

# **Student Perceptions of Skills and Attributes Required in Accounting Careers**

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*Prior studies have been conducted to determine the correspondence between the skills and attributes students perceive important to one's professional accounting career and the level to which those skills and attributes were developed during their academic career. Results obtained indicate a significant difference between students' perceptions of the relative importance of skills/attributes and the development of these skills/attributes during their academic careers. Many of the skills perceived to be important to the students' future accounting careers were considered to receive less priority during their studies. Conversely, other skills perceived to be of less importance received greater priority in academic programs.*

*Keywords: accounting graduates, student perceptions, accounting skills/attributes, accounting careers, expectation gap*

## **INTRODUCTION**

Many believe universities play a critical role in developing students' capabilities to become competent members of the workforce. Lee and Blaszczynski (1999) also stress the importance of establishing generalized accounting standards in higher education to meet the changing needs of business. The lack of an established accounting education model can lead to a "skills gap," which is defined as the "perceived mismatch between competencies and expectations" (Bui & Porter, 2010, p. 23). The Commission on Accounting Higher Education (the Pathways Commission), suggests that the lack of an established educational model by accounting educators puts the accounting profession at risk, and could potentially "erode its ability to deliver on its commitment to serving the broad public interest associated with reliable Accounting information" (Pathways Commission, 2012, p. 24).

In response to the Pathway Commission's comments regarding the lack of an educational model, specific skills/attributes were identified in three competency components: foundational, accounting, and

broad management. Some prior research efforts have addressed the relative importance of the skills/attributes to faculty and practitioners (Albrecht & Sack, 2000; Dunbar, Laing, & Wynder, 2016; Lee & Blaszczynski, 1999; Low, Botes, Dela Rue, & Allen, 2016).

Low, et al. (2016) suggested additional investigation into students' perceptions of "important skills/attributes to hold in order to gain a graduate position" (p. 53) is needed. Such investigation "could help identify any perceived mismatch and provide further incentive for accounting educators to provide programmes that impact these skills" (p. 53). The current study addresses two research questions. First, those skills/attributes students perceive as being the most important to their future careers are identified. Second, differences between the perceived importance of such skills/attributes and how well those skills/attributes were developed during the degree program are evaluated.

This article is organized as follows. Background information related to skills/attributes considered relevant to accounting students and the profession are identified and prior studies focusing on the importance of such skills/attributes are presented in the next section. The research method and data sources are then presented followed by the results of the current study. A discussion and conclusions are presented in the final section.

## **LITERATURE REVIEW**

Albrecht and Sack (2000) argued that changes made to the accounting curriculum have not been sufficiently pervasive or substantive to add value to accounting students' knowledge. They identified six major categories of perceived problems with accounting education. One of the most critical was a lack of skill development. Accounting education has been criticized for focusing on content mastery rather than skill development. Content mastery leads students to "memorize" material which can easily be forgotten. However, skill development allows the student to understand relevant concepts and apply the knowledge across various fact patterns or situations. It is the development of skill which is more enriching to students.

The International Federation of Accountants (IFAC, 2003), identified a "capability" as an individual's attribute which allows her to perform her professional role. Examples include both technical and functional knowledge, behavioral skills, professional judgment and values, ethics, and attitudes. Capabilities serve as the foundation for competence, which IFAC described as "the ability of an individual to perform work that is stipulated by standards, and may be evaluated by the individual's workplace performance through work simulations, written/oral examinations, and self -assessments" (IFAC, 2003).

To gain a better understanding of the relationship between accounting education and one's professional career, Evans, Juchau, and Wilson (2014, p. 2) proposed three questions:

1. "What is the profession's knowledge base?"
2. What is best learned in a university, and what is best learned in professional practice?"
3. What needs to be learned before qualifying to practice and what is best learned after qualifying?"

