

# The Structure of Graduate Tax Programs: Broad-Based or Concentrated in Tax?

Dr. Paul Erickson, Reamer Professor of Accounting, Baylor University  
Dr. Danny Hollingsworth, Arthur Andersen Professor of Accounting, Baylor University

## Abstract

*Graduate tax curriculums range from highly concentrated in tax to broad-based. This paper examines perceptions of major accounting firms' employees regarding their tax, research, management, computer, and communication skills. Perceptions of broad-based graduates did not differ significantly from that of tax-concentrated graduates. Perceived management skills are greater for graduates with courses in a variety of disciplines. Perceived computer skills are lower for graduates with technical noncomputer courses.*

## Introduction

Graduate tax programs proliferated during the 1980s. Programs have ranged from a very broad base, which include courses in a variety of disciplines, to total tax orientation. Tax offerings range from one to sixteen required tax courses [Broden and Lubell, 1990]. Even though considerable diversity exists among tax programs, no significant published research has reported graduates' attitudes toward existing programs or their opinions as to the ideal curriculum. Most educational research in this area has focused on the need for increased tax knowledge, topics for undergraduate tax courses, and communication skills of accounting graduates.

At the 1988 American Institute of Certified Public Accountants (AICPA) Graduate Tax Symposium, Dick Thomas, then partner in charge of education at Arthur Andersen and Company, discussed "The Tax Professional of the Future." Thomas stressed the need for a balance between technical tax knowledge and broad business, communication, and interpersonal skills. Some academicians think a diversity of types of tax programs should serve different constituents. However, according to Thomas, certain basic skills are needed by all tax professionals to achieve success. One major complaint from accounting firms is that many employees with graduate tax degrees have inadequate computer, management, and communication skills.

The authors conducted a survey of employees of major accounting firms holding graduate tax degrees to gain insight into the features of an ideal graduate tax program. The survey probed respondents' perceptions of their acquired tax, computer, management, and communication

skills, and asked them to evaluate their tax programs. Also, the survey requested that the accountants describe the most desirable tax program. This paper discusses our results in order to spawn more research in the quest for improved curricula in graduate tax programs.

## Prior Research

Graduate tax education has developed over the years to meet the demands for increased tax knowledge. Carey [1965] stressed the need for increased tax education after finding tax training for CPAs grossly inadequate. Solari and Summa [1972] concluded that undergraduate accounting education needed... "more emphasis on technical courses in taxation." Universities and colleges responded to this need by adding new tax courses and began offering graduate degrees in tax. Sommerfeld [1966] found only two graduate tax programs in business schools. By 1988, 102 business schools were offering a graduate tax degree. The growth of tax education has caused many professionals to ponder the appropriate content of graduate tax education.

Several studies of desirable topics for undergraduate tax courses have been conducted. The usefulness of these studies is extremely limited for determining the quality of graduate tax programs because of the limited time allocated to taxation in undergraduate programs. Also, numerous studies have reported on the communication skills of accounting graduates. Estes' [1979] survey of accountants in public, private, government, and education found that both oral and written communication skills were extremely important in their employment.

Andrews and Koester [1979] in a similar survey discovered a general dissatisfaction with accounting graduates' writing skills. Similarly, Ingram and Frazier [1980] reported that practitioners believed staff accountants had inadequate communication skills, especially writing. Gingras [1987] found that most accountants with undergraduate degrees believed their education did not sufficiently prepare them for their jobs. However, those with advanced degrees (Masters, J.D., Ph.D.) considered their educational preparation adequate.

Several surveys have also been conducted among students and recent accounting graduates to determine their perceptions of the importance of communication skills. Addams [1981] surveyed employees of major accounting firms in their initial year. Respondents considered their written communication skills to be important in determining pay raises and promotions. Rebele [1985] found that accounting students considered oral communication skills moderately important in promotion and pay-raise decisions, but thought written skills were relatively unimportant.

