

*Issues in Accounting Education*  
Vol. 12, No. 2  
Fall 1997

## **Designing and Implementing an Accounting Assessment Program**

Michael D. Akers, Don E. Giacomino and James P. Trebbly

**ABSTRACT:** Assessment within accounting programs is a response to external pressures from the accounting profession and accreditation associations and to internal pressures of institutions to improve the educational process. Published research has focused on an overview of the assessment process and specific assessment methods. The accounting literature is limited with respect to the design and implementation of an assessment program.

The Accounting Department at Marquette University responded to our own desire to improve our processes and to external pressures by designing and implementing an assessment program. This paper extends published research by discussing the details of the design and implementation of that program. Specifically, the paper examines the selection and involvement of the assessment team, the development of the six intended student outcomes, the establishment of the quantifiable goals, the development of the measurement tools used to evaluate the goals and the identification of mechanisms used to provide feedback. The results of the implementation indicate that improvement is needed in the following areas: oral communication skills, business writing skills and micro-computer skills.

### **INTRODUCTION**

**D**uring the past decade, many groups have called for universities to develop assessment programs. The regional and business accreditation associations expect assessment activity and state governments often require school systems to have assessment programs in place. Assessment is not driven purely by external pressures. Many universities, like businesses, are now realizing that processes must be assessed in order to improve the quality of the product provided.

Assessment within accounting programs is a timely response to the pressures from the accounting profession and the Accounting Education Change Commission (AECC), as well as the de-

sire of academicians to improve accounting education. In 1990, the AECC called for a shift in the focus of the accounting curriculum (AECC 1990). This call stemmed from the report of the Committee on the Future Structure, Content and Scope of Accounting Education (The Bedford Committee 1986) and the Sponsor's Education Task Force Report, *Perspectives on Education: Capabilities for Success in the Accounting Profession*

---

*Michael D. Akers is an Associate Professor, Don E. Giacomino is a Professor and James P. Trebbly is an Associate Professor, all at Marquette University.*

---

*The authors gratefully acknowledge the helpful comments of the three anonymous reviewers and the editor.*

(1989). Both reports were concerned that traditional accounting programs focused too narrowly on transmitting technical knowledge. The AECC (1990) noted that accounting graduates now function in an increasingly sophisticated and interdependent global economy.

Published research on the assessment methods currently used in accounting education is limited. Herring and Izard (1992), in their description of an assessment process at the University of Tennessee, provided empirical evidence on the usefulness of the AICPA Achievement Test for Accounting Graduates as an assessment technique. Schnitker (1993) analyzed the variables related to college attendance and employment outcomes that contributed to perceived satisfaction by graduates with their college experience. Demong et al. (1994) examined issues involved in the design of an assessment program. They identified various assessment methodologies and outcomes that schools could use in determining whether their accounting programs are meeting their goals.

Our paper continues the work in this area by focusing not only on the design but also on the implementation of an assessment program. The first section of the paper will present the definition of assessment. The second section relates how an Assessment Team, comprised of five faculty from the Department of Accounting, one from the Department of Economics and one from the Department of Management at Marquette University, formulated an assessment plan. The next section discusses the implementation to date. The final section of the paper provides a summary and concluding comments.

### Definition of Assessment

Gainen and Locatelli (1995) define educational assessment as "the systematic collection, interpretation, and use of

information about student characteristics, educational environment, learning outcomes and client satisfaction to improve student performance and professional success." Emphasis is placed on the comparison of expected with actual student learning outcomes and the continuous use of information to identify strengths and weaknesses in student performance of the outcomes observed.

The primary purpose of assessment is to help improve processes and outcomes. The AECC (Gainen and Locatelli 1995) note that assessment contributes the greatest value to accounting education when it provides information that can be quickly integrated into the curriculum and enable a continuous overview and evaluation of student performance and client satisfaction. The Accounting Department considers both students and employers as the client (customer). Students are the primary consumers of a delivered education product, while employers are the secondary consumers. Improvements to the education process should enhance student performance.

## PROCESS AND DEVELOPMENT

### Background

Marquette University began to look seriously at assessment in 1991 in preparation for an accreditation visit by the North Central Accreditation group. The university appointed an assessment task force to determine how units could and should go about developing assessment programs. Given the availability of external measures for their graduates, professional programs such as accounting, engineering and law were seen as the more likely candidates for assessment.

The mission of Marquette University includes "the discovery and dissemination of knowledge" and "the development of leadership expressed in service to others." The major goal of the College of Business Administration is to

“prepare students for effective and responsible administrative and managerial leadership.” Specific goals of the College of Business Administration include: (1) learn to communicate; (2) develop understanding of the technical environment; (3) become professionals with highly analytical minds; (4) specialize and prepare for entry-level jobs; and (5) absorb and use the growing body of knowledge and technology. The outcomes of the accounting program had to be consistent with the mission of the University and the goals of the College.

Marquette’s accounting faculty began serious discussion about assessment in 1991, mostly because of the desire to develop better ways to measure the results of our program and partly because of external pressures from the profession and accrediting bodies. Several department meetings were devoted to discussing the need for and value of assessment. Initially, some faculty thought that assessment was equivalent to teaching evaluations and they expressed some concern. The concerns abated as those faculty came to realize that the assessment process focuses upon measuring our outcomes and only indirectly measures teaching. Four faculty members volunteered to serve on the assessment team. Then, the department chair obtained the agreement of two other faculty within the college (one in economics and one in management) to serve on the team. All team members received a copy of the Nichols (1991) guide on departmental assessment. They met five times during the first year to develop a set of intended outcomes.

