting the results in relation to graduate student quality.

The potential for confounding factors necessitates the use of caution when drawing conclusions regarding the quality of accounting students at both the undergraduate and graduate levels. In addition to any effects from possible grade inflation, standardized exam scores may be increasing for reasons other than student quality, such as better test preparation and multiple examination sittings. However, it is safe to say that our data does not support a hypothesis that undergraduate student quality is decreasing. Further, irrespective

⁶ There is general agreement that grade inflation has existed since the 1960s at both the high school and college levels and that it is pervasive, affecting both private and public institutions. Unfortunately, little empirical research exists on the topic. In a study of 22 public and private institutions, Rojstaczer (2003) reports that, while waning in the mid-1970s, grade inflation resurfaced beginning in the 1980s and has continued unabated since that time. He finds that institution-wide GPAs at public universities rose from 2.82 in 1992 to 2.87 in 1997 to 2.97 in 2002, with a similar trend occurring in private institutions. He argues that student quality increases cannot explain the magnitude of the inflation nor its nationwide nature and hypothesizes that it is caused by "the emergence of a consumer-based culture in higher education."

of any change in student quality, the results provide information suggesting the overall quality of both seniors and master's students in FSA accounting programs in the year 2006 is reasonably good,⁷ with high percentages of seniors and master's accounting students above the 50th percentile of the SAT/ACT and GMAT test scores.⁸

ACADEMIC MAJOR DECISION

Table 3 reports the timing of students' decisions to choose accounting as an academic major and the factors influencing these decisions. The timing of students' decisions to major in accounting appears to be taking place later. Although many accounting seniors first considered majoring in accounting while still in high school (31 percent in 2006), this percentage is dropping over time (from 40 percent in 2000, significant at the .01 level). This change is consistent with a similar drop reported in 1995–2000 (Nelson et al. 2002). This trend suggests that fewer accounting students are entering business colleges with preconceived notions that they want to be accountants.

Meanwhile, the percentage of students who actually made the decision to major in accounting during their sophomore year of college is increasing. Among seniors in 2000, 36 percent made their decision in the sophomore year. By 2006, this portion had risen to 40 percent (significant at the .01 level). While not statistically significant, a similar trend appears to exist for master's students, as well. Thus, the most common year for selecting accounting as a major remains the sophomore year in college, and the evidence suggests this is becoming increasingly typical. This finding underscores the importance of giving students a good impression of accounting during their first accounting courses, which students typically take during the sophomore year.

In an attempt to measure the effectiveness of the first course in accounting as a recruiting tool, the survey asked students what effect that course had on their attitudes toward the accounting profession. Although we find no statistically significant changes between 2000 and 2006, it is apparent that most students had a favorable impression of the course. In 2006, 72 percent of accounting seniors reported that their first accounting course had either a "positive" or "very positive" effect on their attitudes toward the accounting profession. For 2006 survey respondents, we examined the relation between student quality and their reaction to their first course in accounting. Untabulated ANOVA results confirm that this relation is positive and significant for the seniors, regardless if we measure student quality using undergraduate GPA ($F = 6.74, p = 0.01$) or SAT score ($F = 9.20, p = 0.01$). In addition, 26 percent of the seniors had both an undergraduate GPA of 3.6 or better and had a positive or very positive impression of their introductory course. Unfortunately, the survey yields no insight into how many bright business students may have been "turned off" to the accounting profession by the first accounting course, and selected other majors. Interestingly, one common factor among accounting majors is that the vast majority of them (85 percent of seniors and 88 percent of master's students in 2006) personally know someone, such as a relative, friend, or other acquaintance, who is an accountant.

Consistent with an apparent trend toward later career decision points, the percentage of students who had always planned on an accounting major is dropping (32 percent of seniors in 2000, 23 percent in 2006), while the percentage of students who had originally

⁷ Only students who attended class on the dates the survey was administered participated in the survey. To the extent that those who did not participate had lower GPAs than did those who participated, the reported averages are inflated.

⁸ During the time period that most of the respondents would have taken the SAT, ACT, and GMAT exams, score values in the 50th percentile were 1010, 21, and 520, respectively.

