

# Accounting Students' Perceptions of Important Skills for Career Success

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During the past decade, the message to accounting educators has been clear: Students require more than technical skills to be successful in today's business environment. The American Accounting Association (AAA, 1986), the American Institute of Certified Public Accountants (AICPA, 1988), the largest public accounting firms (*Perspectives*, 1989), and the Accounting Education Change Commission (AECC, 1990) all have recommended changes to the accounting curriculum. Employers want to hire students who work well with others, have good communication skills, and have strong leadership skills.

Motivating students to improve their nontechnical skills is an important goal for accounting educators. Students are unlikely to work diligently for improvement unless they are convinced that these skills are critical to success in the work environment. The purpose of this study was to assess students' perceptions of the importance of these nontechnical skills relative to technical accounting skills, and to relate perceptions to demographic characteristics. The results indicate the particular types of students who could benefit most from increased emphasis on the importance of nontechnical skills.

Studies have repeatedly argued that business students must develop more than technical skills to succeed (Aiken,

**ABSTRACT.** Given numerous calls from the accounting profession to emphasize nontechnical skills in accounting programs, it seems appropriate and important to ascertain whether that message has reached students. In this study, we surveyed approximately 270 students attending undergraduate and graduate accounting classes at the same college to assess their perceptions of the importance of nontechnical and technical accounting skills. We related students' perceptions to student characteristics. Analyses of the responses show some differences across demographic groups. The results indicate that undergraduate students could benefit from greater awareness of the importance of nontechnical skills and that female students should be more aware of the importance of leadership skills.

Martin, & Paolillo, 1994; Deppe, Sonderegger, Stice, Clark, & Streuling, 1991; Novin & Tucker, 1993; Rader & Wunsch, 1980). Accounting students are generally perceived as having inadequate communication skills (Andrews & Sigband, 1984; Gingras, 1987; Novin, Pearson, & Senge, 1990). The importance of strong communication skills has long been recognized by researchers and professionals. Estes's (1979) results show that practicing accountants and educators consistently ranked communication skills as more important than specific technical skills. However, Rebele (1985) surveyed stu-

dents and did not find similar results. His data suggested that accounting students ranked technical skills higher.

Since Rebele's study, much attention has been devoted to the importance of communication and other nontechnical skills in the academic and professional literature. Changes in the accounting curriculum have often been suggested (AICPA, 1988; *Perspectives*, 1989), as well as ways to improve the teaching of nontechnical skills (Gabriel & Hirsch, 1992; Hirsch & Collins, 1988; Laufer & Crosser, 1990; Ruchala & Hill, 1994; Scofield & Combes, 1993; Stocks, Stoddard, & Waters, 1992). The activities of the AECC and numerous articles have heightened educators' awareness of the need to incorporate communication and other nontechnical skills into the accounting curriculum.

Whether that heightened awareness has affected the importance that students place on nontechnical skills remains a question. For this study, we measured the perception of students at an AACSB-accredited college and related those perceptions to the students' demographic characteristics, to determine whether there were particular types of students who would benefit from activities that stress the importance of these skills in the accounting profession. We specifically examined students' perceptions of communication

skills, leadership ability, and the ability to work with others.

Because our observations were limited to one institution, we must be cautious in interpreting our findings. Educators act as intermediaries in informing students about the profession's emphasis on nontechnical skills. Though professors' opinions will likely affect the opinions of their students, the students in the study had been exposed to a variety of instructors in an accounting department comprising more than 25 full-time faculty members. On the other hand, we have no reason to believe that members of our faculty were not representative of those at other institutions.

## Method

To assess how the students ranked various technical and nontechnical skills and to determine whether student and demographic characteristics were associated with different rankings, we administered a questionnaire to more than 270 graduate and undergraduate students beginning a 15-week semester. The students completed the questionnaire in the first or second class meeting. The undergraduate students were all accounting majors enrolled in Cost Accounting or Advanced Accounting. The graduate students were enrolled in a required graduate Cost Accounting course. Most of the students indicated that they planned to pursue employment related to accounting.