In 2014, Lawson et al. developed a Competency Integration Framework in response to the Commission on Accounting Higher Education (the Pathways Commission) criticism of the accounting education's lack of an appropriate model. Lawson et al. (2014) identified the need for three interconnected competency components: foundational, accounting, and broad management. The foundational competencies were critically important to an individual's ability to develop both their accounting and broad management competencies. Additionally, the broad management competencies affected the individual's accounting competencies. For each of the three components, Lawson et al. (2014) identified specific skills.

### **Foundational Component**

Within the Foundational component, the skills included communication, critical/analytical thinking, interpersonal and human relations, and technological competencies. The need for developing these skills

within the accounting curriculum has been supported by a number of authors (Burnett, 2003; Cameron & Dickfos, 2013; Dallimore, Hertenstein, & Platt, 2006; De Lange, Jackling, & Gut, 2006; Grace & Gilsdorf, 2004; Hertenstein & Platt, 2004, 2006; Howie et al., 2014; Jones, 2014; Low et al., 2016; Mohamed & Lashine, 2003; Siriwardane & Durden, 2014; Tonge & Willett, 2009; Young & Lee, 2011).

### *Communication*

According to International Education Standard 3, Professional Skills and General Education (2015), accounting professionals should be able to “present, discuss, report, and defend views effectively through formal, informal, written and spoken communication” (International Accounting Education Standards Board, 2015, p. 157). Howie et al. (2014) identified the necessity for oral communication skills (both speaking and listening) in a variety of settings, including client meetings, presentations, negotiations, and social gatherings. Low et al. (2016) reported that employers perceived oral communication skills to be one of the most important skills needed for accounting graduates. Communication was also found to be the most highly ranked skill in an analysis of accounting job advertisements (Dunbar, Laing, & Wynder, 2016).

Jones (2014) reported that a cohort of employers considered communication to be an important professional skill. Jones indicated that communication skills were pertinent to such tasks as writing letters, telephone communications, and client inquiry. The ability to clearly explain to clients what work was being performed and the reasons for performing such work was also an important skill for a new staff person to possess.

Cameron and Dickfos (2013) argued oral communication should be “taught and assessed in a contextualized manner, meaning it must be relevant to the workplace environment in order to meet the demand of professionals for accounting graduates” (p.137). However, Siriwardane and Durden (2014) indicated that despite efforts of accounting educators, there is still a perception that accountants are poor communicators. They suggested some accounting educators may not meet the communication requirement for practicing accountants themselves and, as a result, the skills taught at the university level may not be sufficient for professional needs. Accounting students may also have an apprehension toward oral communication which may result in their inability to develop the necessary skills.

Various strategies have been suggested to develop accounting students’ oral and written communication skills. Dallimore, Hertenstein and Platt (2004, 2006) suggested that classroom discussions emphasize active learning and allow students to develop problem solving and critical thinking skills (which is also a skill within the foundational component).

Grace and Gilsdorf (2004) suggested the use of “communication-to-learn” exercises. These multi-task exercises provide students the opportunity to communicate in a familiar environment (the classroom) while providing the instructor feedback as to the students’ level of understanding.

### *Critical/Analytical Thinking*

The American Institute of Certified Public Accountants (AIPCA) identified critical thinking and problem-solving skills as one of the core-competencies needed by certified public accountants (2013). This skill is needed by accountants “in evaluating facts, challenging assumptions and applying judgment to develop relevant solutions” (AICPA, 2013, p. 43). Mohamed and Lashine (2003) believe analytical skills include knowing the appropriate questions to ask to collect needed information, being able to recognize important information and being able to apply appropriate logic to synthesize the information with the problem at hand. Jones (2014) reiterated the importance of new accountants needing to be able to understand, synthesize and apply knowledge to new tasks or situations and referred to an individual possessing ‘intellectual flexibility’ (p. 534) as a key professional skill.

Oral and written exercises can be used to aid students in developing their critical thinking skills (Dallimore, Hertenstein, & Platt, 2004, 2006; Young & Lee, 2011). Tonge and Willet (2009) suggested students prepare written arguments on a variety of accounting topics. Such tasks encourage students to develop their critical thinking skills as well as their research abilities and oral and written communication skills.