TABLE 3
Academic Major Decision

| | Seniors | | | Master's Students | | |
|---|-------------|-------------|----------|-------------------|-------------|----------|
| | 2000 (%) | 2006 (%) | χ^2 | 2000 (%) | 2006 (%) | χ^2 |
| When did you first seriously consider accounting as an academic major? | | | 17.22*** | | | 6.28 |
| During high school | 40.2 | 31.3 | | 31.7 | 27.6 | |
| Freshman in college | 19.6 | 22.3 | | 11.8 | 15.7 | |
| Sophomore in college | 30.6 | 34.1 | | 22.7 | 25.1 | |
| Junior in college | 8.5 | 11.0 | | 7.6 | 8.6 | |
| Senior in college | 1.1 | 1.3 | | 3.5 | 2.5 | |
| Later | NA | NA | | 22.7 | 20.5 | |
| At what point did you make the decision to major in accounting? | | | 16.26*** | | | 6.18 |
| During high school | 27.8 | 20.4 | | 23.4 | 19.7 | |
| Freshman in college | 20.4 | 20.6 | | 14.6 | 16.2 | |
| Sophomore in college | 35.9 | 39.9 | | 21.7 | 27.2 | |
| Junior in college | 14.1 | 16.8 | | 12.1 | 12.4 | |
| Senior in college | 1.8 | 2.3 | | 4.0 | 3.3 | |
| Later | NA | NA | | 24.2 | 21.2 | |
| What effect did the first year accounting courses have on your attitude toward the accounting profession? | | | 2.40 | | | 2.86 |
| Very positive | 32.5 | 33.5 | | 38.4 | 38.0 | |
| Positive | 37.0 | 38.5 | | 33.4 | 37.5 | |
| Neutral | 22.3 | 20.9 | | 21.1 | 17.7 | |
| Negative | 7.1 | 5.8 | | 6.3 | 5.8 | |
| Very Negative | 1.1 | 1.3 | | 0.8 | 1.0 | |
| Do you personally know someone who is an accountant? | | | 1.76 | | | 0.40 |
| No | 17.1 | 15.0 | | 13.6 | 12.2 | |
| Yes | 82.9 | 85.0 | | 86.4 | 87.8 | |
| Before you decided on an accounting major, what was your major? | | | 29.61*** | | | 8.51** |
| Undecided | 13.5 | 13.3 | | 10.1 | 8.1 | |
| Business | 27.7 | 37.4 | | 34.6 | 43.7 | |
| Non-business | 27.2 | 26.7 | | 29.6 | 25.3 | |
| Always planned on an accounting major | 31.6 | 22.6 | | 25.7 | 22.9 | |
| What single factor most influenced your decision to pursue accounting as a major? | | | 30.10*** | | | 7.25 |
| Availability of jobs | 22.5 | 33.3 | | 30.2 | 33.4 | |
| Money/good salaries | 22.8 | 18.4 | | 15.1 | 15.7 | |
| Lifestyle/prestige | 4.1 | 4.0 | | 3.5 | 3.3 | |
| Interesting/exciting profession | 19.2 | 17.8 | | 19.8 | 18.7 | |
| Intellectual challenge | 13.6 | 11.8 | | 11.8 | 14.9 | |
| Other (none of the above) | 17.8 | 14.7 | | 19.6 | 14.0 | |

** , *** Indicates significance at the .05 and .01 levels, respectively.

been some other business major and then switched to accounting is increasing (28 percent of seniors in 2000, 37 percent in 2006; significant at the .01 level). We report similar results among master's students (significant at the .05 level).

The reasons why students choose to major in accounting have also shifted significantly since 2000. In the 2000 survey, senior respondents were somewhat split between the "availability of jobs," "money/good salaries," "interesting/exciting profession," and "other" choices for why they chose accounting as a major. However, in 2006, over 33 percent of seniors identified the "availability of jobs" as the single most important factor that influenced their decisions to major in accounting. No other category of factors influencing senior students' decisions garnered more than 18 percent of the responses. While 33 percent of 2006 master's students also denoted the "availability of jobs" as the most significant factor in their decision to major in accounting, this represents little change from the 2000 survey.

This shift to "availability of jobs" as the most influential factor among seniors in deciding on an accounting major closely mirrors the FSA survey responses from the early 1990s. In fact, the 1991 survey results were remarkably similar to those from the 2000 survey. Moreover, between 1991 and 1995, the shift to "availability of jobs" as the dominant factor is nearly identical to the change that occurred between 2000 and 2006 (see Nelson and Vendirzyk 1996). These results are consistent with an interpretation that students' reasons for choosing to major in accounting are cyclical. In the mid-1990s, as now, the employment situation for accountants was very bright.