### Research Questions

The curriculum structure of graduate tax programs varies substantially among colleges and universities across the nation. Some schools require predominantly tax courses while other schools require only a core of tax courses combined with other disciplines. An MBA program typically contains a wide variety of courses with only a few courses in tax. An MS graduate, on the other hand, concentrates study in fewer areas [Lewis and Shimerda, 1984]. Thus, one question is whether graduates of programs highly concentrated in tax believe their tax knowledge and research skills are greater than the skills of graduates from broad-based programs.

In addition to course work, many programs include other requirements that may contribute to tax knowledge and research skills, including a thesis, a comprehensive written exam at the end of the program, an oral exam at the end of the program, and several (e.g., more than three) course term papers. An important question is whether the perceived tax knowledge and research skills of graduates from tax programs with some or all of these requirements is greater than the perceived tax knowledge and research skills of graduates from programs not containing these requirements.

Accountants concur that their success depends on their management abilities [Milam and Briner, 1983]. The American Accounting Association [AAA] study committee on the future structure, content and scope of accounting education recognized accounting education's deficiency in developing management skills. This committee noted that accounting education must extend beyond the technical skills to enhance "personal capacities of students

to interact well with others" [Bedford and Shenkir, 1987, p. 90]. Highly concentrated tax programs usually sacrifice courses in management and related disciplines. Lewis and Shimerda [1984, p. 66] report that CPA firms and Fortune 500 firms often prefer MBAs with a concentration in accounting because "an MBA recruit possesses a broader education, has greater management potential, and has greater in-firm mobility." Therefore, we ask whether the perceived management skills of graduates from broad-based programs exceed the perceived management skills of graduates from heavily concentrated programs.

Tax programs may enhance management skills in addition to tax knowledge. There is general agreement that the program that accomplishes both objectives dominates the program that only imparts tax knowledge. We ask whether the perceived management skills of graduates from tax programs requiring a thesis, a comprehensive written exam, an oral exam, several term papers, or a combination thereof are greater than the perceived management skills of graduates from programs without these requirements.

The microcomputer has created a demand in the accounting profession for accounting graduates with computer skills. Lander and Reinstein [1986] reported that many accounting graduates lack computer skills. Thus, it would not be unreasonable to presume that graduate tax students lack computer skills, since many of them have undergraduate accounting degrees. The AAA committee on future accounting education recommended that information systems be one of the topics in the general accounting curriculum [Bedford and Shendir, 1987]. Some broad-based tax programs already include courses in accounting information systems. Thus, we ask whether graduates from these programs perceive their computer skills to be greater than the perceived computer skills of graduates from programs highly concentrated in tax.

Accountants are well trained in various technical areas of accounting. However, communication skills are often overlooked in preparing the accountant for his profession. Lander and Reinstein [1986, p. 66] indicate that good communication skills is "the most serious deficiency of accounting graduates." Communication skills of a graduate will vary depending upon pre-university education and the strength of their university education [Sloan, 1983]. Lander and Reinstein [1986] found that upper level management accountants and chairpersons support a five year accounting program that requires students to take courses other than accounting and business. "Students who enroll in a wide variety of courses could strengthen their communication skills..." [Lander and Reinstein, 1986, p. 67]. Therefore, we ask whether graduates from broad-based programs perceive their communication skills to be greater than the