### *Interpersonal and Human Relations*

Interpersonal and human relation skills are critical for team-based interactions common to the accounting profession (Lawson et al., 2014). Examples of human relations skills include team-based management skills, negotiation skill, and conflict resolution. Interpersonal skills were favored by a number of employers surveyed by Jones (2014) and Low et al. (2016) and was found to be the third most frequently cited skill in accounting employment advertisements (Dunbar, Laing, & Wynder, 2016). The ability to work well with colleagues at various levels of staff, taking ownership and responsibility for one's work and having a hard-working attitude identified by employers as being important to interpersonal skills (Jones, 2014).

Beyond ones' ability to work well with others, Jones (2014) stressed that the individual's interpersonal skills were key to the new accountant's ability to successfully integrate into a firm. Confidence, self-awareness, professional attitude and outlook, and common sense were elements of a set of skills Jones (2014) referred to as 'X Factor Skills' (p. 534). From his discussions with various professionals, Jones concluded that 'these attributes were key to settling into professional life and establishing professional credibility with colleagues and clients' (p. 533).

### *Technological Competencies*

Technology, when combined with an accountant's functional knowledge, enhances the overall client services provided (AICPA, 2013). With rapid technological changes, it is critical for accounting student to continually improve their skills and acquire new skills to compete in the global market (Mohamed & Lashine, 2003).

Knowledge of and ability to use technology is critical for communication. Today, accountants use video conferencing more frequently to meet with their clients. Integrating technological skills into the accounting curriculum is a way to develop a student's skills to meet those used in the accounting profession (De Lange et al., 2006). Burnett (2003) reported that accounting professionals need to develop technological skills related to using spreadsheet and word-processing software for communication purposes and using relevant information resources available through the internet. Dunbar, Laing and Wynder (2016) reported knowledge of several computerized software programs as being frequently occurring in accounting position advertisements. However, Low et al. (2016) noted that skills related to accounting software were one of the lowest ranking skills in terms of importance.

### **Accounting Component**

Accounting Competencies is another component of the Competency Integration Framework. This component includes skills such as those related to external reporting and analysis, planning, analysis, and control, and professional values and ethics. These skills are generally included in the topics covered throughout one's academic career.

### *External Reporting and Analysis*

Preparation of financial information in conformity with applicable accounting standards is necessary the allocation of resources and the functioning of various economic markets. Students are introduced to the concepts and requirements of financial accounting and reporting in a variety of academic courses.

### *Planning, Analysis and Control*

Lawson et al. (2014) defined planning as "the process for defining the organization's strategic and operational goals and implementing decisions that support these goals" (p. 304). This process requires an accountant to synthesize information gathered from risk management, strategic planning, budgeting, and forecasting as various alternate solutions are evaluated and selected.

Results reported by Low et al. (2016) provide an interesting perspective with respect to skills within the Accounting Component. The participants in their study stressed the importance of a basic understanding of accounting concepts. However, the employers anticipated that accounting graduates would develop their skills through 'on-the-job' training. Participant employers were more interested in

accounting graduates have ‘an ability to learn and be able to apply those skills and the ability to pick something up that is new’ (p. 43).

### **Broad Management Component**

Broad management skills allow accountants to effectively work with members of the organization and to create value in the accountants’ work (Lawson et al., 2014). Broad management skills are essential for individuals who aspire to become successful managers and executives. Within the component of Broad Management Competencies, skills related to leadership and ethical and social responsibilities are of significant importance to accountants.

#### *Leadership*

Leadership aids in the development and implementation of an entity’s vision, values, and mission. It also improves overall performance and increases the awareness, interest and responsibility to one’s community (Lawson et al., 2014). The importance of leadership skills was cited by DeRue, Sitkin and Podolny (2011), Low et al. (2016), O’Leonard (2011), and Stephens (2007).