The students were asked to rank 15 skills on a scale ranging from 1 (*most important*) to 15 (*least important*) to success in the accounting practice. The questionnaire also asked for an absolute rating for each skill on a 5-point Likert scale ranging from 1 (*essential*) to 5 (*useless*). The questionnaire collected demographic data as well as other background information about each respondent.

## Results

### Sample Demographics

In Table 1 we report demographic information about the respondents. Because some students did not answer every question, the total number of students varies by category. The sample

**TABLE 1. Demographic Data of Respondents**

Item	No.	%
Male	132	49
Female	136	51
Total	268	100
GPA < 3.0 <sup>a</sup>	82	31
GPA ≥ 3.0	184	69
Total	267	100
Age ≤ 21 years	129	47
Age > 21 years	143	53
Total	272	100
Undergraduate	227	83
Graduate	45	17
Total	272	100
Continuing education <sup>b</sup>	87	39
Day	138	61
Total	225	100
Seniors	52	24
Juniors	143	66
Certificates <sup>c</sup>	21	10
Total	216	100

<sup>a</sup>Self-reported grade point average (on a 4.0 scale). <sup>b</sup>Students enrolled in continuing education are typically part-time students who are employed. Some are degree candidates and therefore can be classified as juniors or seniors based on the number of courses completed. The others are working toward a certificate and therefore cannot be classified as juniors or seniors. <sup>c</sup>Certificate students have completed an undergraduate degree in a field other than accounting and are working toward a certificate in accounting. They are required to take all the accounting courses needed to major in accounting.

was nearly evenly divided between male and female students, and more than a third of the respondents were over 26 years old. The majority of respondents (83%) were undergraduate students. Of the total undergraduate sample, about 61% were traditional day students, and the remainder were continuing education students (most of them part time). A small proportion of the continuing education students were "certificate" students. They had college degrees in disciplines other than accounting and took the same undergraduate accounting courses as accounting majors to earn a certificate in accounting. Self-reported grade point averages (GPAs) show that about 69% of students responding had a GPA greater than a 3.0 on a 4.0 scale.<sup>1</sup>

### Skill Rankings

Students rated each skill on both the 5-point and the 15-point scales. In Table

2, we report the means and standard deviations for both the absolute ratings and the relative rankings of the 15 technical and nontechnical skills. According to the absolute ratings, students believed most of the skills listed were very important or essential; two thirds of the items received a mean rating of less than 2. The highest rated skills were accounting knowledge (1.32), professionalism (1.37), logical reasoning (1.45), and problem solving (1.49). The four nontechnical skills, leadership, oral communication, written communication, and working well with others, had mean ratings between 1.5 and 2.0. Only auditing knowledge, economics, law, memorization, and statistics had mean ratings below 2.0. Students surveyed seemed unwilling to admit that any skill is unimportant to their careers in accounting.

The students' perceptions reflected in the mean relative rankings indicate that accounting knowledge was considered

to be the most important skill by far. Statistics and memorization were ranked as the least important. The four nontechnical skills examined had mean relative rankings between 6.4 and 8.4,

but the high standard deviations observed in Table 2 indicate that students' perceptions varied considerably. Histograms that summarize the frequency distributions of students' rankings of

leadership, oral communication, written communication, and working well with others are presented in Figure 1. These clearly show students' lack of consensus about the importance of nontechnical skills to an accounting career.

**TABLE 2. Perceptions of the Importance of Skills for Career Success**

Skill	Mean scale <sup>a</sup> (1–5)	SD	Mean rank <sup>b</sup> (1–15)	SD
Accounting knowledge	1.32	.53	2.75	2.75
Auditing knowledge	2.13	.80	8.36	3.62
Computer knowledge	1.54	.67	6.48	3.42
Economics	2.93	.76	12.18	2.88
Law	2.43	.81	10.01	3.48
Leadership	1.96	.85	8.39	3.78
Logical reasoning	1.45	.59	5.54	3.57
Memorization	2.73	.79	11.58	3.50
Oral communications	1.56	.68	6.49	3.66
Professionalism	1.37	.58	6.32	3.58
Problem solving	1.49	.62	5.90	3.47
Statistics	2.89	.84	13.12	2.15
Time management	1.61	.70	7.41	3.44
Written communications	1.66	.72	7.94	3.56
Working well with others	1.59	.74	7.39	3.67

