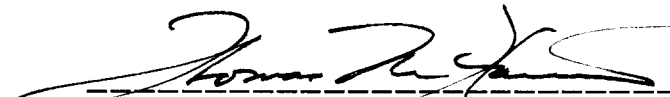


**THE IMPORTANCE OF COMPUTER COMPETENCY
IN PUBLIC ACCOUNTING**

An Honors Thesis (ID 499)

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When preparing to interview, it would help if accounting students knew what public accounting firm's criteria are for hiring. Students believe that accounting GPA, experience, and outside activities are the firms' criteria for employment, but accounting GPA, overall GPA, and quality of a candidate's University are the most important characteristics for the Big 8 accounting firms. These are followed by personality traits, professional appearance and presence, and offices held in organizations. (Dinius, 99) Other firms look for many of the same characteristics, accounting and overall GPA, professional image, and leadership. They also look for work experience in accounting, ability orally to communicate, and intellectual ability. (Krystofik, 84) The least important criteria for all firms are membership or lack of membership in organizations, format and presentation of resume, and references from prior employees. (Krystofik, 85)

Today as more companies automate and public accounting firms increase their use of computers, how important is it to be computer competent? In a questionnaire given to Big 8 accounting firms dealing with characteristics looked for in entry-level accountants, 49 different variables were rated. The only mention of looking for computer knowledge in hiring came in the variable that read "number of EDP and stat classes." (Dinius, 93) Out of the 54 responses, 36 replied this a significant area while the other 18 replied that it is not important. The significant replies give it an average rating of 3.8 with 1 being least important and 7 being most important, (Dinius, 93) and caused "number of EDP and stat classes" to ranked 42 out of 49 and tied with "applicant's choice of faculty" and "applicant's evaluation of previous jobs." (Dinius, 99)

PROCEDURE

The purpose of the study was to find out how important computer competency was in the field of public accounting. The surveys included a list of 8 packages of microcomputer based software available on the market today. The software listed was chosen to represent a wide range of operating systems and types (word processing, spreadsheet, etc.), and based on availability and popularity. Blanks were included and broken down into other accounting software and other software. The reason for the blanks being listed was so the responses would not be restricted to listed software. All of the software was to be ranked based on level of experience using a scale of 0 to 5, with 5 being proficient for both the students and recent graduates while the firms used the same 0 to 5 scale only based on experience looked for in hiring.

The next two questions dealt with the importance of computer knowledge. All surveyed were asked the perceived importance of computer experience in college and importance in career. After ranking the questions from very unimportant to important, there was room to make additional comments and to explain the reasoning behind the ranking. On both, the recent graduate and firm surveys a question was asked concerning the amount of time staff in that office spent using a computer. The surveys are included as exhibits 0-accounting firm survey, 1-recent graduate survey, and 2-student survey.

In all, the surveys were given to three different groups, students, recent graduates, and public accounting firms. Students, the first group, consisted of undergraduate accounting majors at Ball State University. The recent graduates made up the second group and to qualify, must have graduated from college within the past 4 years and currently be employed by a public accounting firm. The final group, public accounting firms or firms, consisted of local, regional, national, and Big 8 accounting firms with offices located in Indiana. Management was to fill out the surveys sent to the firms.

The people who received the surveys were randomly chosen. Students receiving the survey were picked based on accounting classes enrolled in and time of class. For the recent graduates and firms, surveys were sent to Ball Sate's contact within the firm. The contact then distributed the surveys to people who met the criteria to answer the surveys. The contact then recollected the completed surveys and mailed them back.

RESULTS

A total of 300 surveys were sent out, and 168 of the returned surveys were able to be used. Surveys that were not used included those that did not meet predetermined criteria or those that left information off necessary to determine if the criteria had been met. The break down of used surveys was accounting firms, 27; recent graduates, 63; and students, 78. These surveys were coded, optically scanned, and analyzed. The analysis was performed using SPSS-X release 3.0 and 3.1, Statistical Package for the Social Sciences, on a VAX mainframe.