In the United States, corporations spend billions of dollars annually on learning and development programs targeted at leadership development (O’Leonard, 2011). Although some universities are introducing leadership education and development into their curricula, a lack of research, addressing the design and delivery of leadership education, exists (DeRue et al., 2011).

Through their involvement with campus organizations, students can begin to develop leadership skills. Stephens (2007) reported that members of Beta Alpha Psi (an academic accounting fraternity) graduate with valuable skills learned from their leadership experiences and are more likely to assume leadership positions within professional organizations. Successful leaders must also maintain an awareness, interest, and responsibility to the community (Lawson et al., 2014).

#### *Ethical and Social Responsibility*

Professional ethics is one of the skills necessary for the accounting component and is integral to the broad management component. Ethical and social responsibilities play crucial roles in successful business practices. Several financial statement debacles led to the passage of the Sarbanes-Oxley Act of 2002. This Act has had a significant impact on accountants’ ethical and social responsibility (Nicholson & DeMoss, 2009). Inclusion of materials and class activities promoting the development of accounting students’ ethical and social responsibility is crucial to future accountants’ success and are supported by several authors (Bean & Bernardi, 2005; Camp & Schnader, 2010; Davis, 2003; Jennings, 2005; Low et al. 2016).

In 2002, the Sarbanes Oxley Act (‘SOX’) was signed into law in the United States. This piece of legislation established a framework for public companies’ accountability in the areas of financial reporting and disclosure, performance of audits, auditors’ professional conduct, and corporate governance (Davis, 2003). SOX established the Public Company Accounting Oversight Board to ensure that financial statements are audited appropriately according to the established independent standards.

Prior to the passing of the Sarbanes-Oxley Act of 2002, the public perceived a lack of ethics within those companies who suffered financial statement failures and associated it directly with the failure of auditors to perform their audits according to professional standards. To regain the public’s trust, the accounting profession must be proactive in demonstrating compliance with ethical standards (Bean & Bernardi, 2005). Accountants are encouraged to be curious and demonstrate professional skepticism when auditing the financial statements and related internal accounting controls (Camp & Schnader, 2010).

While some institutions have implemented ethics and social responsibility issues into the curriculum, a gap exists between current and normative levels (Nicholson & DeMoss, 2009). Course materials tend to be related to one of three ethical models (Jennings, 2005). One model emphasizes the importance of environmentalism, diversity, human rights, and philanthropy. A second model emphasizes the importance of the professional code of conduct. And a third model emphasizes the analysis of ethical dilemma in terms of the consequences to various groups with a vested interest in the potential outcome of a situation

(Jennings, 2005). Given the various services provided by accountants, a single ethical model is not sufficient. Rather, accountants must be well-versed in each of the various models and be able to relate the theories and ideas from each to ethical dilemma encountered in their day-to-day activities.

CPAs are among the most respected and trusted financial professionals and are known for their objectivity, integrity and financial and business expertise, earning the title of trusted advisor to individuals and business' (AICPA, 2013, p. 22). To continue earning the public's trust, current and future accounts must maintain high ethical standards and demonstrate a reputation for promoting social responsibility.

Lawson et al. (2014) argued the three competency components (foundational, broad management and accounting) promote long-term career development beginning with the educational process and provide a foundation for a wide variety of career opportunities. Evans, Juchau, and Wilson (2014) concurred with Lawson et al.'s (2014) argument that accounting education should be well-rounded. Evans, Juchau, and Wilson (2014) indicated that education should not specifically focus on work preparation as such focus fails to prepare students for life-long professional practice.

In addition to the Competency Integration Framework, the National Association of Colleges and Employers (NACE) Job Outlook (2014) specifies attributes preferred by employers. Although not exclusively limited to accounting majors, NACE's information is consistent with the foundational competencies needed for accounting majors to be successful in their professions, as identified by Lawson et al. (2014). NACE reported that communication skills (written and oral), analytical and quantitative skills, technical skills, technological skills and interpersonal skills were highly desired by employers.