EXTRACURRICULAR INVOLVEMENT

The survey revealed no substantive change in the percentage of senior students who are members of Beta Alpha Psi (BAP). The percentage of seniors actively involved in BAP was 24 percent in 2000 and 25 percent in 2006 (see Table 4). Among master's students, however, we detected significant changes (at the .01 level). While 39 percent participated in BAP in 2000, only 26 percent participated in 2006. This finding reverses a trend reported in the early 1990s. Membership in BAP among master's students rose significantly from 1991 to 1995, peaked in 1995, has dropped since, and is now at its lowest level since the surveys began (Nelson and Vendirzyk 1996; Nelson et al. 2002). While BAP membership among seniors has been much more stable, and the changes have not always been statistically significant, the raw data shows a similar but far less pronounced pattern.

We detected no statistical differences at the senior or master's levels regarding the number of students involved in "any form of student organization." The percentage of those involved in some form of a student organization remained at just over 70 percent for seniors and roughly 65 percent for master's students.

While significant only for the master's students (at the .05 level), the percentage of students who had already completed or were currently completing internships increased. Nearly 49 percent of 2006 seniors and 60 percent of 2006 master's students had completed or were currently completing internships. This upward trend is consistent with the 1995 versus 2000 study, which documents very large increases in the number of students engaged in internships (nearly doubling between 1995 and 2000 for master's students; see Nelson et al. 2002).

When asked how many years should be required for certification as a public accountant, more than 75 percent of both the seniors and the master's students chose five years or more, with approximately 28 percent of the master's students choosing six years or more (see Table 4). However, untabulated Spearman correlation statistics detect a positive and significant correlation between the number of years students believe should be required for CPA certification and whether students are pursuing their degrees in states that require 150 hours of education for CPA certification ($p = 0.001$ for both the seniors and the master's students).

In 150-hour states, almost 80 percent of the seniors and 87 percent of the master's students chose five years or more in 2006. Although we detected no significant changes

TABLE 4
Extracurricular Involvement, Internship Experience, and Certification Requirement

| | Seniors | | | Master's Students | | |
|--|----------|----------|-----------------|-------------------|----------|-----------------|
| | 2000 (%) | 2006 (%) | F-Value | 2000 (%) | 2006 (%) | F-Value |
| I am an active member of: | | | | | | |
| Beta Alpha Psi | | | 0.21 | | | 17.23*** |
| Yes | 24.2 | 25.1 | | 38.8 | 26.4 | |
| No | 75.8 | 74.9 | | 61.2 | 73.6 | |
| Any student organization ^a | | | 1.34 | | | 0.29 |
| Yes | 70.2 | 72.6 | | 66.5 | 64.8 | |
| No | 29.8 | 27.4 | | 33.5 | 35.2 | |
| Internship Experience | | | 0.84 | | | 4.45** |
| Already Completed/Currently Completing | 47.2 | 48.6 | | 54.7 | 59.6 | |
| Accepted/Definite Plans | 10.6 | 11.5 | | 6.0 | 8.6 | |
| Maybe | 8.9 | 8.4 | | 9.6 | 7.5 | |
| No | 33.3 | 31.5 | | 29.7 | 24.3 | |
| How many years of college should be required to be required to become a CPA? (%) | | | $\chi^2 = 3.86$ | | | $\chi^2 = 3.63$ |
| 4 years | 25.1 | 24.3 | | 18.4 | 16.4 | |
| 5 years | 56.6 | 56.5 | | 58.1 | 55.7 | |
| 6 years | 16.3 | 16.7 | | 19.4 | 24.4 | |
| 7 years | 1.2 | 2.1 | | 2.8 | 2.5 | |
| More than 7 years | 0.8 | 0.4 | | 1.3 | 1.0 | |

** , *** Indicates significance at the .05 and .01 levels, respectively.

^a "Any student organization" includes Beta Alpha Psi, other accounting and business organizations, other academic organizations, honorary societies, and social, cultural, and athletic organizations.