The highest proficient of all software was in Lotus, with 33 people (19.8%) rating themselves a five. The lowest proficiency of all software was Apple Works, with 128 people rating themselves as having no experience. In total, there were five packages of software in which over 50% of the responses stated that they had no experience or looked for no experience when hiring. The two software packages that had the lowest overall proficiency rating were Apple Works (76.6%) and McWrite (75.4%). These were the only two non-IBM compatible software listed. The 'other accounting software' and 'other software' that were written in did not appear on enough surveys to make it possible to draw any conclusion except that many graduates use special accounting software that was developed by their firm.

The recent graduate group represented a variety of colleges, private, public, large, small, Indiana schools, and out-of-state schools. None had more than a Bachelor's degree, and eleven were seniors with the rest being staff accountants. All of the students were seniors at Ball State University. Nine had a second major all within the College of Business with finance being the most popular at 6, and three had minors none in the College of Business with 2 being Spanish. Out of the 27 firm responses all participate in hiring except one. The firms represent a variety of sizes of firms from the smallest of 4 to the largest

40,000 professional staff. Positions held within the firm were 10 managers, 12 partners, and 5 other positions. The other positions were all from the human resource area. Table 1 contains the answers given by all of the groups.

Computer experience in college was ranked important by all groups. In comparing this ranking with each of the software listed, only Lotus was ranked as important by the firms in hiring. The main comment by the firms is that computer experience is a great bonus but not yet a major factor looked for in hiring because the firm will train the new staff while they are teaching how to use their software, but they also agree it is becoming more important in business. One reply was "the more experience a new graduate brings to bear the more he/she is distinguished from others seeking entry level positions." Students had the most proficiency in Lotus and Wordperfect. One comment not made by any student was that computer usage was necessary to succeed in college. Two main reasons given for the average importance of 4.6 from students were computers are everywhere and computer knowledge is necessary in the work force, or as one student stated "computers are becoming a tool used more & more in nearly all facets of life. It is important to know how to use & understand them." Recent graduates did not feel that they had much knowledge of any software as a group in college. A comment made by many graduates is that they wished that they had more exposure to computers in college, and the exposure should be with "canned" microcomputer software and not programming. An Indiana University graduate simply stated "I wish I would have had some." Others expressed that experience in college was helpful in getting over the "initial fear" of computers, there is already enough to learn in the first few years after graduation, that it gives a person a head-start on the job, and that it is the way of the future.

Computer literacy in career received an overall importance rating of 4.48 from all three groups, but each group gave different reasons. The firms looked at it from an overview

and gave broad reasons. Popular reasons given included client expectations, efficiency, keeping up with technology, and in many accountants' minds most importantly the bottom line. Firms also stated that it was more important for staff to know how to use a computer than management. The recent graduates took a more specific look at why computer literacy is important. An Indiana University-Purdue University at Indianapolis graduate summed most of what was listed on the surveys.

"Computer literacy in the certified public accounting profession is **vitaly** important simply because of the day-to-day requirements of my duties. Virtually every client's accounting records are computer-generated; thus, in order to properly audit a client's financial statements I must understand the computerized accounting system and be able to identify weaknesses which might have an effect on the financial information being audited. In addition, a working knowledge of a spreadsheet software program is invaluable and has proven to be a time-saving way to compile financial information and prepare financial projections. Finally, most CPA firms now utilize software programs to maintain and update client data which is being audited."

The graduate who rated the importance in career the lowest out of all surveyed gave it a two and reasoned "many of my peers have significant less experience and it has not had an adverse impact on their career progression." The students did not seem sure why it is important because eighteen did not give any reasons, and those that did, gave the reasons use daily, accounting systems are becoming more computerized, "have heard of use", and entering the business field. The most descriptive reason given by a student was "because accountants use computers in nearly every aspect of their work -- auditing, tax research, tax return preparation, spreadsheet applications, and word processing. I **have** to be able to know where to start to learn all these software packages. College experience has been a good base, just not demanding enough."