#### *Evaluative Analysis of Competencies*

Several studies have been performed in which the relative importance of certain skills was evaluated. In 1999, Lee and Blaszczyński reported that the perceived importance of accounting knowledge had declined between 1992 and 1997 and was expected to decline in importance through 2002. However, communication skills, technology skills and interpersonal skills had increased in importance and were expected to continue to increase in importance through 2002. The authors suggested that these skills be developed in the academic environment by integrating other non-accounting materials that focus on communication skills, problem-solving, group activities, and technology

Albrecht and Sack (2000) evaluated a list of twenty-two skills and reported that accounting faculty and practitioners were in substantial agreement when ranking these skills in terms of the time to be devoted to developing each during an accounting course. Kavanagh and Drennan (2008) adapted the Albrecht and Sack survey instrument and made minor refinements to be applicable to Australian accounting students.

Kavanagh and Drennan (2008) identified a list of forty-seven skills and attributes relevant to accounting students. In their study of Australian accounting students, the authors reported that twelve of the skills/attributes were perceived by students as being the most important to their future careers. These skills included self-motivation/direction, professional attitude, oral and written communications, teamwork, values, analytical problem solving, decision making, critical thinking, leadership, computer literacy, and interpersonal skills to be of greatest importance to their future careers. However, when considering how well specific skills had been developed during their academic programs, the authors reported that an insufficient priority had been dedicated to developing those skills. The largest gaps discovered were for accounting software skills, self-promotion/motivation, negotiation, leadership, and customer service. Of the top 12 skills identified as being most important, significant differences between perceived importance and academic development were found for self-motivation/direction, professional attitude, oral communication, and decision making.

Jones (2014) conducted interviews and discussions with a panel of employers from Northern England. Results of these communications led Jones to identify a similar set of skills and abilities which he categorized as 'communication, intellect and technical skills, team working/attitude, commercial/business awareness, and X factor skills' (2014, p. 534).

## THE CURRENT STUDY

In the 1990s, the American Institute of Certified Public Accountants (AICPA) began an initiative to determine the direction of the profession into the new century. This initiative, the “CPA Vision Project”, was the precursor to “CPA Horizons 2025,” begun in 2010. As part of the CPA Horizons 2025 project, the AICPA reviewed the purpose, values, and competencies that had been initially developed as part of the CPA Vision Project. In the CPA Horizons 2025 Report (2013), the AICPA identified six core values (integrity, competency, lifelong learning, objectivity, commitment to excellence, and relevance in the global marketplace). Additionally, core competencies were identified as communication skills, leadership skills, critical thinking and problem solving skills, anticipating and serving evolving needs, synthesizing intelligence to insight, and integration and collaboration.

In another project, the AICPA, in conjunction with accounting educators, developed a Core Competency Framework (n.d.-b). This framework identified the skills needed for students to be successful in their future professional careers, whether in public accounting, industry, or government. The Core Competency Framework identified three areas of competency and specific skills as follows:

- Foundational competencies: Decision modeling, risk analysis, measurement, reporting, research, and technology (AICPA, n.d.-c);
- Personal competencies: Professional manner, problem solving/decision making, interaction with others, leadership, communication, and project management (AICPA, n.d.-d); and
- Broad business perspectives competencies: Strategic/critical thinking, industry/sector perspective, international/global perspective, resource management, legal/regulatory perspective, and marketing/client focus (AICPA, n.d.-a).