between the 2000 and 2006 responses (for the overall sample and for students in 150-hour states), the percentages for the overall sample are consistent with those reported in the 2000 survey (Nelson et al. 2002). However, untabulated results detect a significant change among student responses in non-150 hour states. In 2000, approximately 70 percent of both the seniors and the master's students in non-150-hour states chose five years or more as the number of years they believed should be required for CPA certification. By 2006, these numbers had decreased significantly to 50 percent of the seniors ($\chi^2 = 15.8$, $p = 0.001$) and 61 percent of the master's students ($\chi^2 = 8.7$, $p = 0.013$) choosing five years or more. At the time of the 2000 survey, approximately 59 percent of the seniors and 73 percent of the master's students were studying in 150-hour states. By 2006, these percentages increased to 87 percent and 88 percent, respectively. In 2000, seven of the 20 schools in our study were in states in which the 150-hour requirement would become effective by 2006 (Illinois and North Carolina on January 1, 2001; New Mexico on July 1, 2004; and Virginia on July 1, 2006). An impending 150-hour requirement may have influenced the responses of the students in these states.

EDUCATION, CERTIFICATION, AND CAREER PLANS

The survey asked students their plans for post-graduate education with the question, "Do you plan to pursue additional education beyond the bachelor's degree?" While we detect no statistically significant changes between 2000 and 2006, we note that several

previously reported trends seem to be continuing. Consistent with the trend established between 1995 and 2000, fewer of the 2006 seniors responded that they intended to cease their education with only a bachelor's degree (see Panel A of Table 5). Additionally, more seniors in 2006 indicated that they intended to obtain 150 credit hours before entering the profession with additional undergraduate courses or by pursuing a master's in Accounting degree such as a M.P.A. or M.Acc. However, fewer students responded that they expected to pursue the Master of Business Administration (M.B.A.) degree. The latter finding continues the trend of declining interest in the M.B.A. that occurred between 1995 and 2000 (Nelson et al. 2002). Students appear to be increasingly interested in an accounting-based graduate degree rather than the more general M.B.A. degree.

The survey asked students if they plan to sit for the following professional examinations: Certified Public Accountant (CPA), Certified Management Accountant (CMA), Certified Internal Auditor (CIA), and Certified Information Systems Auditor (CISA). As shown in Panel B of Table 5, the CPA overwhelmingly remains the certification of choice among accounting students. We detected a shift in the percentage of master's students planning to sit for the CPA examination at a future date versus having already done so (significant at the .01 level). The timing of when master's students take the CPA exam has fluctuated over time. For example, Nelson et al. (2002) reports that approximately 16 percent had already taken the CPA exam in 1995, compared to about 7 percent in 2000. We also report 7 percent in 2000 followed by an increase to 18 percent in 2006. With changes and variations in state laws and regulations regarding when applicants can sit for the exam, it is possible that this temporary shift was related to 150-hour implementation and/or the move to computerization of the exam. The important statistic, however, is that the total percentage of master's students who have taken or are planning to take the CPA exam has remained at roughly 95 percent. Similarly, we detected no statistically significant change in the percentage of seniors who have taken or are planning to take the CPA exam (86 percent in 2000 and 89 percent in 2006).

The other three professional exams were far less popular, with percentages of students planning to sit for them ranging mostly in the teens and twenties. The CMA designation is apparently becoming less popular among both senior and master's students, with the raw data suggesting a continuation of a downward trend that commenced in 1995 (see Nelson et al. 2002). In 2006, only 18 percent of seniors and 18 percent of master's students planned to sit for the CMA exam. However, the CIA credential gained popularity among seniors, with an increase from 20 percent in 2000 to 28 percent in 2006 planning to sit for the CIA (significant at the .01 level). Similarly, 18 percent of master's students in 2000 and 22 percent in 2006 planned to sit for the CIA exam (although the difference was not statistically significant). From the 2006 survey, 13 percent of seniors and 12 percent of master's students plan to sit for the CISA exam. These statistics are virtually unchanged from year 2000.