In response to the amount of time staff spent on a computer, seventy percent said staff spend, fifteen hours or less per week using a computer. Table 2 contains the replies given by firms and graduates. A cross comparison involving staff time on a computer and computer ex-

perience in college produced the highest percent of responses in computer experience is vital in college but when working in public accounting expect on average to spend only 6 to 10 hours per week on a computer. The 6 to 10 hours spent on a computer in comparison with the importance of computer literacy received a rating of vitally important. Four of the recent graduates replied they spend over thirty hours per week on a computer. One of those a Ball State University commented "there are terminals on every desks. Everything we do is w/ computers." There were two graduates from Indiana University and University of Notre Dame who work for two different Big 8 firms that commented they "would like to use more" computers and amount of time using a computer "would be higher if the computers in our office were more readily available."

A question asked of the firms was what hardware and software does the firm use. All 27 firms that they use microcomputers, and 24 of those specifically listed IBM, Compaq, and other IBM compatibles. One firm simply stated "you name it in micros and network micro environment." The most popularly listed software was Lotus, FAST, R-Base, and D-Base. This should help students interested in entering public accounting to know what type of systems and software was actually used in public accounting. Students should then spend time learning these software packages in order to be better prepared to interview and to enter the accounting profession.

CONCLUSION

Computer competency is becoming increasingly important in the field of public accounting. One firm in Indianapolis helps every new staff to purchase their own computer for both business and personal use. As the use of computer technology increases in the business world, the accounting profession must keep up with the growing demand of computer literacy. The importance of public accounting firms in keeping up to date on computers and automated systems can be seen in the Statement of Auditing Standards (SAS) 48. The SAS deals with the effects of computer processing on examining financial statements.

All three survey groups agree that computer literacy is important in a public accounting career. As the importance of computers increases in public accounting, it will become more important for new staff to already know how to use a computer when they are hired. This will cause a decrease in the learning curve as the firms will only have to teach the new staff how to use the software and not how to turn on the computer. To be able to do this, a new staff upon graduating from college must already be able to use a computer. One accounting student who is also in public relations wrote "every job I've had I have had to use a computer," while another student wrote "computers are used everywhere today from cash registers to accounting to airplanes." A 1988 Ball State University graduate agrees that "it is easier to learn the company software that is vital to your job if you have had prior experience." Along with this increase in importance of computer literacy there will come an increase in the use of computers. The increase in use will affect everyone in public accounting from new staff to partners. One Big 8 accounting firm has started a computer training program that encompasses all levels within the firm.

Accounting students should be required to learn more microcomputer software. Packages that should be taught include Lotus, Wordperfect or other word processor package, and some type of database software. The students do not need to become experts of these software packages, but they should know how to do the basic functions that these packages contain. It is not necessary to be able to write complicated programs, but a student

should know what is involved in writing programs. Not only will the students benefit from becoming more computer literate, but the accounting firms and faculty will benefit. Students papers will no longer contain strikeouts, white-out, or other marks helping to create more readable papers. The firms will benefit because the new staff will be able to start using necessary software and hardware sooner.