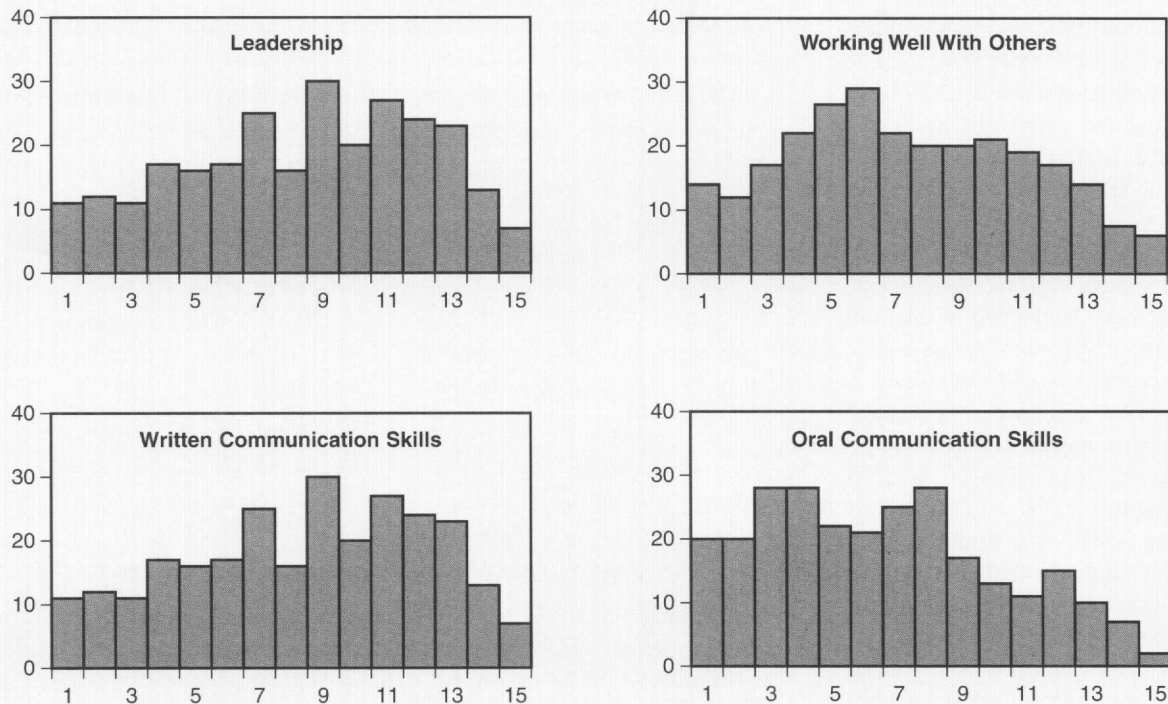
<sup>a</sup>Students rated each skill listed on a scale ranging from 1 (*essential*) to 5 (*useless*). Each skill was rated independent of others, therefore a student could have given every skill the same rating. <sup>b</sup>Students ranked each skill listed on a scale ranging from 1 (*most important*) to 15 (*least important*). In this question, each student compared the skills listed and indicated his or her perception of their relative importance. Responses that did not provide relative rankings are not included in the analyses.

*Are Demographic Characteristics Associated With Perceptions?*

For each of the four nontechnical skills, we categorized the responses into three levels—*high*, *medium*, and *low*—based on the importance ranking that the student assigned to the skill. We then conducted a series of chi-square tests to determine if demographic characteristics were related to students' rankings. Responses of students who did not rank the skills from 1 to 15 according to the directions in the questionnaire were excluded from the analyses.<sup>2</sup> There were 267 valid responses included in the analyses that follow.