The survey asked students about their career plans with the question, "What type of accounting is your first choice to pursue as a career after graduation?" Consistent with responses regarding professional examination plans, interest in public accounting as a career choice appears to be increasing, while interest in careers in industry appears to be decreasing. The percentage of seniors desiring careers in public practice was 61 percent in 2000 and 64 percent in 2006 (see Panel C of Table 5). The percentage of master's students interested in public accounting was 72 percent in 2000 and 75 percent in 2006. Although these changes were not statistically significant in the present study, the raw data implies a continuation of a trend reported in the 1995–2000 study wherein both seniors and master's students indicated increasing interest in public accounting across time (Nelson et al. 2002). Increased interest in public accounting is also consistent with the AICPA's finding that

TABLE 5
Education, Certification, and Career Plans

| | Seniors | | | Master's Students | | |
|--|-------------|-------------|----------|-------------------|-------------|----------|
| | 2000 (%) | 2006 (%) | χ^2 | 2000 (%) | 2006 (%) | χ^2 |
| Panel A: Education Plans | | | | | | |
| Do you plan to pursue additional education beyond the bachelor's degree? | | | 11.79** | | | 2.07 |
| Bachelor's degree only | 14.9 | 13.4 | | NA | NA | |
| Professional entry with only bachelor's, then evening course (on the job) to get 150 hours | 19.7 | 17.8 | | NA | NA | |
| 150-hour bachelor's before professional entry | 7.6 | 11.0 | | NA | NA | |
| M.P.A./M.Acc./M.S.Accg./M.S.Tax | 41.4 | 43.1 | | 84.3 | 85.2 | |
| M.B.A. | 16.1 | 13.9 | | 10.8 | 11.7 | |
| Ph.D. | 0.3 | 0.8 | | 4.9 | 3.1 | |
| Panel B: Certification Plans | | | | | | |
| Have you taken the CPA Exam? | | | 4.30 | | | 25.70*** |
| Yes | 1.2 | 1.1 | | 6.8 | 18.1 | |
| No, will take later | 84.4 | 87.6 | | 87.6 | 76.8 | |
| No, do not plan to take | 14.4 | 11.3 | | 5.6 | 5.1 | |
| Have you taken the CMA Exam? | | | 2.48 | | | 3.39 |
| Yes | 0.4 | 0.5 | | 0.8 | 1.5 | |
| No, will take later | 20.5 | 17.8 | | 20.6 | 16.7 | |
| No, do not plan to take | 79.1 | 81.7 | | 78.6 | 81.8 | |
| Have you taken the CIA Exam? | | | 18.18*** | | | 2.09 |
| Yes | 0.3 | 0.5 | | 0.7 | 1.3 | |
| No, will take later | 19.3 | 27.3 | | 18.1 | 21.0 | |
| No, do not plan to take | 80.4 | 72.2 | | 81.2 | 77.7 | |
| Have you taken the CISA Exam? | | | 1.65 | | | 0.43 |
| Yes | 0.3 | 0.7 | | 0.8 | 0.7 | |
| No, will take later | 12.6 | 13.1 | | 13.8 | 12.4 | |
| No, do not plan to take | 87.1 | 86.2 | | 85.4 | 86.9 | |
| Panel C: Career Plans | | | | | | |
| What type of accounting is your first choice to pursue as a career after graduation? | | | 15.08*** | | | 7.30 |
| Education | 0.7 | 0.9 | | 3.5 | 1.7 | |
| Government | 6.6 | 9.7 | | 4.8 | 7.6 | |
| Industry | 22.1 | 16.7 | | 14.1 | 12.1 | |
| Public accounting | 61.2 | 64.4 | | 71.8 | 73.1 | |
| Not planning a career in accounting | 9.4 | 8.3 | | 5.8 | 5.5 | |

** , *** Indicates significance at the .05 and .01 levels, respectively.
NA indicates the data is not available.

public accounting firms employed the largest percentage of new 2003–2004 graduates, at both the bachelor's and master's levels (Sanders 2005).

Also continuing the trend established between 1995 and 2000, interest in industry as a career choice appears to be on the decline at both the senior and master's levels. We detect no significant changes in the percentage of seniors and master's students for whom industry would be their first career choice. The percentage of students desiring careers in industry is 22 percent on 2000 versus 17 percent in 2006, a statistically insignificant decrease. Similarly, the percentage of master's students making this choice was 14 percent in 2000 and 12 percent in 2006. While not statistically significant, it is worthy of note that the percentage of master's students who plan to pursue Ph.D.s was lower in 2006 (3.1 percent) than in 2000 (4.9 percent), concurrent with a corresponding drop in those planning a career in education (3.5 percent in 2000, 1.7 percent in 2006).