Table 1

RESULTS							
rating	0	1	2	3	4	5	9
Question # 1 LOTUS							
firms	1 3.7		1 3.7	10 37	3 11.1	12 44.4	
graduates	9 14.5	14 22.6	7 11.3	20 32.3	8 12.9	4 6.5	
students		1 1.3	5 6.4	17 21.8	38 48.7	17 21.8	
totals total %	10 6	15 9	13 7.8	47 28.1	48 29.3	33 19.8	
DBASE 3							
firms	10 37	1 3.7	4 14.8	4 14.8	1 3.7	2 7.4	5 18.5
graduates	49 79	6 9.7	5 8.1	2 3.2			
students	47 60.3	10 12.8	11 14.1	8 10.3	1 1.3	1 1.3	
totals total %	106 63.5	17 10.2	20 12	14 8.4	2 1.2	3 1.8	5 3
WORDPERFECT							
firms	12 44.4	1 3.7	4 14.8	5 18.5	1 3.7		4 14.8
graduates	43 69.4	7 11.3	6 9.7	2 3.2	4 6.5		
students	14 17.9	11 14.1	9 11.5	14 17.9	15 19.2	15 19.2	
totals total %	59 41.3	18 11.4	19 11.4	21 12.6	20 12	15 9	4 2.4
MS-DOS							
firms	2 7.4	1 3.7	4 14.8	11 40.7	4 14.8	3 11.1	2 7.4
graduates	24 38.7	10 16.1	17 27.4	10 16.1	1 1.6		
students	20 25.6	6 7.7	14 17.9	19 24.4	9 11.5	10 12.8	
totals total %	46 27.5	17 10.2	35 21	40 24	14 8.4	13 7.8	2 1.2

rating	0	1	2	3	4	5	9
WORDSTAR							
firms	12 44.4	2 7.4	3 11.1	4 14.8	1 3.7	1 3.7	4 14.8
graduates	45 72.6	3 4.8	4 6.5	3 4.8	3 4.8	4 6.5	
students	56 71.8	7 9	3 3.8	6 7.7	1 1.3	5 6.4	
totals total %	113 67.7	12 7.2	10 6	13 7.8	5 3	10 6	4 2.4
MCWRITE							
firms	16 59.3		3 11.1	2 7.4	1 3.7		5 18.5
graduates	50 80.6	2 3.2	3 4.8	3 4.8	2 3.2	2 3.2	
students	60 76.9	3 3.8	4 5.1	4 5.1	5 6.4	2 2.6	
totals total %	126 75.4	5 3	10 6	9 5.4	8 4.8	4 2.4	5 3
SUPERCALC							
firms	15 55.6	1 3.7	3 11.1	2 7.4	1 3.7	1 3.7	4 14.8
graduates	44 71	5 8.1	2 3.2	6 9.7	3 4.8	2 3.2	
students	56 71.8	5 6.4	9 11.5	5 6.4		3 3.8	
totals total %	115 68.9	11 6.6	14 8.4	13 7.8	4 2.4	6 3.6	4 2.4
APPLE WORKS							
firms	16 59.3	1 3.7	2 7.4	2 7.4	1 3.7	1 3.7	4 14.8
graduates	55 88.7	3 4.8	2 3.2	1 1.6	1 1.6		
students	57 73.1	9 11.5	2 2.6	7 9	2 2.6	1 1.3	
totals total %	128 76.6	13 7.8	6 3.6	10 6	4 2.4	2 1.2	4 2.4

rating	0	1	2	3	4	5	9
Question # 2 College							
firms				7 25.9	8 29.6	12 44.4	
graduates		5 8.5	10 16.9	12 20.3	18 30.5	14 23.7	
students		1 1.3		3 3.8	21 26.9	53 67.9	
totals total %		6 3.7	10 6.1	22 13.4	47 28.7	79 48.2	
Question # 3 CAREER							
firms				7 25.9	6 22.2	14 51.9	
graduates			1 1.6	4 6.6	21 34.4	35 57.4	
students					34 43.6	44 56.4	
totals total %			1 .6	11 6.6	61 36.7	93 56	

the percentages were calculated using SPSS-X

Legend:

Question # 1

0-none to 5-proficient

9-no response

Question # 2 & # 3

0-very unimportant to 5-vitally important

Table 2

Hours per Week that Staff Spend on a Computer								
Hours	0-5	6-10	11-15	16-20	21-25	26-30	over 30	no response
firms	3	10	5	1	1	3	2	2
graduates	12	23	9	6	5	2	4	
totals	15	33	14	7	6	5	6	2
total %	17	37.5	15.9	8	6.8	5.7	6.8	2.3