These recent efforts at developing competencies are applicable to U.S. accounting students and professionals. The core competencies developed by the AICPA conform to those identified and studied by Albrecht and Sack (2000), Evans, Juchau, and Wilson (2014), and Kavanagh and Drennan (2008). While the Kavanagh and Drennan (2008) study focused on Australian accounting students, the current study addresses the perceptions of accounting students in the United States. Two research questions of interest are the focus of this study:

**RQ1:** *Which skills/attributes are perceived as being the most important to the future careers of U.S. accounting students?*

**RQ2:** *Are there differences between the perceived importance of skills/attributes and the perception of how well those skills/attributes have been developed (i.e., given priority) during the degree program?*

## Methodology

### *Subjects*

A sample of approximately 274 undergraduate accounting students at a large, public, West coast university were used for the current study. The research effort evaluated students' perceptions of necessary skills required to be successful in the accounting profession in relation to how well the students' perceived those skills had been developed during their degree programs. Of the 274 students surveyed, 186 responses were used for the study, producing a 68% viable response rate. Ninety-two survey responses were discarded for at least one of the following reasons: the survey was either incomplete, incorrectly completed, or the student was not an accounting major. The demographic profile of the sample suggests that most students (99.5%) were either juniors or seniors. In addition, most students were between 18 and 29 years of age (89.8%).

### *Design*

The survey instrument was adapted from Kavanagh and Drennan (2008), and consisted of multiple tasks. First, participants were presented a list of 47 specific skills/attributes. The participants were asked to evaluate the importance of each skill/attribute regarding success in future accounting careers using a

Likert-type scale. The endpoints were: 1 (not important) to 5 (very important). Second, participants were asked to identify the extent to which these skills/attributes were developed and given priority during their academic program. The same forty-seven skills/attributes were evaluated using a Likert-type scale where the endpoints were 1 (no priority) to 5 (top priority).

The internal consistency of these two scales (i.e., importance and priority regarding skills/attributes) and the overall alpha score was assessed using Cronbach’s alpha. These results indicate that both of these scales have very high reliability and internal consistency, with the “importance” scale receiving an alpha of .915 and the “priority” scale receiving an alpha of .935. Therefore, all 47 items within both scales were retained for further analyses.

## Results

In order to test the two research questions, descriptive analysis is utilized in addition to paired-samples t-tests.

### *Research Question 1*

To determine the skills/attributes which are perceived as being the most important to the future careers of U.S. accounting students, descriptive analysis was performed on the 47 items pertaining to the “importance” measures for these skills/attributes. These results are highlighted in Table 1. The results suggest that “work ethic” has the highest mean regarding the “importance” measures for these skills/attributes, while “foreign language” and “entrepreneurship” are the lowest.

**TABLE 1**  
**IMPORTANCE OF ACCOUNTING SKILLS/ATTRIBUTES**

<b>Variable</b>	<b>Average</b>	<b>Std. Dev.</b>	<b>Variable</b>	<b>Average</b>	<b>Std. Dev.</b>
Work ethic	4.8	0.4	Independent thought	4.1	0.8
Professional attitude	4.7	0.5	Logical argument	4.1	0.8
Problem solving	4.7	0.6	Project management	4.0	0.9
Critical thinking	4.7	0.7	Resource management	4.0	0.7
Oral communication	4.7	0.5	Flexibility	4.0	0.8
Accounting software skills	4.7	0.6	Measurement	3.9	0.9
Analytical thinking	4.6	0.6	Self-promotion	3.9	0.9
Listening	4.6	0.6	Strategic management	3.9	0.9
Computer literacy	4.6	0.6	Research	3.8	0.9
Read with understanding	4.6	0.6	Interdisciplinary skills	3.8	0.9
Self-motivation	4.6	0.7	Tenacity	3.7	0.8
Written communication	4.6	0.7	Decision modeling	3.7	1.0
Continuous learning	4.6	0.6	Change management	3.7	0.9
Ethical awareness	4.5	0.8	Cultural sensitivity	3.7	1.0
Technical/bookkeeping	4.5	0.7	Negotiation	3.7	0.9
Decision making	4.5	0.7	Risk propensity	3.6	0.9
Computer-technology competence	4.5	0.7	Cross-cultural communication	3.6	0.9
Teamwork	4.4	0.7	Company promotion	3.6	1.0



Interpersonal skills	4.4	0.7	Citizenship	3.6	1.2
Values	4.4	0.8	Social justice	3.4	1.1
Leadership	4.2	0.8	Cross-cultural appreciation	3.4	1.0
Company service	4.1	1.0	Creativity	3.4	1.1
Risk analysis	4.1	0.8	Foreign language	2.9	1.1
			Entrepreneurship	2.9	1.0