Of the seven team members, five were each assigned responsibility for gathering materials and preparing a draft statement for one of the outcomes. The two other team members developed the alumni survey which was approved by the faculty and mailed in December

1992. The department chair administered the survey with the assistance of a department research assistant.

In addition to faculty and chair time, other resources used were the research assistant, some secretarial time and materials and postage for the survey. The college’s alumni association provided the alumni lists. Faculty did not receive any release time for serving on the assessment team, but their work qualified as a significant service contribution to the department and was considered in the annual salary evaluations.

To be effective, the assessment process must be continuous and adaptable to change. The department chair will continue to direct assessment activity. This will include developing a complete database, scheduling major assessment activities, communicating results to faculty and refining the assessment process. Faculty support and assistance will continue to be needed. In one sense, the entire faculty of the department is the team. However, most of the assessment activity will be carried out by a team of three faculty within the department.

To develop the assessment plan, the assessment team used *The Department Guide to Implementation of Student Outcomes Assessment and Instructional Effectiveness*, written by Dr. James Nichols (1991), Director of University Planning and Institutional Research at the University of Mississippi. Development of the assessment plan consisted of these major stages:

- Develop statements of intended student learning outcomes
- Identify efforts to accomplish the goals
- Set quantifiable goals for each outcome
- Identify and develop the measurement tools for each outcome
- Set up a feedback mechanism for each outcome

### Develop Statements of Intended Student Outcomes (SOISO)

Development of the SOISOs started with each accounting faculty member identifying what he or she considered to be the most important student outcomes. Outcomes were to be consistent with the missions of the department, college and university. Lists were reviewed, and, as suggested by Nichols (1991), a small number (five) of clear and simple SOISOs were developed. The five SOISOs developed by the faculty are SOISOs #1–#5 in exhibit 1. An alumni survey (discussed later in the paper) confirmed that the five SOISOs identified by the faculty were among the six most essential skills according to alumni. Another outcome, computer skills, was rated very highly by the alumni. Accordingly, the team added SOISO #6 to the list.

The six SOISOs are stated in terms of lifelong learning skills (critical thinking, writing and oral communication) and knowledge necessary to begin a career in accounting (technical knowledge for entry-level position, technical knowledge for CPA examination, computer skills). Since many of our gradu-

ates do not enter public accounting, the technical knowledge for the entry-level position is different from the technical knowledge necessary to sit for the Certified Public Accountant Examination. Since technical knowledge (i.e., standards, software) changes, the lifelong skills will equip our graduates with the skills necessary to maintain technical competency throughout their careers.

The effectiveness of assessment is enhanced when assessment outcomes are tied to the mission/goals of the University, College and Department. Exhibit 2 shows the relationship of the mission of the University and the College of Business Administration's goals with the six statements of intended student outcomes of the assessment plan.

Table 1 lists the six SOISOs and presents detailed information about efforts, goals, measurement tools and feedback mechanisms for each SOISO. An overview of each of these items and a description of each of the terms presented in table 1 are discussed in the following sections of the paper.

### Efforts to Accomplish the Outcomes

The assessment team identified efforts that are currently being used and

**EXHIBIT 1**  
**Statements of Intended Student Outcomes**

<b>SOISO #1.</b>	Accounting graduates should be able to critically analyze information.
<b>SOISO #2.</b>	Accounting graduates should possess strong business writing skills.
<b>SOISO #3.</b>	Accounting graduates should possess strong oral communication skills.
<b>SOISO #4.</b>	Accounting graduates should possess the technical accounting knowledge necessary for obtaining a relevant entry level accounting position upon graduation.
<b>SOISO #5.</b>	Accounting graduates should possess the technical knowledge necessary for passing the Certified Public Accountant Examination.
<b>SOISO #6.</b>	Accounting graduates should possess strong skills in using microcomputers in accounting.

**EXHIBIT 2**

**Relationship of Mission of Marquette University and College of Business Administration Goals with Statements of Intended Student Outcomes**

<u>University Mission</u>	<u>College Goals</u>	<u>Related Statements of Intended Student Outcomes</u>
Discovery and dissemination of knowledge	Learn to communicate	Strong Oral Communication Strong Written Communication
Development of leadership	Develop understanding of technical environment	Strong Microcomputer Skills CPA Exam Preparation Knowledge for Entry-Level Job
	Become Professionals with highly analytical minds	Strong Critical Analysis Skills
	Specialize and prepare for entry-level jobs	CPA Exam Preparation Knowledge for Entry-Level Job
	Absorb and use growing body of knowledge and technology	Strong Microcomputer Skills CPA Exam Preparation Knowledge for Entry-Level Job

efforts that will be used to accomplish the six intended student outcomes. Most of the efforts identified by the assessment team are those that are currently being used. These efforts include: cases and problems that require critical-thinking skills, writing requirements in all accounting courses, student presentations in accounting/business courses and Beta Alpha Psi activities, faculty participation in meetings and workshops that address the integration and evaluation of communication skills, a broad-based curriculum that examines several different technical areas, the internship program, use of CPA exam questions and problems, communication by the faculty of the importance of the CPA certification, required information systems courses and the utilization of computer assignments in required accounting courses. Future efforts include developing a required senior-level accounting capstone course that will address several of the six intended student outcomes and developing a required professional communications course for master of accountancy candidates.