**Table 1**  
**Demographics of Respondents**

	Respondents	Percent
<u>Geographical Region</u>		
Northeast and East	15	11.7
Southeast and South	29	22.6
Midwest	11	8.6
Southwest	40	31.3
Northwest and West	29	22.7
Missing	4	3.1
<u>Years Since Graduate Degree Received</u>		
Less than 1	7	5.5
1	37	28.9
2	23	18.0
3	17	13.3
4	14	10.9
5	13	10.2
More than 5	13	10.2
Missing	4	3.1
<u>Current Position</u>		
Staff	42	32.8
Senior	37	28.9
Manager	40	31.3
Partner	4	3.1
Other	1	.8
Missing	4	3.1
<u>Years of Audit &amp; Accounting Experience</u>		
Less than 1	51	39.8
1	26	20.3
2	13	10.2
3	8	6.3
4	6	4.7
5	9	7.0
Over 5	12	9.5
Missing	3	2.2
<u>Years of Tax Experience</u>		
Less than 1	5	3.9
1	30	23.4
2	20	15.6
3	14	10.9
4	16	12.5
5	14	10.9
Over 5	26	20.3
Missing	3	2.5
<u>Undergraduate Degree</u>		
Accounting	98	76.6
BBA - Nonaccounting	14	10.9
BA	3	2.3
BS	7	5.5
Other	3	2.3
Missing	3	2.3
<u>Graduate Degree</u>		
M-Tax	90	70.3
MBA	25	19.5
LLM	7	5.5
JD	1	.8
Missing	5	3.9

perceived communication skills of graduates from programs heavily concentrated in tax.

Graduate school may enhance the communication skills of students in several ways. Some programs may require a thesis, a comprehensive written exam, an oral exam, or a combination of all three. Also, graduate programs frequently contain courses that require several term papers, which should contribute substantially to students' perception of communication skills, especially written communication. We ask whether the perceived communication skills of graduates from programs containing a thesis, a comprehensive written exam, an oral exam, several term papers, or a combination thereof is greater than the perceived communication skills of graduates from programs without these requirements.

### Research Methodology

A questionnaire was designed to solicit responses from masters graduates (tax concentration) employed by major accounting firms. These responses pertain to how graduates perceived their tax knowledge, research, communication, and computer skills relative to that of their peers (e.g., employees at the same level in their office performing comparable duties). It was not possible to identify these masters graduates directly; therefore, questionnaires were mailed to one tax partner in every office of each major accounting firm in the United States. The partners were asked to distribute the questionnaires among their tax staff who had recently (e.g., within the last five years) obtained graduate degrees. The completed questionnaires were anonymously returned directly to the authors (i.e., the graduates could respond to the questionnaire without the partners or the researchers being able to identify the responses). A total of 128 usable responses were received. After reviewing these responses, we found no evidence of a nonresponse bias.

Table 1 contains a summary of the demographic information for the respondents. This information indicates

that respondents were well distributed throughout the United States with the exception of the Midwest region. The graduates were equally distributed from the staff level to the manager level, indicating that a significant number of graduates were experienced accountants that had the ability to assess their strengths and weaknesses. Seventy-eight percent of the respondents had an accounting undergraduate degree. In addition, approximately 79 percent had four years or less tax experience. Over 73 percent of the respondents had a Masters of Tax degree and over 20 percent had an MBA. Overall, the respondents were well diversified.

Since this study sought to answer several questions, multiple dependent variables were required. The dependent variables for this study include graduates' perceptions of: tax knowledge, tax research skills, management skills, computer skills, and communication skills. These dependent variables were classified by the graduates into one of five groups based upon their perception of their own skills relative to the skills of their peers. These groups include: above average, average, below average, inadequate, and unable to determine. The independent variables for this study were the number (required and elective) and mixture (tax, accounting, management, etc...) of courses in each graduate's tax program. Some of the graduates' schools used the quarter basis. Therefore, to accurately compare the results, it was necessary to convert the number of courses taken on a quarter basis to a comparable number of courses taken on a semester basis. Fractional courses were rounded up or down, depending upon whether the fraction was above or below one-half.

The dependent variables are categorical, which restricted the statistical techniques that could be used. This study used chi-square with a .05 criteria level for significance to determine if there was a difference among the groups. If a significant difference existed, separate discriminant analysis was used to identify the independent variables that contributed most to the group classification.

## Results

### *Tax Knowledge and Tax Research Skills*

The analysis did not reveal that more tax courses, required or elective, resulted in greater perceived tax knowledge or research skills. Using the number and mixture of courses (tax and nontax) as the discriminating variable and using perceived tax knowledge as the identifier variable, a chi-square of 20.54 (significant at .30) was found. This indicates the groups, above average, average, below average, inadequate, or unable to determine, do not have no significant differences with respect to perceived tax knowledge. Changing the identifier variable to perceived tax research skills resulted in a chi-square of 34.51, which is significant at .539.