Rather than applying an arbitrary cutoff to classify responses into the high, medium, and low groups, we defined the categories using the frequency distributions.<sup>3</sup> We sorted the students'

**FIGURE 1. Frequency Distributions of Students' Rankings of Nontechnical Skills**



responses for each skill from highest to lowest based on the importance ranks assigned to that skill by students. We then divided the responses approximately<sup>4</sup> into thirds: The third who ranked the skill as most important was designated as the high group; the third who ranked the skill as least important was designated as the low group. In Table 3, we report the number of responses included in each category. These groupings produced an approximately equal number of observations in each "row" of the chi-square tests. Therefore, almost all variation observed in the tests was the result of differences in the student characteristic being examined.

We found some demographic factors that were significantly associated with differences among the importance categories. The results of univariate chi-square tests of the entire population are reported in Table 4, Panel A. An interesting gender effect was observed. Male students were more likely than female students to rank leadership skills higher ( $p < 0.001$ ). There are no other significant differences related to gender.

The other strong result relates to graduate students. Compared with undergraduate students, graduate students ranked written communications much higher ( $p < 0.001$ ). Graduate students also ranked oral communication skills and working well with others higher, but the differences were not statistically significant ( $p = 0.12$  and  $p = 0.15$ , respectively). The distribution of rankings for leadership were different for graduate students relative to undergraduates, though the difference was not significant ( $p = 0.14$ ). A higher percentage of graduate students than undergraduates ranked leadership in the middle category.

Because graduate student status is positively correlated with both age and GPA, we must be careful when interpreting the results for those characteristics. The results for age and GPA reported in Panel A of Table 4 mirror those reported for graduate students for both written communication skills and leadership skills. Older students and students with higher GPAs ranked written communication skills higher and leadership skills lower. We examined the graduate and undergraduate student responses

separately to determine whether the graduate students' responses were driving the results for age and GPA. Univariate chi-square tests on the graduate students' responses indicate that graduate students were homogeneous in their perceptions of the importance of non-technical skills. All demographic factors tested were independent with respect to the importance rankings. In Panel B of Table 4, we summarize the results for undergraduate students. Note that for written communication skills and leadership skills, the differences observed in Panel A for age and GPA disappear. The effects of age and GPA only exist when

the graduate students are included in the sample. This suggests that it may be graduate status that is responsible for the differences observed.

The "working well with others" category provides an interesting story. As mentioned above, graduate students tended to rank working well with others slightly higher than undergraduates. However, we found that older students ranked it lower than did younger students. This finding related to age prompted us to examine differences between day undergraduates and continuing education students. Results presented in Panel B of Table 4 suggest that

**TABLE 3. Categories Used for the Chi-Square Tests for Independence**

Skill	Ranks and no. of responses categorized as		
	High	Medium	Low
Written communications	1-6 ( <i>n</i> = 98)	7-10 ( <i>n</i> = 79)	10-15 ( <i>n</i> = 90)
Oral communications	1-4 ( <i>n</i> = 96)	5-8 ( <i>n</i> = 96)	9-15 ( <i>n</i> = 75)
Leadership	1-6 ( <i>n</i> = 84)	7-10 ( <i>n</i> = 91)	11-15 ( <i>n</i> = 92)
Working well with others	1-5 ( <i>n</i> = 91)	6-9 ( <i>n</i> = 93)	10-15 ( <i>n</i> = 83)

*Note.* The number of responses in each category represents those analyzed in the chi-square tests that combine undergraduate and graduate students (Table 4, Panel A). The same boundaries apply to the high, medium, and low categories used for testing undergraduates only; however, the number of responses in each category is fewer.

**TABLE 4. Results of Univariate Chi-Square Tests of Students' Perceptions**

	Written communication	Oral communication	Leadership	Works well with others
<i>Panel A: Nontechnical skills and selected demographic characteristics of all students</i>				
Gender	0.19	1.27	14.08***	1.83
Age	8.38*	4.00	10.38**	10.04**
GPA	8.94*	0.67	6.98	3.71
Graduate vs. undergraduate	11.95***	4.21	3.86	3.83
<i>Panel B: Nontechnical skills and selected demographic characteristics of undergraduate students</i>				
Gender	0.93	0.44	12.80***	2.52
Age	3.07	5.69	7.67	9.93**
GPA	5.34	0.25	7.40	5.67
Day/ continuing education	1.74	1.06	9.00**	9.25***

\* $p < 0.10$ . \*\* $p < 0.05$ . \*\*\* $p < 0.01$ .