**Establish Quantifiable Goals**

Utilizing their knowledge of the Accounting Department, the College of Business Administration, Marquette University and the Milwaukee business community, the assessment team subjectively developed quantifiable *incentive* goals (see table 1) for each of the six SOISOs. With two exceptions (the 40 percent of accounting graduates who will be placed with public accounting firms and the CPA exam pass-rate goals), the goals were developed prior to obtaining any data from the measurement tools. Marquette University has historically placed the 40 percent of its accounting graduates with public accounting firms. The assessment team wanted to maintain this placement percentage. Since public accounting firms are hiring fewer people, the team considered this an incentive goal. Our CPA exam pass-rate goals reflect another incentive goal, since our recent performance has been below those set by the faculty.

The establishment of any specific percentage goals can always be debated.



**TABLE 1**  
**Overview of Assessment Plan**

<b>Statement of Intended Outcomes</b>	<b>Efforts to Accomplish the Outcomes</b>	<b>Quantifiable Goals</b>	<b>Measurement Tools</b>	<b>Feedback Mechanisms</b>
1. Accounting graduates should be able to critically analyze information	Case analyses Problems, essay questions Future Consideration—a required senior-level accounting capstone course involving a complex case	90% of alumni will indicate critical analysis skills were enhanced some or better	Alumni Survey	Alumni Survey Results Re-evaluate goals and tools  Determine teaching changes
		50% of alumni will indicate critical analysis was enhanced quite a bit or better	Alumni Survey  Future Considerations: Employer Survey Watson Glaser Critical-Thinking Test Cornell Critical-Thinking Test	
2. Accounting graduates should possess strong business writing skills	Effective Spring 1995 every accounting course must include a writing requirement  Faculty enhancement: Texts, professional meetings and workshops devoted to integrating and evaluating writing skills Faculty communicate to students <i>AICPA Position on Writing Skills</i>	90% of alumni will indicate writing skills were enhanced some or better	Alumni Survey	Alumni Survey Results Internship Results Re-evaluate goals and tools
			Future Considerations: Employer survey Internship report—assessment of writing skills	

<p>3. Accounting graduates should possess strong oral communication skills</p>	<p>Student presentations/ interviews in accounting and other business school courses</p>	<p>90% of alumni will indicate oral communication skills were enhanced some or better</p>	<p>Alumni Survey Communication Skills Assessment Internship Reports</p>	<p>Alumni Survey Communication Skills Internship Results</p>
<p>Student presentations, Beta Alpha Psi activities</p>	<p>50% of alumni will indicate oral communication skills were enhanced quite a bit or very much</p>	<p>Alumni Survey</p>	<p>Re-evaluate goals and tools Determine teaching changes</p>	
<p>Faculty enhancement: Texts, professional meetings and workshops devoted to integrating and evaluating oral communication skills</p>	<p>Employment Interview: —Students' ability to communicate: ■ 80% will receive a 5 or better on a 10-point scale, 1 = unsatisfactory and 10 = excellent ■ no more than 5% will receive a 4 or lower —Comparison with students at other institutions: ■ 80% will receive a 5 or better ■ no more than 5% will receive a 4 or lower —Characteristics: ■ 80% will receive a 5 or better</p>	<p>Communication Skills Assessment</p>	<p>(continued on next page)</p>	
<p>Faculty stress to students the importance of oral communication skills</p>	<p>Future Consideration: Internship Report— Assessment of oral communication skills</p>			



TABLE 1 (Continued)

Statement of Intended Outcomes	Efforts to Accomplish the Outcomes	Quantifiable Goals	Measurement Tools	Feedback Mechanisms
4. Accounting graduates should possess the technical accounting knowledge necessary to obtain an entry-level accounting position	Accounting curriculum provides a mix of courses to sufficiently prepare for entry-level positions in government, industry and public accounting	80% or more of accounting graduates not continuing in school will accept a relevant job in accounting	Alumni Survey Placement Surveys Career Services Data College of Business Survey Department's Data	Alumni survey results Placement Data Re-evaluate goals Determine teaching changes
	Internship program provides students with meaningful and relevant work experiences	40% of accounting graduates will be placed with public accounting firms		
		90% of alumni will indicate that technical knowledge for entry-level job is enhanced some or better	Alumni Survey	
		90% or more of employers will be satisfied with Marquette's accounting graduates	Future Consideration: Employer Survey	
		50% of alumni will indicate that entry-level job preparation is enhanced quite a bit or better		



<p>5. Accounting graduates will be adequately prepared to pass the Certified Public Accountant Examination</p>	<p>For all relevant courses, CPA exam problems and questions are used in homework assignments, exams and projects</p>	<p>Marquette graduates' first-time pass rate on the CPA exam will exceed the national average and rank at least third in Wisconsin</p>	<p>NASBA National Statistics on CPA Examinations and Wisconsin Statistics</p>	<p>NASBA and Wisconsin results Alumni Survey results Re-evaluate goals and tools Determine teaching changes</p>
<p>For all relevant courses, faculty provide an overview of CPA examination coverage of specific topics</p>	<p>90% of alumni will indicate that CPA exam preparation is enhanced some or better</p>	<p>50% of alumni will indicate that CPA exam preparation is enhanced quite a bit or better</p>	<p>Wisconsin Statistics</p>	
<p>Faculty communicate the importance of the CPA certification throughout the accounting profession</p>	<p>For each part of the exam, Marquette graduates' passing rate will exceed the Wisconsin average</p>	<p>50% or more of alumni will pass CPA exam</p>	<p>Alumni Survey</p>	
<p>Faculty encourage students to take a CPA Review</p>				

(continued on next page)



TABLE 1 (Continued)