Thus, the number and mixture of courses for the classification groups are not sufficiently different, indicating that various course structures result in a perception of above average tax knowledge and research skills.

Table 2 indicates a range of four to eight tax courses were required in 59.5 percent of respondents' programs and 38.2 percent of the programs offer no elective tax courses. Table 3 indicates that most of the graduates responding to the questionnaire perceive their tax knowledge and research skills to exceed that of their peers.

Table 4 shows the number of required and elective tax courses that the respondents recommend for a graduate tax program. The most significant difference is that more elective tax courses are recommended.

The analysis relating to thesis, written exam, oral exam, or term paper requirements resulted in a chi-square of 8.80 (significant at .147). See Appendix A for a distribution of the graduates' responses. Even though a .147 significance level does not meet a .05 criteria, such a level of significance does provide evidence that the population contains differences with respect to the discriminating variables (thesis, written exam, oral exam, or term papers). The group mean discriminate scores derived in this analysis indicate that the canonical discriminate function containing all significant discriminating information contributes most heavily to an average classification. In fact, the function has a small negative relationship with the above average classification, which indicates the presence of a thesis, written exam, oral exam, or term papers may actually hinder an above average perception of tax skills.

Table 5 indicates a .81 bivariate correlation between a written comprehensive exam and the discriminate function and a .45 correlation between term papers and the discriminate function. Thus, these two variables provide the most discriminating power to the function. This implies that a written comprehensive exam and course term papers only contribute to a perception of average tax knowledge and may hinder students' perceptions of having above average tax knowledge. Regarding tax research skills, the analysis found a chi-square of 8.64 (significant at .733) before deriving any discriminate functions. Such a high significance level indicates that the population contains relatively no differences with respect to the discriminating variables (thesis, written exam, oral exam, or term papers). Therefore, graduates from tax programs containing any of the above discriminating variables did not perceive their level of tax research skills to be any different than those of graduates from tax programs not containing these variables.

### *Management Skills*

Our analysis found that graduates are not as confident

**Table 2**  
**Respondents Indicating Number of Required And Elective Tax Courses**

Number of Tax Courses	Required		Elective	
	%	#	%	#
0	1.6	2	38.2	49
1	5.5	7	8.6	11
2	3.1	4	6.3	8
3	8.5	11	15.6	20
4	16.4	21	7.8	10
5	15.7	20	8.6	11
6	11.7	15	.8	1
7	6.3	8	1.6	2
8	9.4	12	-	-
9	2.3	3	-	-
9+	7.0	9	-	-
Missing	12.5	16	12.5	16

**Table 3**  
**Respondents' Perception of Tax Skills**

Group	Perceived Tax Research Skills			Perceived Tax Knowledge		
	Respondents	Percent	Group	Respondents	Percent	Group
Above average	95	74.2	1	95	74.2	1
Average	27	21.1	2	32	25.0	2
Below average	3	2.3	3	-	-	3
Inadequate	1	.8	4	-	-	4
Missing	2	1.6	-	1	.8	-
Median	1.0	1.0				
Range	3.0	1.0				

**Table 4**  
**Respondents Indicating Number of Recommended Required and Elective Tax Courses**

Number of Tax Courses	Required		Elective	
	%	#	%	#
0	1.6	2	29.6	38
1	2.4	3	10.9	14
2	3.9	5	14.1	18
3	6.9	9	10.2	13
4	9.4	12	6.3	8
5	18.8	24	5.5	7
6	14.9	19	2.3	3
7	6.3	8	.8	1
8	7.0	9	-	-
9	3.9	5	-	-
9+	7.7	10	3.1	4
Missing	17.2	22	17.2	22

**Table 5**  
**Perceived Tax Knowledge: Pooled Within-Group Correlations Between Discriminating Variables And The Function**

Variable	Correlation
Comprehensive Written Exam	.81
Course Term Papers	.45
Thesis	.11
Oral Examination	-.12
Canonical R	.23
Eigenvalue	.06

about their management skills as they are about their tax skills. Table 6 provides a summary of respondents' perceptions of their management skills.