DISCUSSION AND IMPLICATIONS

This study reports the results of surveys of senior accounting majors and accounting master's students at 20 schools that are members of the Federation of Schools of Accountancy (FSA). The surveys measured changes in student characteristics between the years 2000 and 2006.

Although the percentage of minority students (excluding international students) among seniors increased significantly during this time, we report no similar increase at the graduate level. This finding has important implications for the public accounting profession. Since most states require 150 hours for certification, it is possible that fewer minorities will be entering the profession with master's degrees than are enrolling as accounting majors. Future research needs to address why fewer minorities are continuing beyond the baccalaureate level. If this phenomenon relates to financial considerations (i.e., rising graduate tuition rates and socioeconomic status), more may need to be done in the way of scholarships and financial aid for economically disadvantaged students. If it relates to other factors, such as a lack of role models, the profession needs to address that problem. In any case, the finding is troubling, particularly in light of the very high interest in careers in public accounting reported by students at both the undergraduate and graduate levels.

We detect a shift in the gender mix at the graduate level with a drop in the percentage of female master's students, although females still comprise a small majority at both the graduate and undergraduate levels. Interestingly, in 1995 females were significantly under-represented in master's programs. In 2000, it was the reverse with males significantly under-represented. The current gender mix at the graduate level is consistent with the undergraduate mix, which has remained stable throughout the last 15 years.

The results of the study are consistent with previously reported trends toward younger, more full-time students at both the senior and master's levels, with more students in the under-25, full-time group. This suggests that more students are going straight through school, with fewer nontraditional paths to an accounting degree. Additionally, more students are completing internships.

As in past studies, measures of scholastic aptitude and performance imply an increase in student quality. Although the results must be interpreted with caution because of possible grade inflation, accounting educators and professionals may be encouraged that student quality appears to be increasing or, at a minimum, that it is certainly not decreasing. Both high school and college GPAs rose significantly between 2000 and 2006 for both seniors and master's students. Although not significant in this study, the results are consistent with trends reported in past studies of upward trends in SAT/ACT scores among seniors. Additionally, among master's students, SAT/ACT and GMAT scores increased significantly between 2000 and 2006. Thus, it would appear that accounting is still attracting good students. Incidentally, fewer students are taking the GMAT exam, implying that some

schools may be dropping the GMAT as a requirement for entrance into their graduate programs.

The findings regarding the factors influencing students' decisions to choose accounting as an academic major and the timing of those decisions have important implications for those engaged in creating and implementing strategies to recruit qualified students into accounting programs. Students are deciding to major in accounting later in their academic careers. More students are making this decision during their sophomore years of college, while fewer are doing so while in high school. Concurrently, the percentage of students who always planned on an accounting major is dropping, while the percentage of those who originally planned on another business major and switched to accounting is increasing. These findings imply that, while outreach programs to high school students may still be appropriate, recruiting efforts might be more effectively directed toward students in their sophomore years in college. They also highlight the importance of the first college course in accounting as a recruiting tool (AECC 1992). Unfortunately, however, the study found no change between 2000 and 2006 in how well students reacted to the first course in their perceptions of accounting. The finding that so many accounting students personally know an accountant implies that relatively few students who do not personally know an accountant are choosing accounting as a major. Perhaps negative stereotypes of accounting may indeed influence students who do not have personal experience with role models to offset and dispel the stereotypes.

The findings regarding reasons why students choose accounting as an academic major are fascinating. The period 2000–2006 experienced a shift almost identical to one that occurred in 1991–1995, with “availability of jobs” increasing in importance. Clearly, with the implementation of SOX, the job market for accountants has been very good in recent years. This implies that efforts to recruit accounting majors may be more effective if periodically adapted to reflect students' primary concerns.

Beta Alpha Psi (BAP) membership is stable at the undergraduate level but has dropped among master's students. Past surveys reveal that BAP membership among graduate students increased between 1991 and 1995, peaked between 1995 and 2000, and dropped from 2000 to 2006. Because many believe that outside-of-class experiences are helpful, if not critical, in developing the knowledge, skills, and abilities (KSAs) desired by the profession (*Perspectives* 1989; AECC 1990), this finding is disturbing. On the other hand, perhaps this shortfall is being offset by increases in the number of students completing internships.