Statement of Intended Outcomes	Efforts to Accomplish the Outcomes	Quantifiable Goals	Measurement Tools	Feedback Mechanisms
6. Accounting graduates should possess strong skills in using micro-computers in accounting	All accounting majors are required to take Introduction to Computer Information Systems and Accounting Information Systems  Several required accounting courses include computer assignments, such as database applications	90% of alumni will indicate that micro-computer skills are enhanced some or better  50% of alumni will indicate that microcomputer skills are enhanced quite a bit or better	Alumni Survey	Alumni Survey results Re-evaluate goals and tools Determine teaching changes

The team established goals that would be consistent with *desired* outcomes. Each school will have to determine goals appropriate for its program. The assessment team will use information from the measurement tools to identify strengths and weaknesses of our accounting program. The original goals will be reviewed and revised, as necessary.

### Measurement Tools

External tests such as the CPA Examination or AICPA Achievement Tests have been popular measurement tools. Assessment, however, is a much broader concept than external tests. Accordingly, our assessment plan includes several different measurement tools. This section will examine measurement tools from three perspectives: (1) tools used prior to the plan; (2) tools included in the plan; and (3) tools we are considering for the future.

#### Measurement Tools Used Prior to the Plan

Our program had used the AICPA Achievement Tests (I and II) over ten years ago. Herring and Izard (1992) found a "significant statistical relationship between scores on the AICPA Achievement Test and other intellectual variables, indicating that the test is a valid instrument for measuring technical achievement in an accounting program." We have found the test useful for evaluating specific courses or topical areas within our programs. This test has very limited relevance for measuring whether our assessment goals are achieved. As of 1993, these Achievement Tests have been discontinued by the AICPA and were replaced by an examination from Psychological Testing Service.

Another national standardized test is the Core Curriculum Assessment Pro-

gram (CCAP) from the AACSB. We used the undergraduate test several years ago at the college level. This test is limited to core areas. Thus, for accounting, the test is relevant only for our principles courses. While the results of this test indicate student's knowledge of specific topics in accounting, our own final exam results and course grades may be more relevant measures of students' knowledge.

### Measurement Tools of the Assessment Plan

Our assessment plan includes the following measurement tools: alumni survey, communication skills assessment instrument, placement surveys, career services data, national and state statistics on CPA examinations and internship reports.

#### Alumni Survey

An alumni survey is one of the most useful tools for assessment purposes. Nichols (1991) has observed that "Activities reported by (observed of) alumni some time after graduation, but reflecting attitudes or values which were intended outcomes of their program, are among the most powerful forms of behavioral assessment." For an accounting program these outcomes can be the obtaining of an entry level position, passing a professional examination, or attaining certification or advancing into management positions. In their study, Chamberlain et al. (1991) found that administrators ranked alumni surveys fourth among 18 potential outcome measures. Demong et al. (1994) developed an outcomes-measures matrix which shows the alumni survey to be the most pervasive of six measures used in the matrix.

In December 1992, Marquette University's accounting program conducted an alumni survey to determine alumni satisfaction with the accounting program. The survey instrument (table 2)

**TABLE 2**  
**Alumni Survey Questionnaire and Results**

**Instructions:**

This survey intends to measure the extent to which you believe specific skills are essential for a successful business career and the extent to which you believe the "accounting program" enhanced those skills while you were at Marquette. Please view the accounting program as broader than just the formal courses in the accounting curriculum (i.e., program includes internships, Beta Alpha Psi and other activities within the accounting department). For each skill listed below place an "X" in the column which describes your view on how essential you consider the skill and the degree to which the accounting program enhanced that skill.

<b>Example:</b>	<b>None</b>	<b>Very Little</b>	<b>Some</b>	<b>Quite a bit</b>	<b>Very Much</b>
	1	2	3	4	5
<b>Office Politics</b>					
Essential	—	<u>X</u>	—	—	—
Enhanced	—	<u>X</u>	—	—	—
<b>Skill</b>					
<b>1. Business Writing</b>					
A. Essential	—	—	—	<u>4.37</u>	—
B. Enhanced	—	—	<u>3.09</u>	—	—
<b>2. Teamwork Skills</b>					
A. Essential	—	—	—	<u>4.19</u>	—
B. Enhanced	—	—	<u>3.29</u>	—	—
<b>3. Critical Thinking</b>					
A. Essential	—	—	—	<u>4.37</u>	—
B. Enhanced	—	—	<u>3.64</u>	—	—
<b>4. Leadership</b>					
A. Essential	—	—	—	<u>4.08</u>	—
B. Enhanced	—	—	<u>3.16</u>	—	—
<b>5. Oral Communication</b>					
A. Essential	—	—	—	<u>4.48</u>	—
B. Enhanced	—	—	<u>3.22</u>	—	—
<b>6. Creativity</b>					
A. Essential	—	—	<u>3.52</u>	—	—
B. Enhanced	—	<u>2.79</u>	—	—	—
<b>7. Quantitative Ability</b>					
A. Essential	—	—	—	<u>4.17</u>	—
B. Enhanced	—	—	—	<u>4.07</u>	—
<b>8. Microcomputer Skills</b>					
A. Essential	—	—	—	<u>4.44</u>	—
B. Enhanced	—	—	<u>3.34</u>	—	—
<b>9. Mainframe</b>					
<b>Computer Knowledge</b>					
A. Essential	—	<u>2.9</u>	—	—	—
B. Enhanced	—	<u>2.3</u>	—	—	—
<b>10. Accounting Knowledge to Pass CPA Exam</b>					

(continued on next page)

TABLE 2 (Continued)

A. Essential	_____	_____	_____	<u>4.35</u>	_____
B. Enhanced	_____	_____	_____	<u>4.27</u>	_____

**11. Accounting Knowledge for Entry Level Job**

A. Essential	_____	_____	_____	<u>4.28</u>	_____
B. Enhanced	_____	_____	_____	<u>4.17</u>	_____

**Demographic Information:**

Please check the appropriate response. All demographic information and individual answers to above questions are confidential.