The analysis did not disclose sufficient evidence to conclude that greater management skills result from broad-based tax programs. Using the groups of perceived management skills as the identifier variable and number and mixture of courses as the discriminating variable, the analysis revealed a chi-square of 96.00 (significant at .031) before deriving any discriminate functions. After deriving one discriminate function, the residual discrimination was insignificant, indicating that one function contains all the significant information about group differences.

Analysis of the group mean discriminate scores shows the function contributes most to an above average classification. Table 7 indicates a .57 bivariate correlation between required management courses and the discriminant function. Relative to other courses, this structure coefficient is large, indicating that the number of required management courses is important to the function in discriminating among the groups. Courses having an inverse relationship with the discriminate function include elective tax courses, required marketing courses and required finance courses. Thus, the presence of these courses tends to lower the probability of an above average classification.

Table 8 indicates numerous tax programs require no management courses and most of the remaining programs only require one course in management.

Table 9 provides a summary of the required and elective management courses that respondents recommend for a graduate tax program. Even though the presence of required management courses tend to result in an above average classification of perceived management skills, the recommended number and mixture of required and elective management courses does not appear to be significantly different from the actual number and mixture of management

**Table 6**  
Respondents' Perception of Management Skills

Group	Number Respondents	Respondents' Percentage	Group Number
Above average	6	4.7	1
Average	62	48.4	2
Below Average	16	12.5	3
Inadequate	8	6.3	4
Unable to Determine	31	24.2	5
Missing	5	3.9	-
Median			2.0
Range			4.0

**Table 7**  
Perceived Management Skills: Pooled Within-Group Correlations Between Discriminating Variables And The Function

Variable	Correlation
Required Management Courses	.57
Required Accounting Courses	.29
Required Computer Courses	.28
Required Economic Courses	.28
Elective Management Courses	.23
Required Writing Courses	.19
Elective Tax Courses	-.19
Required Marketing Courses	-.14
Required Finance Courses	-.09
Canonical R	.59
Eigenvalue	.53

**Table 8**  
Respondents Indicating Number of Required And Elective Management Courses

Number Courses	Required		Elective	
	Number	Percent	Number	Percent
0	75	58.6	95	74.2
1	30	23.5	14	10.9
2	6	4.7	3	2.3
4	1	.8	-	-
Missing	16	12.4	16	12.6

**Table 9**  
Respondents Indicating Number of Recommended Required And Elective Management Courses

Number Courses	Required		Elective	
	Number	Percent	Number	Percent
0	69	53.9	84	65.6
1	31	24.3	19	14.9
2	4	3.1	1	.8
3	2	1.6	2	1.6
4	-	-	0	0.0
Missing	22	17.1	22	17.1

**Table 10**  
Perceived Management Skills: Pooled Within-Group Correlations Between Discriminating Variables and The Function

Variable	Correlation
Course Term Papers	.54
Comprehensive Written Exam	.40
Thesis	.30
Oral Examination	-.52
Canonical R	.44
Eigenvalue	.24

courses taken by respondents.

In evaluating whether the perception of management skills for graduates from tax programs containing either a thesis, a comprehensive written exam, an oral exam, or several term papers or a combination thereof is greater than the perception of management skills for graduates from programs not containing such requirements, the analysis provided a chi-square of 35.85 (significant at .003) before deriving any discriminate functions. After deriving one function, the chi-square indicated relatively no residual discrimination remained in the population. Thus, regarding the discriminating variables (thesis, written exam, oral exam, or course term papers), one function contains most of the discriminating information in the population. See Appendix A for a distribution of responses.