**TABLE 5. Impact of Undergraduate Status on Perceptions of the Importance of Writing Skills**

Population examined <sup>a</sup>	Comparison	$\chi^2$ statistic	<i>p</i> value
Day and continuing education ( <i>n</i> = 212)	Certificates vs. seniors vs. juniors	7.50	<i>p</i> = .11
Day and continuing education ( <i>n</i> = 212)	Certificates and seniors vs. juniors	5.44	<i>p</i> = .07
Day only ( <i>n</i> = 135)	Seniors vs. juniors	3.67	<i>p</i> = .16
Continuing education only ( <i>n</i> = 75)	Certificates vs. undergraduates	4.25	<i>p</i> = .12

<sup>a</sup>See Table 1 (notes b and c) for a description of student status.

traditional day students ranked leadership skills ( $p < 0.05$ ) and working well with others ( $p < 0.01$ ) higher relative to the continuing education students.

Chi-square tests on subsets of the population show few statistically significant differences related to class standing. In Table 5, we present comparisons among various categories of undergraduate students related to written communication skills. A comparison of certificate students, seniors, and juniors shows that the more experienced students ranked written communication skills higher (though not statistically significant). Combining the most experienced groups, certificates and seniors, produces a statistically significant result ( $p < 0.10$ ). The tendency in all the comparisons was similar; more experienced students ranked writing somewhat higher than did the less experienced students.

## Discussion

The results indicate that though some students recognize the importance of nontechnical skills, many continue to rank them much lower in importance than technical accounting skills. Graduate students appear to be more aware of the profession's emphasis on nontechnical skills; those in this sample rated written communication skills significantly higher than did the undergraduate students. Seniors and certificate stu-

dents tended to rank written communication skills higher than did juniors. On balance, the results find modest support for the argument that students' awareness of the importance of nontechnical skills, particularly of written communication, is heightened as they progress in education and experience.

Contrary to that interpretation are the results noted for continuing education students. The continuing education students perceived leadership and working well with others to be significantly less important than did day students. Because many of these students were working full time, it appears that increased level of college education, rather than work experience, is associated with higher rankings for nontechnical skills. The result may also be the evening students' frustration at having group projects assigned in accounting classes. Both skills—leadership and working well with others—are directly associated with group work, and often the evening students are most vocal about the difficulties involved in managing the logistics of group assignments.

Another interesting finding is that male undergraduates ranked leadership skills higher than did female undergraduates. There was no similar gender difference among the graduate students. This result indicates a need for accounting professors to stress the link between leadership skills and career success, especially to female students. Advisors

within accounting departments must also encourage female students to seek opportunities to develop their leadership potential.

## Conclusion

The results of this study show that many students still do not appreciate the value that employers place on nontechnical skills, whereas others consider those skills to be critical to their success. Students with more seniority (graduate students relative to undergraduates and seniors relative to juniors) appear to rate nontechnical skills higher on average (except for leadership skills). The various activities incorporated in the junior level accounting courses that stress nontechnical skills, such as cases and written projects, may be responsible for these findings. It is also possible that students' educational experiences differ, thus leading to the higher variation in pedagogical approaches on students' perceptions.

Educators must evaluate what amount of time and effort should be directed to heighten students' awareness of the importance of nontechnical skills. These results indicate that undergraduate students, juniors in particular, still may not appreciate the importance of these skills to their future success. Accounting professors must design projects and activities that will successfully increase students' awareness of how important nontechnical skills are to a successful career in accounting.

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## NOTES

1. This proportion seems unusually high, especially for the undergraduate population. We believe there is an upward bias in the self-reported grade point averages.
2. Some students did not rank all items (incomplete responses), and some reported the same rank for more than one skill (e.g., more than one skill ranked number one).
3. We wish to thank an anonymous reviewer for suggesting the use of tripartite to define the high, medium, and low categories for each non-

technical skill. We also analyzed the data by classifying high as ranks 1-5, medium as ranks 6-10, and low as ranks 11-15. Our results were qualitatively similar for both approaches.