	<u>CPA</u>	<u>CMA</u>	<u>CIA</u>	<u>CDP</u>	<u>CFP</u>	<u>Other (specify)</u>
<b>Professional Certifications:</b>	<u>43%</u>	<u>2%</u>	<u>5%</u>	<u>5%</u>	<u>5%</u>	<u>.4%</u>
<b>If not certified, have you passed the exam for</b>	<u>20%</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>.4%</u>
<b>Graduate Degree:</b>	<u>7% MBA (School)</u>		<u>2% MA</u>	<u>1.5% DOCTORAL</u>		
<b>Present Position With:</b>	<u>47%</u> Corporation		<u>3%</u> Government	<u>26%</u> Big 6		
	<u>3%</u> NFP		<u>2%</u> Business Owner	<u>1%</u> Grad School		
	<u>12%</u> Other Public Accounting			<u>3%</u> Law School		
	<u>0%</u> Faculty Member			<u>4%</u> Other Capacity		
<b>Practice Area:</b>	<u>20%</u> Fin. Rept	<u>10%</u> Tax	<u>31%</u> Audit	<u>2%</u> Law		
	<u>4%</u> Cost	<u>16%</u> Other (specify)	<u>17%</u> More than one response			
<b>Sex:</b>	<u>55.7% Male</u>		<u>44.3% Female</u>			

Year Received Bachelor Degree from Marquette: After 1988: 61%

Were you an officer in Beta Alpha Psi? 14% yes

Did you serve as an accounting intern (3 credit course) while at Marquette?  
29% Yes 71% No

What was the most meaningful part of your accounting education?

Faculty (competent, available, helpful) \_\_\_\_\_  
 Internship \_\_\_\_\_

was patterned after the Georgetown University assessment survey (Pettit 1989). Whereas the Georgetown survey focused upon many learning and personal development variables for all students at the institution level, our survey dealt with the intended learning outcomes of the accounting program.

The initial step in developing the survey was to obtain faculty consensus

on which outcomes should be measured and what demographic information should be obtained. Faculty were asked to identify what they considered to be the most important outcomes for the program without any specific outcomes identified for the faculty. Based upon the faculty feedback, the assessment team selected 11 learning outcomes for inclusion in the survey.



Alumni were asked to rank each outcome on the basis of how essential each of the 11 skills/outcomes is to accounting practice and the degree to which the accounting program enhanced the skill. Alumni did not know how the faculty ranked the skills/outcomes. We sent the survey to alumni who graduated between 1971 and 1992. Our thinking was that graduates from the 1970s could provide reliable feedback on how essential certain skills are in accounting practice. We could also ask questions about their positions to measure their professional achievements. In addition to rating each of the 11 skills, the survey respondents provided information about their professional positions, certifications, graduate degrees, year of graduation, area of practice or specialization and passage of professional examinations. More recent graduates could provide useful feedback about the degree to which our accounting program enhanced specific skills.

We mailed the survey to a random sample of 448 accounting alumni. Fifteen questionnaires were returned for wrong address and other reasons. Of the 433 alumni who we assumed received the survey, 276 alumni (62 percent) responded. Approximately sixty-one percent of the respondents graduated after 1988. In addition, 14 percent were past officers of Beta Alpha Psi and 29 percent were former interns, skewing responses toward the better students.

Table 2 shows the alumni survey questionnaire. For each skill, the mean response from all respondents is shown. In addition, the percentages for all demographic variables are provided. Responses for the demographic information provide useful information on how our graduates have done on the professional accounting exams and where they are employed. The results show an effective (eventual) pass rate of 63 percent (43 percent certified plus 20 percent of those without CPA certificate have passed the exam) on the CPA exami-

nation. The two percent rate for CMA status was disappointing since we would like to have more graduates sitting for and passing the CMA exam. In response, the department decided to more aggressively inform the students of the nature and benefits of the CMA designation. We will consider setting a specific goal for percent passing the CMA examination. At the time of the survey, 38 percent of the respondents were in public accounting (26 percent with Big 6 and 12 percent with other) and 47 percent were employed with corporations.

### **Communication Skills Assessment Instrument**

While there are several different ways of assessing communication skills (i.e., grade in communications course, oral presentation grades in accounting courses, internship reports), the assessment team initially decided to develop a communication skills instrument. The instrument was revised based on suggestions from recruiting personnel from public accounting firms.

Since most of our accounting majors interview with the Big 6 public accounting firms during the fall semester of their senior year, we originally asked two of the larger Big 6 firms in Milwaukee, Wisconsin to complete the instrument during the original employment interview. Both firms agreed to participate without any hesitancy. Beginning with Fall 1995 recruiting season, each of the Big 6 firms completed the instrument.

We do, however, realize there are some limitations with the use of the instrument. First, although the majority of our students interview with the Big 6, these firms primarily interview our best students. Second, the assessment is for a brief time on a topic of extreme importance to the students. Third, the recruiters have limited time to complete the instrument. Despite these limitations,

the assessment team believes that the administration of this instrument provides useful information regarding communication skills.