A review of the mean discriminate scores found that the discriminate function contributes most to an above average perception of management skills. Table 10 contains the pooled within-groups correlations between the discriminating variables and the function. This table shows that the course term paper variable has a .54 correlation and the written exam and thesis variables also positively correlate with the function. The implication of these positive correlations is that each of these variables contributes to graduates' perceptions of above average management skills. Interestingly, the oral exam variable has a negative correlation, which implies that graduates from tax programs requiring an oral exam perceive their management skills to be less than above average.

*Computer Skills*

The results provide some evidence that greater perceived computer skills result from broad based tax programs. Using perceived quality of computer skills as the identifier variable and number and mixture of courses as the discriminating variable, the analysis yields a chi-square of 89.29 (significant at .082). Even though the chi-square is not significant using a .05 criteria, a

**Table 11**  
**Perceived Computer Skills: Pooled Within-Group Correlations**  
**Between Discriminating Variables and The Function**

Variable	Correlation
Required Tax Courses	.26
Required Finance Courses	.13
Elective Finance Courses	.11
Required Computer Courses	-.48
Required Writing Courses	-.32
Elective Marketing Courses	-.31
Required Management Courses	-.29
Canonical R	.58
Eigenvalue	.51

**Table 12**  
**Respondents' Perception of Computer Skills**

Group	Respondents	Percent	Group Number
Above average	14	10.9	1
Average	49	38.3	2
Below Average	32	25.0	3
Inadequate	10	7.8	4
Unable to Determine	18	14.1	5
Missing	5	3.9	-
Median			2.0
Range			4.0

**Table 13**  
**Respondents Indicating Number of Recommended**  
**Required And Elective Computer Courses**

Number Courses	Required		Elective	
	Number	Percent	Number	Percent
0	53	41.4	77	60.2
1	37	28.9	23	18.0
2	16	12.5	6	3.9
3	-	-	1	.8
Missing	22	17.2	22	17.1

**Table 14**  
**Respondents' Perception of Communication Skills**

Group	Oral Communication		Written Communication			
	Number	Percent	Group	Number	Percent	Group
Above average	24	18.8	1	46	35.9	1
Average	81	63.3	2	68	53.1	2
Below Average	16	12.5	3	9	7.0	3
Inadequate	-	-	4	1	0.8	4
Unable to determine	6	4.7	5	3	2.3	5
Missing	1	.7	-	1	.9	-
Median						2.0
Range						4.0

**Table 15**  
**Respondents Indicating Number of Recommended**  
**Required And Elective Writing Courses**

Number Courses	Required		Elective	
	Number	Percent	Number	Percent
0	90	70.3	105	82.0
1	10	7.8	1	.8
2	5	3.9	-	-
3	1	.8	-	-
Missing	22	17.2	22	17.2

.08 significance level does indicate differences in the population. The group mean discriminant scores show that the function derived from the discriminant analysis contributes positively to both below average and unable to determine classifications. The function contributed negatively to the average and above average classifications. Table 11 indicates that required tax courses had a .26 correlation with the function and required computer courses had a negative .48 correlation with the function. The correlations imply that technical noncomputer courses such as tax and finance contribute to a below average or unable to determine classification.

Table 12 indicates relatively few respondents perceive their computer skills to be above average, with a significant number perceiving their computer skills as below average.

These results are interesting because, as provided in Table 13, 41.4 percent of the respondents recommended no computer courses should be required and 60.2 percent recommended no elective computer courses should be offered in a graduate tax program. This implies a significant number of respondents believe computer skills should be obtained through integration in other graduate courses, undergraduate courses, or on the job training.

*Communication Skills*

Table 14 provides a summary of how respondents rated their communication skills.

The analysis did not provide sufficient evidence to conclude that perceptions of greater communication skills result from broad based tax programs. Using perceived oral communication skills as the identifier variable and number and mixture of courses as the discriminating variable, a chi-square of 55.65 (significant at .413), before deriving any discriminant functions, was generated. This indicates that graduates from tax programs with courses predominantly in tax do not perceive their oral communication skills

to be significantly different from those of graduates from broad based tax programs.