4. If we divide the sample into equal thirds, different responses that ranked a skill exactly the same would occasionally be separated into different groupings. For example, to create equal triptiles for leadership, the top triptile should contain the 89 responses that ranked leadership the highest. Unfortunately, using that criteria, both the 89th and 90th responses ranked leadership a 7 out of 15. Of the 24 responses that ranked leadership as a 7 there would be 5 classified in the high group and 19 classified in the medium group. Because there is no reasonable rationale for grouping responses in that manner, we constructed the triptiles that cut off between ranks. For leadership that means the top triptile contains only 84 responses.

#### REFERENCES

- Accounting Education Change Commission (AECC). (1990). Objectives of education for accountants: Position statement number one. *Issues in Accounting Education*, 5, 307-312.
- Aiken, M. W., Martin, J. S., & Paolillo, J. G. P. (1994). Requisite skills of business school graduates: Perceptions of senior corporate executives. *Journal of Education for Business*, 69(3), 159-162.
- American Accounting Association (AAA) Committee on the Future Structure, Content, and Scope of Accounting Education (The Bedford Committee). (1986). Future accounting education: Preparing for the expanding profession. *Issues in Accounting Education*, 1, 168-195.
- American Institute of Certified Public Accountants (AICPA) Education Executive Committee. (1988). *Education requirements for entry into the accounting profession*. New York: American Institute of Certified Public Accountants.
- Andrews, J. D., & Sigband, N. B. (1984). How effectively does the 'new' accountant communicate? Perceptions by practitioners and academics. *The Journal of Business Communication*, 21, 15-24.
- Deppe, L. A., Sonderegger, E. O., Stice, J. D., Clark, D. C., & Streuling, G. F. (1991). Emerging competencies for the practice of accountancy. *Journal of Accounting Education*, 9, 257-290.
- Estes, R. (1979). The profession's changing horizons: A survey of practitioners on the present and future importance of selected knowledge and skills. *The International Journal of Accounting*, Spring, 47-70.
- Gabriel, S. L., & Hirsch, M. L. (1992). Critical thinking and communication skills: Integration and implementation issues. *Journal of Accounting Education*, 10, 243-270.
- Gingras, R. T. (1987). Writing and the certified public accountant. *Journal of Accounting Education*, 5, 127-137.
- Hirsch, M. L., & Collins, J. D. (1988). An integrated approach to communication skills in an accounting curriculum. *Journal of Accounting Education*, 6, 15-31.
- Laufer, D., & Crosser, R. (1990). The "writing-across-the-curriculum" concept in accounting and tax courses. *Journal of Education for Business*, 65(2), 83-87.
- Novin, A. M., Pearson, M. A., & Senge, S. V. (1990). Improving the curriculum for aspiring management accountants: The practitioner's point of view. *Journal of Accounting Education*, 8, 207-224.
- Novin, A. M., & Tucker, J. M. (1993). The composition of 150-hour accounting programs: An empirical investigation. *Issues in Accounting Education*, 8, 273-291.
- Perspectives on education: Capabilities for success in the accounting profession*. (1989). New York: Managing Partners of the Big Eight Accounting Firms.
- Rader, M. H., & Wunsch, A. P. (1980). A survey of communication practices of business school graduates by job category and undergraduate major. *Journal of Business Communication*, 7, 33-41.
- Rebele, J. E. (1985). An examination of accounting students' perceptions of the importance of communication skills in public accounting. *Issues in Accounting Education*, 8, 41-50.
- Ruchala, L. V., & Hill, J. W. (1994). Reducing accounting students' oral communication apprehension: Empirical evidence. *Issues in Accounting Education*, 12, 283-303.
- Scofield, B. W., & Combes, L. (1993). Designing and managing meaningful writing assignments. *Issues in Accounting Education*, 8, 71-85.
- Stocks, K. D., Stoddard, T. D., & Waters, M. L. (1992). Writing in the accounting curriculum: Guidelines for professors. *Issues in Accounting Education*, 7, 193-204.

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