In the future, we will incorporate other tools to assess communication skills. These tools are presented later in the paper ("Measurement Tools for the Future").

### **Placement Surveys/Career Services Data**

Surveys of recent graduates are conducted by our Career Services Center and the College of Business Administration. The results of these surveys, as well as information obtained by Career Services from employers, provide us with information about where our graduates are placed (i.e., industry, public, government) and whether the position is relevant to the accounting program.

### **CPA Examination Statistics**

Standardized exams, especially external exams, have been popular tools for measuring technical knowledge. As an external, objective tool, the CPA examination serves that purpose. First-time pass rates are available by state and by program. However, "effective" pass rates (percent who eventually pass) are not available. Since one of our program's intended outcomes is sufficient technical knowledge to pass the CPA exam, CPA pass rates are relevant. In addition to looking at first-time pass rates, we ask alumni (on the alumni survey) to indicate whether they are certified and whether they passed the exam, if not yet certified. This enables us to determine an effective pass rate (63 percent for the 1992–93 survey).

### **Internship Reports**

Our accounting majors participate in internships during the spring semester of their junior year or the summer before their senior year. Upon comple-

tion of the internship, each employer receives a standardized form (internship report) provided by us to evaluate the student. Some of the items addressed in the internship report include: attitude, ability to learn, dependability, initiative, quality of work, relations with others, maturity, poise, judgment, overall performance, students' potential and factors that could hinder the students' advancement. Interns are required to write a paper on how the internship experience relates to academic work and how the experience adds to the students' development. In their reports, interns frequently cite the importance of oral communication and writing skills in the accounting profession. Seldom do they cite microcomputer knowledge; perhaps, taking for granted that it would be expected. In the future, we will ask the internship employers to evaluate oral and written communication skills.

### **Measurement Tools for the Future**

We would like to measure employer satisfaction with our accounting graduates and to elicit employers' reactions about the skills of our graduates. Thus, we are considering the development of an employer survey. The Chamberlain (1991) survey showed that accounting program administrators rated employers' satisfaction surveys as the most useful outcome measure. We are also considering the use of these measurement tools: critical thinking tests (pre-post) such as the Watson Glaser Critical Thinking Appraisal and Cornell Thinking Test, communication tools such as the grade in the professional communication course in the Master of Accountancy program and the grade in the undergraduate communications course, the employer survey and internship reports.

### **Feedback Mechanisms**

Data generated by the measurement tools are used to determine if we meet

the quantifiable goals and to determine, if necessary, appropriate changes in our goals or teaching methods. We will evaluate measurement methods to determine if the methods are providing sufficient data to evaluate the goals and to determine if there are other more appropriate measurement methods. Since assessment is a continuous process, the statements of intended student outcomes will be examined on a periodic basis to determine that they are consistent with the mission and goals of Marquette University, the College of Business Administration and the Department of Accounting. The results of the administration of the measurement

tools, alumni survey and communication skills assessment are presented next.

### Feedback—Alumni Survey

Results from the alumni survey, which was mailed in December 1992, for responses on each of the 11 outcomes are provided in exhibit 3. Respondents rated each skill using a five-point scale starting from "none" (1.0) to "very much" (5.0) with intermediate ratings of "very little" (2.0), "some" (3.0) and "quite a bit" (4.0). One of the main results was that alumni rated microcomputer skill as the second most essential skill. Since the accounting faculty rated this skill sixth and well below the

EXHIBIT 3  
Alumni Rankings Of Outcomes/Skills

#### A. Essential and Enhanced Rankings for all Respondents

Outcome	Essential Rank	Enhanced Rank
Oral Communication	1	7*
Microcomputer Skill	2	5*
Business Writing	3 (tie)	9*
Critical Thinking	3 (tie)	4
CPA Exam Preparation	5	1
Entry-Level Job Preparation	6	2
Teamwork	7	6
Quantitative Ability	8	3
Leadership	9	8
Creativity	10	10
Mainframe Knowledge	11	11

#### B. Comparison of "Enhanced" Ranking Between Pre-89 and Post-88 Alumni

Outcome	All Alumni	Pre-89	Post-88
CPA Exam Preparation	1	1	2
Entry-Level Job Preparation	2	2	1
Quantitative Ability	3 (tie)	3	3
Critical Thinking	3 (tie)	4	5
Microcomputer Skill	5	10**	4
Teamwork	6	7	6
Oral Communication	7	6	7
Leadership	8	5***	9
Business Writing	9	8	8
Creativity	10	9	10
Mainframe Knowledge	11	11	11

\* Signify area for immediate investigation and action.

\*\* Difference in positive direction.

\*\*\* Difference in negative direction.



fifth-rated skill, the faculty originally intended to focus upon only five major outcomes. The high ranking by alumni of computer skill as essential to practice convinced the faculty that we should include microcomputer skill as one of the top intended outcomes.

Initially, we had chosen to do a gap analysis of the survey results. This meant taking the arithmetic difference (gap) between the enhanced and essential mean values and comparing this gap with a somewhat arbitrary maximum tolerable gap. For all intended outcomes the essential mean exceed the enhanced mean. Some faculty and each of the manuscript reviewers questioned the interpretability of the gap analysis. Although Georgetown did conduct a gap analysis for its survey, we decided to discontinue use of the gap analysis and to focus upon independent analysis of the essential and enhanced scores.