The analysis of written communication skills also did not provide evidence that perceptions of greater communication skills result from broad based tax programs. The outcome reveals no significant differences among the groups, as indicated by a chi-square of 50.09 (significant at .977). This indicates that a particular number and mixture of courses did not result in respondents perceiving their written communication skills to be above average. Table 14 reflects that only 35.9 percent of the respondents perceive their written communication skills (compared to that of their peers) to be above average. As indicated in Table 15, approximately 70 percent of the respondents recommended no writing courses be required in a graduate tax program and 82 percent recommended no elective writing courses be offered. This may imply that writing proficiency should be obtained at the undergraduate level or through integration with other graduate tax courses.

From the analysis, sufficient evidence is not provided to conclude that graduates from tax programs containing a thesis, a written exam, an oral exam or numerous course term papers perceive their communication skills to be greater than graduates from tax programs not containing such requirements. See Appendix A for a distribution of responses. A chi-square of 17.31 (significant at .366) and 16.83 (significant at .156) was found for written communication skills and oral communication skills, respectively. Thus, using these discriminating variables, the population does not contain significant differences.

### Limitations

Since the data for this study consisted of responses from employees of major accounting firms holding graduate degrees, one limitation of this study, common to most studies using questionnaires to gather data, is construct validity. The construct validity of the group classifications is dependent upon the consistency of graduates' understanding of the meaning of these groups. Their perceptions may vary due to inherent differences in respondents or variations in the institutions. To draw conclusions from this study it must be assumed that the graduates' education and training, as well as other traits such as self-confidence and judgement, are relatively equal. Considering the type of graduates major accounting firms typically seek to employ, this assumption appears realistic. A related limitation is the relationship between the identifier variable (group classification) and the discriminating variables (number and mixture of courses). It can be argued that many factors contribute to the group classification in addition to curriculum of the graduate. However, if major accounting firms prefer to employ individuals with similar characteristics; intuitive-

ly, the major variation among graduates should be the quantity of courses in their graduate tax curriculum.

Another limitation of this study pertains to the potential nonresponse bias. A concern with nonresponses is that fear of indicating weaknesses (e.g., inadequate tax knowledge) prevented the graduate from participating in our study [Williams, 1989]. This should not be a problem with this study because of the high quality and self-confidence of graduates hired by major accounting firms. In addition, the graduates could anonymously return their responses without the researchers or tax partners knowing how they responded to the questions.

### Conclusions

Graduate tax programs must provide graduates the skills necessary to successfully manage a sophisticated tax practice. One way to evaluate these skills is to analyze the perception of recent graduates with enough experience to understand their strengths and weaknesses. This perception provides information about how recent graduates think their tax program prepared them for a tax career. Since graduates bear the cost of education, their thoughts are very important in designing future tax programs.

Graduates from broad-based tax programs do not perceive their tax knowledge or research skills to be any less than graduates from tax programs highly concentrated in tax courses, according to the evidence of our study. In addition, comprehensive written exams and term papers do not contribute significantly to a perception of above average tax knowledge for graduates. Perceived management skills tend to be greater for graduates with courses in a variety of disciplines, especially management. Also, term papers, comprehensive written exams, and a thesis requirement contribute to a perception of above average management skills. Furthermore, perceived computer skills tended to be lower for graduates with courses in tax and finance.

This study analyzed both oral and written communication skills and found consistent results for the two. Perceived oral communication skills of graduates from broad-based tax programs were no greater than that of graduates from tax programs containing predominantly tax courses. A possible explanation for these results is that students may believe they have developed sufficient oral communication skills prior to entering graduate school. A few formal presentations in graduate school may not significantly improve the perception of these skills. However, this does not imply that such presentations should be eliminated from graduate programs. Perceived written communication skills of graduates from broad-based tax programs were no greater than that of graduates from tax programs containing predominantly tax courses. A possible explanation for these results is



that term papers are not limited to nontax courses, since many tax courses include a term paper requirement. The requirement of a thesis, a comprehensive written exam, an oral exam, or term papers did not significantly enhance the perception of communication skills of graduates in our survey.