These skills/attributes are consistent with the literature (Jones, 2014; Kavanagh & Drennan, 2008; Lawson et al., 2014), in that the skills/attributes perceived as being the most important to an accounting student's future career relate to:

1. Foundational competencies (communication [both oral and written, and listening], analytical/problem solving, reading with understanding, technological [computer literacy, and accounting software], critical thinking and decision-making); and
2. Broad management competencies (work ethic, professional attitude, self-motivation, continuous learning, and ethical awareness).

#### *Research Question 2*

Paired-sample t-tests were performed on the 47 pairs of “importance/priority” items to determine if there are any differences between the perceived importance of skills/attributes and the perception of how well those skills/attributes have been developed and given priority according to accounting students.

Table 2 illustrates that most of the item pairs (34 pairs) suggest that students attach a greater amount of importance to the given skills/attributes than their perceptions of the priority given to these skills/attributes during their degree program.

**TABLE 2**  
**IMPORTANCE & PRIORITY PERCEPTIONS OF ACCOUNTING SKILLS/ATTRIBUTES**

<b>(Importance &gt; Priority)</b>				
<b>Skill/Attribute</b>	<b>Importance</b>	<b>Priority</b>	<b>Difference</b>	<b>Significance</b>
Work ethic	4.84	3.24	1.60	0.00
Professional attitude	4.74	4.39	0.34	0.00
Problem solving	4.71	4.42	0.29	0.00
Critical thinking	4.71	4.35	0.36	0.00
Oral communication	4.70	4.46	0.24	0.00
Accounting software skills	4.66	3.45	1.21	0.00
Analytical thinking	4.64	3.10	1.54	0.00
Listening	4.63	3.19	1.44	0.00
Computer literacy	4.62	3.13	1.49	0.00
Read with understanding	4.57	4.28	0.29	0.00
Written communication	4.56	4.42	0.14	0.01
Self-motivation	4.56	3.97	0.59	0.00
Continuous learning	4.55	2.96	1.59	0.00
Ethical awareness	4.54	3.93	0.61	0.00
Technical/bookkeeping	4.54	3.84	0.70	0.00
Decision-making	4.50	2.85	1.65	0.00
Computer technology competence	4.45	3.73	0.72	0.00
Values	4.36	3.02	1.34	0.00
Leadership	4.19	3.78	0.41	0.00
Company Service	4.15	3.22	0.93	0.00
Logical argument	4.05	3.79	0.26	0.00
Resource management	4.01	3.48	0.53	0.00
Project management	4.01	3.54	0.47	0.00
Measurement	3.94	3.42	0.52	0.00
Self-promotion	3.92	3.25	0.67	0.00
Strategic management	3.91	3.47	0.44	0.00
Decision-modeling	3.69	3.48	0.21	0.02
Negotiation	3.67	2.91	0.76	0.00
Risk propensity	3.63	3.14	0.49	0.00
Company promotion	3.59	2.66	0.93	0.00
Social justice	3.44	2.98	0.46	0.00
Cross-cultural appreciation	3.42	2.92	0.50	0.00
Foreign Language	2.94	2.30	0.64	0.00
Entrepreneurship	2.92	2.58	0.34	0.00

Interestingly, only six pairs of these “importance/priority” items indicate that accounting degree programs give a higher priority to certain skills/attributes than the importance attached to those same skills/attributes by accounting students. Table 3 lists these pairs, which include Creativity, Tenacity, Change Management, Risk analysis, Flexibility, and Interdisciplinary skills.