Although we find no significant change in the number of students pursuing graduate degrees between 2000 and 2006, our results are consistent with trends reported in prior surveys that indicate more students are planning to pursue graduate degrees and that more of them are doing so immediately after graduating with their bachelors' degrees, rather than waiting until a later time. This finding is hardly surprising, given the implementation of the 150-hour rule in many states. What is interesting is that, even though the 150-hour rule allows more general studies, more students are pursuing professional accounting degrees rather than M.B.A.s.

Of particular concern to accounting educators and to the profession is that fewer students are planning to pursue Ph.D.s and fewer are planning on careers in education. While not statistically significant, this possible trend is particularly disconcerting given a projected shortfall in accounting Ph.D.s in coming years (Sharman 2007). Unfortunately, this does not bode well for Fogarty and Markarian's (2007) hope that SOX might persuade a large number of students to pursue a doctorate in accounting. Rather, our results suggest that the decline of tenure-track faculty, especially at the Assistant Professor level, as reported by Fogarty and Markarian (2007) will continue.

Both seniors and master's students indicated strong interest in careers in public accounting and plans to sit for the CPA examination. Coupled with the findings that more students are pursuing the accounting major as a result of job availability, these results suggest that the impact of job creation associated with the passage of SOX more than offset the negative press aimed at public accounting, such as lawsuits and governmental probes, as it pertains to student perceptions and ultimate college major choice.

Meanwhile, fewer students are indicating an interest in careers in industry, and fewer are planning to sit for the CMA examination. On the other hand, more students plan to sit for the CIA examination. Obviously, these results have important strategic implications for professional organizations such as the American Institute of Certified Public Accountants, Institute of Management Accountants, and Institute of Internal Auditors, as well as to recruiters. They also have curricular implications as various schools consider strategic niches in the education marketplace (Nelson et al. 1998).

The study reveals a continuing high level of support among both seniors and master's students in 150-hour states for a requirement for five or more years of college education. Although there was no significant change in overall attitudes toward the 150-hour requirement between 2000 and 2006, more than 25 percent still think that certification should require six or more years. However, the number of years students believe should be required for CPA certification is positively and significantly related to whether the students are pursuing degrees in states that require 150 hours for CPA certification.

LIMITATIONS AND CONCLUSION

The data and trends reported in this study are subject to several important limitations. First, the findings may not generalize to accounting programs at schools or departments that are not members of the Federation of Schools of Accountancy (FSA). Students in this study were all located at institutions with accredited graduate programs in professional accounting. Since differences may exist between FSA-member and non-FSA-member institutions, the generalizability of this study's findings to the greater population of accounting programs within the United States, and certainly to programs outside the U.S., is limited.

A second limitation relates to a problem common to survey research, in general. Despite efforts to obtain responses from all accounting students at participating schools, differences may exist between students who actually completed the questionnaires and those who failed validity checks, chose to not complete the surveys, or were absent from class on the days the questionnaires were administered.

A final limitation relates to the use of self-reported measures. Some students may have knowingly reported inaccurate information. Additionally, some responses may be inaccurate for other reasons, including forgetting. This is particularly a concern with items dealing with information in the past such as high school GPAs and SAT/ACT scores of master's students.

We recommend additional research to determine why minority students may not be continuing through the master's level. We also suggest that the FSA continue to conduct this survey periodically, to enable the continued tracking of the student characteristics reported in this article. After all, these students are the future of both public and private accounting. It is hoped that the longitudinal data will continue to provide insights and implications for such issues as student recruitment strategies, minority representation in accounting programs, the 150-hour requirement, the introductory accounting, extracurricular programs and internships, professional certification and examinations, and other relevant topics in accounting education.

APPENDIX
LIST OF PARTICIPATING SCHOOLS INCLUDED IN THIS STUDY

The University of Alabama
 Auburn University
 University of Delaware
 University of Denver
 George Mason University
 Kansas State University
 Louisiana Tech University
 Loyola College
 Miami University
 University of Nebraska—Lincoln
 New Mexico State University
 State University of New York at Buffalo
 Northern Illinois University
 Old Dominion University
 Southern Illinois University
 Texas A&M University
 The University of Texas at Arlington
 Utah State University
 Virginia Polytechnic Institute & State University
 Wake Forest University

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