The results of this study imply that a greater number of tax courses in the curriculum, at the expense of other business courses, adds little to graduates' perceived tax knowledge or research skills relative to graduates from broad-based programs. Perhaps the problem may not be with the number of tax courses in the curriculum, but with the method in which these courses are taught. If so, one answer may be to adopt a method of teaching that allows students to improve other skills in addition to learning tax rules. Due to the rapidly increasing demand for professionals with graduate tax degrees, additional research is needed to provide business school administrators sufficient information to design future graduate programs or redesign current graduate programs in order to provide the proper education for these professionals.

## References

1. Addams, H. Lon, "Should the Big Eight Teach Communication Skills?," *Management Accounting* (May 1981), pp. 37-40.
2. Andrews, J. Douglas and Robert J. Koester, "Communication Difficulties as Perceived by the Accounting Profession and Professors of Accounting," *The Journal of Business Communications* (Winter 1979), pp. 33-42.
3. Bedford, Norton M. and William G. Shenkir, "Reorienting Accounting Education," *Journal of Accountancy* (August 1987), pp. 84-91.
4. Broden, Barry C. and Myron S. Lubell, *Ernst & Whinney Guide to Graduate Tax Education - 1988*.
5. Carey, J. L., "The CPA Plans for the Future," (AICPA 1965).
6. Estes, Ralph, "The Profession's Changing Horizons: Survey of Practitioners on the Present and Future Importance of Selected Knowledge and Skills," *The International Journal of Accounting Education and Research* (Spring 1979), pp. 47-70.
7. Gingras, Russell T., "Writing and the Certified Public Accountant," *Journal of Accounting Education* (1987), pp. 127-137.
8. Ingram, Robert W. and Charles R. Frazier, "Developing Communication Skills for the Accounting Profession," (American Accounting Association 1980).
9. Lander, Gerald H. and Alan Reinstein, "Improving the Management Accountant's Education," *Management Accounting* (March 1986), pp. 66-67.
10. Lewis, Tom D. and Thomas A. Shimerda, "MS or MBA: Which is Right for the Accountant," *Management Accounting* (March 1984), pp. 66-67.
11. Milam, Edward and Russell F. Briner, "Broadening the Accounting Student's Foundation for Career Development," *Collegiate News and Views* (Fall 1983), pp. 21-24.
12. Rebele, James E., "An Examination of Accounting Students' Perceptions of the Importance of Communication Skills in Public Accounting," *Issues in Accounting Education* (1985), pp. 41-50.
13. Sloan, Donald R., "The Education of the Professional Accountant," *Journal of Accountancy* (March 1983), pp. 56-60.
14. Solari, J. P. and D. J. Summa, "Profile of the CPA in Tax Practice," *The Journal of Accountancy* (June 1972), pp. 45-50.
15. Sommerfeld, Ray M., "Taxation: Education's Orphan," *The Journal of Accountancy* (December 1966), pp. 38-441.
16. Williams, Jan R., M. Tiller, H. Herring III, and J. Scheiner, "A Framework for the Development of Accounting Education Research," (American Accounting Association 1989).

## Appendix A

### Courses Requiring Term Papers

Number of Courses	Respondents	Percent
0 - 2	57	44.8
3 - 4	40	31.3
5 - 6	19	14.9
Over 6	9	7.0
Missing	3	2.3

### Percent of Respondents' Tax Programs Requiring a Thesis

Thesis Required	Respondents	Percent
Yes	5	3.9
No	120	93.8
Missing	3	2.3

### Percent of Respondents' Tax Programs Requiring a Written Exam

Written Exam	Respondents	Percent
Yes	71	55.5
No	54	42.2
Missing	3	2.3

### Percent of Respondents' Tax Programs Requiring an Oral Exam

Oral Exam	Respondents	Percent
Yes	10	7.8
No	115	89.8
Missing	3	2.3