Exhibit 0
Accounting Firms Survey

Number of employees in office _____
 firm _____
 Office location _____
 Your position _____
 Do you participate in hiring new employees _____yes _____no

1. How much computer experience do you look for in hiring (0-none to 5-as much as possible)?

Lotus	0 1 2 3 4 5
D-Base III+	0 1 2 3 4 5
WordPerfect	0 1 2 3 4 5
MS-DOS	0 1 2 3 4 5
WordStar	0 1 2 3 4 5
MacWrite	0 1 2 3 4 5
Supercalc	0 1 2 3 4 5
Apple Works	0 1 2 3 4 5
Other Accounting Software	
-----	0 1 2 3 4 5
-----	0 1 2 3 4 5
Other	
-----	0 1 2 3 4 5
-----	0 1 2 3 4 5

2. How important do you think computer experience in college is? (0-very unimportant to 5-vitally important)
 0 1 2 3 4 5 Why?

3. How important is computer literacy in your firm? (0-very unimportant to 5-vitally important)
 0 1 2 3 4 5 Why?

4. On average, how much time does each your staff spend on a computer per week?

5. What hardware and other software do you use?

Exhibit 1
Recent Graduate Survey

College Graduated from _____
 Degree _____
 Date Started Working (month & year) _____
 Position _____

1. What is your level of experience (0-none to 5-proficient) using the following software?

	In College	After Graduating
	0 1 2 3 4 5	0 1 2 3 4 5
Lotus	0 1 2 3 4 5	0 1 2 3 4 5
D-Base III+	0 1 2 3 4 5	0 1 2 3 4 5
WordPerfect	0 1 2 3 4 5	0 1 2 3 4 5
MS-DOS	0 1 2 3 4 5	0 1 2 3 4 5
WordStar	0 1 2 3 4 5	0 1 2 3 4 5
MacWrite	0 1 2 3 4 5	0 1 2 3 4 5
Supercalc	0 1 2 3 4 5	0 1 2 3 4 5
Apple Works	0 1 2 3 4 5	0 1 2 3 4 5
Other Accounting Software		
-----	0 1 2 3 4 5	0 1 2 3 4 5
-----	0 1 2 3 4 5	0 1 2 3 4 5
Other		
-----	0 1 2 3 4 5	0 1 2 3 4 5
-----	0 1 2 3 4 5	0 1 2 3 4 5

2. How important do you think computer experience was in college? (0-very unimportant to 5-vitally important)
 0 1 2 3 4 5 Why?

3. How important is being computer literate in your job/career? (0-very unimportant to 5-vitally important)
 0 1 2 3 4 5 Why?

4. What is the average amount of time per week that you use a computer?
 0-5 hours 16-20 hours over 30 hours
 6-10 hours 21-25 hours
 11-15 hours 26-30 hours

Exhibit 2 Student Survey

School Attending _____
 Class _____
 Other Majors _____
 Minors _____

1. What is your level of experience (0-none to 5-proficient) using the following software?

Lotus	0 1 2 3 4 5
D-Base III+	0 1 2 3 4 5
WordPerfect	0 1 2 3 4 5
MS-DOS	0 1 2 3 4 5
WordStar	0 1 2 3 4 5
MacWrite	0 1 2 3 4 5
Supercalc	0 1 2 3 4 5
Apple Works	0 1 2 3 4 5
Other Accounting Software	0 1 2 3 4 5
-----	0 1 2 3 4 5
-----	0 1 2 3 4 5
Other	0 1 2 3 4 5
-----	0 1 2 3 4 5
-----	0 1 2 3 4 5

2. How important do you think computer experience is? (0-very unimportant to 5-vitally important)

0 1 2 3 4 5 Why?

3. How important do you think computers will be in your career? (0-very unimportant to 5-vitally important)

0 1 2 3 4 5 Why?

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