The assessment team examined the alumni survey results to determine areas of differences between faculty and alumni ratings of the outcomes. Except for the ratings on microcomputer skill there was general agreement on the top six outcomes. There were more differences between the more recent (post-

1988) and older (pre-1989) graduates' rankings as shown in exhibit 4, although none were significant at the .05 level.

Notice that the more recent alumni (post-88) rated microcomputer skill one place higher than did the pre-89 alumni and alumni overall rated microcomputer skill second while faculty rated the skill sixth in importance. Given this importance that alumni attributed to microcomputer skill, the assessment team decided to compare this ranking with the enhancement rankings for the skill. Exhibit 3, part B compares the "enhanced" ranking (based on mean response values) for all skills/outcomes between the pre-89 and post-88 alumni. Given the rapid changes in computer technology and the use of technology in our classrooms, we should expect to see higher "enhanced" ratings from the more recent graduates. That was the case, as post-88 alumni had ranked microcomputer skill fourth while pre-89 alumni ranked the skill tenth. This suggests that we have enhanced our students' microcomputer skill more since 1989. We should expect to see even higher enhancement ratings on the next alumni survey.

**EXHIBIT 4**  
**Differences Between Faculty and Alumni Rankings**

Skill/Outcome	Faculty Importance Ranking	Alumni Rank as Essential Skill*		
		All Alumni	Post-88 Alumni	Pre-89 Alumni
Oral Communication	1	1	1	1
Business Writing	2	3 (tie)	6	2
Critical Thinking	3	3 (tie)	3 (tie)	4
Job Preparation	4	6	5	6
CPA Exam Preparation	5	5	3 (tie)	5
Microcomputer Skill	6	2	2	3

\* There were no significant differences (ANOVA at .05 level) between the post-88 and pre-89 alumni rankings on any of the top six outcomes.

Statistical analysis of the "essential" ratings by pre-89 and post-88 alumni showed only one significant difference between their ratings. That was for the creativity outcome. For "enhanced" ratings, however, there were significant differences for five of the outcomes, four of which are among the top six outcomes. Following is a summary of those differences:

<u>Outcome/Skill</u>	<u>Enhanced Pre-89 Mean</u>	<u>Post-88 Mean</u>	<u>Enhanced p &lt; .05</u>
Business Writing	2.91	3.25	.0006
Teamwork	3.05	3.47	.0000
Oral Communication	3.10	3.32	.0433
Microcomputer Skill	2.82	3.68	.0000
CPA Exam Preparation	4.40	4.19	.0355

The above differences signify a positive change in student ratings on four of five outcomes. Only in the case of CPA exam preparation is the trend downward and in that case the overall enhanced ranking was four positions above the essential ranking (exhibit 3, part A).

Clearly, based upon the overall differences between the essential and enhanced rankings in exhibit 3, there is room for improvement. Our main priorities for action relate to the outcomes where the differences in rankings between enhanced and essential were higher for essential by several ranks. Our goal is to improve the areas of need while maintaining the others. Thus, we focused on business writing, oral communication and microcomputer skill. To address the first two outcomes, we established a requirement that all accounting majors complete a professional communication course which will cover business and professional presentations. This course will be taken before completing upper division courses above the intermediate level. The skills learned in the professional communication course, then, will be integrated into other courses as appropriate and feasible. We have approved and

are in the process of developing, a new capstone course which will emphasize communication skill, microcomputer skill and critical thinking.

Since 1987, all accounting majors have been required to complete the accounting information systems course. This, in part, may explain the higher "enhancement" scores from the more recent

alumni. In addition to monitoring the performance of students in the systems course, we have increased integration of the computer in other accounting courses.

Table 4 compares the alumni responses on enhancement of each of the top six outcomes with the original quantifiable goals for those outcomes. Overall alumni responses are below the goals set for the percentage who answer "some or better" and "quite a bit or better" for business writing, oral communication and microcomputer skill (although post-88 alumni responses met the goals). Responses for entry-level job preparation and critical analysis (thinking) met the goals. In the case of entry-level job preparation and CPA exam preparation, we should consider raising the goals.

Overall, results of the frequency distribution of alumni responses support the conclusions drawn from comparing mean values on the "enhanced" ratings. The response breakdown on microcomputer skills shows even more clearly that the skill has been enhanced more in recent years (notice the large percentage differences between pre-89 and post-88 alumni).

**Communication Skills Assessment Instrument**

As previously noted, each of the Big 6 public accounting firms completed the communication skills assessment instrument (table 3) during the Fall 1995 recruiting season. The results are presented in exhibit 5.

The results of the Fall 1995 recruiting interviews show that the positive-oriented goals (80 percent or more will receive a five or better) were attained. The results also show that the negative-oriented goals (no more than five percent will receive a four or lower) were not attained. Even considering the limitations of the instrument, the findings indicate the communication skills of some of our students need to improve.

**Implementation to Date**

The assessment plan has been reviewed and accepted by the Accounting Department, Dean of the College of Business Administration, Associate Vice President for Academic Affairs and Vice President for Academic Affairs. Results of the Alumni Survey and Oral Communication Skills Assessment Instrument have been presented to and discussed with the Accounting Department faculty. The department chair is currently developing a database.

**SUMMARY AND CONCLUSION**

This paper extends the accounting assessment literature by presenting the details of the design and implementation

**TABLE 3  
Communication Skills Assessment**

Student Candidate: \_\_\_\_\_

1. Indicate the candidate's ability to communicate orally:

<b>Unsatisfactory</b>							<b>Satisfactory</b>					<b>Excellent</b>	
1	2	3	4	5	6	7	8	9	10				

2. Compared to candidates at other institutions, the candidate's ability to communicate orally is:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Please indicate other institutions that you are using for the comparison:

\_\_\_\_\_

If you do not recruit at any other institutions, indicate NA.

**Please Complete Question 3 or 4, or Both**

3. Please indicate the characteristics that describe the candidate.

	<u>Unsatisfactory</u>			<u>Satisfactory</u>				<u>Excellent</u>		
Confident	1	2	3	4	5	6	7	8	9	10
Easy to understand	1	2	3	4	5	6	7	8	9	10
Friendly	1	2	3	4	5	6	7	8	9	10
Grammar	1	2	3	4	5	6	7	8	9	10
Enthusiastic	1	2	3	4	5	6	7	8	9	10
Ability to ask good questions	1	2	3	4	5	6	7	8	9	10

4. Please provide an overall assessment of the candidate's ability to communicate orally by briefly discussing strengths and weaknesses:



**TABLE 4**  
**Alumni Responses—Frequency Distribution**  
**Enhanced Ratings**

Outcome	Some or Better Response			Quite a Bit Better			Comments	
	Goal	Total Alumni	Pre-89 Alumni	Post-88 Alumni	Total Alumni	Pre-89 Alumni		Post-88 Alumni
1. Critical Analysis (Thinking)	90%	94%	97%	92%	57%	56%	57%	Meet goals
2. Business Writing	90	77	66	86	30	22	36	Below goals on both Recent alumni closer to goals
3. Oral Communication	90	80	78	82	37	30	43	Below goals on both Recent alumni closer to goals
4. Entry-Level Job Preparation	90	99	99	99	81	85	82	Meet goals Consider higher goals
5. CPA Exam Preparation	90	98	99	98	84	89	81	Meet goals Consider higher goals
6. Microcomputer Skill	90	78	58	92	48	28	60	Overall, goals not met Recent alumni responses meet goals



**EXHIBIT 5**  
**Oral Communication Skills—Fall 1995**

	<u>Goal</u>	<u>Actual</u>	<u>Comment</u>
<b>Candidates Ability to Communicate</b>	80% score 5 or better	90%	Goal attained
	5% score 4 or below	10	Goal not attained
<b>Comparison with Candidates at Other Institutions</b>			
	80% score 5 or better	88%	Goal attained
	5% score 4 or below	12	Goal not attained
<b>Characteristics</b>			
Confident	80% score 5 or better	87%	Goal attained
Easy to understand	80% score 5 or better	93	Goal attained
Friendly	80% score 5 or better	99	Goal attained
Grammar	80% score 5 or better	98	Goal attained
Enthusiastic	80% score 5 or better	91	Goal attained
Ability to ask good questions	80% score 5 or better	80	Goal attained

of an accounting assessment program. Specifically, the paper describes the selection and involvement of the assessment team and the specific components of the assessment program at Marquette University.

The assessment program, which is the first of its kind at Marquette University, was developed by a team of faculty from the Accounting, Economics and Management Departments. Using input from the Accounting Department faculty and the alumni, the assessment team developed a program comprised of five major components: (1) Six Statements of Intended Outcomes; (2) Efforts to Accomplish the Outcomes; (3) Quantifiable Goals; (4) Measurement Tools; and (5)

Feedback Mechanisms. The program has been reviewed and accepted by the Accounting Department, the College of Business Administration and upper administration at Marquette University.

Although the entire program is not fully operational, the results of implementation indicate that improvement is needed in the areas of business writing skills, oral communication skills and microcomputer skills. The Accounting faculty are now aware of these areas and we are attempting to improve the processes related to these areas. We hope that the assessment program will result in continuous improvement of all aspects of our accounting program.

#### REFERENCES

- Accounting Education Change Commission (AECC). 1990. *Objectives of Education for Accountants*. Position Statement No. 1. *Issues in Accounting Education* (Fall): 307-312.
- American Accounting Association Committee on the Future Structure, Content and Scope of Accounting Education (the Bedford Committee). 1986. Future accounting education: Preparing for the expanded profession. *Issues in Accounting Education* (Spring ): 168-195.

- Chamberlain, D., R. Seay, and F. Julian. 1991. Accounting administrators' perceptions of the status and usefulness of outcome measurement. *The Accounting Educators' Journal* (Winter): 18–29.
- Demong, R., J. Lindgren, and S. Perry. 1994. Designing an assessment program for accounting. *Issues in Accounting Education* (Spring): 11–27.
- Herring, H. C., III, and C. D. Izard. 1992. Outcomes assessment of accounting majors. *Issues in Accounting Education* (Spring): 1–17.
- Gainen, J., and P. Locatelli. 1995. Assessment for the New Curriculum: A Guide for Professional Accounting Programs (Sarasota, FL: AAA and AECC).
- Nichols, J. O. 1991. *The Departmental Guide to Implementation of Student Outcomes Assessment and Institutional Effectiveness*. New York, NY: Agathon Press.
- Perspectives on Education: *Capabilities for Success in the Accounting Profession* (The White Paper). 1989. Arthur Andersen & Co., Arthur Young, Coopers & Lybrand, Deloitte Haskins & Sells, Ernst & Whinney, Peat Marwick Main & Co., Price Waterhouse, and Touche Ross. New York, NY.
- Pettit, J. 1989. A report card from Georgetown University undergraduate alumni. Paper presented at the Society for College and University Planning Conference, Denver, CO.
- Schnitker, T. J. 1993. Alumni perceptions as a resource for institutional outcomes assessment. Ph.D. dissertation, University of Iowa.