**TABLE 3**  
**IMPORTANCE & PRIORITY PERCEPTIONS OF ACCOUNTING SKILLS/ATTRIBUTES**

<b>(Importance &lt; Priority)</b>				
<b>Skill/Attribute</b>	<b>Importance</b>	<b>Priority</b>	<b>Difference</b>	<b>Significance</b>
Creativity	3.37	3.90	-0.53	0.00
Tenacity	3.71	4.04	-0.33	0.00
Change management	3.68	4.46	-0.78	0.00
Risk Analysis	4.14	4.56	-0.42	0.00
Flexibility	3.97	4.36	-0.39	0.00
Interdisciplinary skills	3.79	4.20	-0.41	0.00

Finally, Table 4 indicates no significant differences between seven of the “importance/priority” pairs, thus suggesting that accounting degree programs are allocating the right amount of resources to these skills/attributes according to students. These include Research, Teamwork, and Cultural sensitivity, among others.

**TABLE 4**  
**IMPORTANCE & PRIORITY PERCEPTIONS OF ACCOUNTING SKILLS/ATTRIBUTES**

<b>(Importance = Priority)</b>				
<b>Skill/Attribute</b>	<b>Importance</b>	<b>Priority</b>	<b>Difference</b>	<b>Significance</b>
Cultural sensitivity	3.68	3.55	0.13	0.26
Interpersonal skills	4.37	4.22	0.15	0.06
Cross-cultural communication	3.60	3.80	-0.20	0.06
Independent thought	4.13	4.16	-0.03	0.71
Citizenship	3.56	3.59	-0.03	0.79
Teamwork	4.38	4.33	0.05	0.48
Research	3.84	3.84	0.00	1.00

### Discussion

The results obtained in the current study are similar to those reported by Kavanagh and Drennan (2008). Students perceive the skills/attributes most important to their future careers relate to skills that have been emphasized for a number of years. These skills/attributes relate to the foundational and broad management competency components. Specifically, communication (oral and written), problem-solving, critical thinking and decision-making skills, related to the foundational competency component, were considered important. Additionally, work ethic, professional attitude, self-motivation, continuous learning, and ethical awareness, all related to the broad management competency component, were also important. For the majority of the skills/attributes included in the study, students perceived the skill/attribute to be more important than the priority given to that skill/attribute. What is of particular interest here is that the students tend to focus on the skills/attributes that are related to the types of professional services provided by accountants over the years (accounting and auditing or tax services). However, as the accounting profession changes, other skills/attributes need to be more highly developed.

Six of the skills/attributes were perceived to be given greater priority as compared to the students’ perceptions of their importance. These skills/attributes include risk analysis, change management, flexibility, interdisciplinary skills, and creativity. This is particularly interesting in light of changes being made to the Uniform CPA examination. Beginning in April 2017, the CPA exam is being revised to focus greater attention to testing “higher-order analysis and evaluation skills” (Tysiac, 2016, p. 27). Tysiac (2016) reports that with input received from professionals, professional organizations, academics, regulatory agencies and businesses, the AICPA has identified a greater need for CPA candidates to focus less on “remembering-and-understanding” skills (p. 28). Rather, the emphasis should be on “higher-level analysis and evaluation skills” (Tysiac, 2016, p. 28). Michael Decker, AICPA vice-president –

Examinations was quoted as saying, CPA candidates “need to be able to form conclusion in basic areas and identify issues in more complex and riskier areas” (Tysiac, 2016, p. 28). New document review simulations will be included on the CPA exam and will require individuals to “determine what information is or is not relevant and make edits or changes as appropriate” (“New Type of Question Debuts in July 2016,” 2016). Thus, student perceptions as to important skills/attributes may not be consistent or as relevant to future expectations of the profession. Rather, the ability to respond to these new expectations will require students to develop their skills related to risk analysis, change management, flexibility, interdisciplinary skills, and creativity. These skills/attributes appear to be given priority in the accounting program included in the current study but not yet recognized by students as having a bearing on their future success.

It is interesting to note that the students’ perceptions of the relative importance of certain skills differ from those identified by employers in the Low et al. (2016) study. As shown in Table 5, students placed less importance on the skills/attributes considered to be most important to employers. Within the employers’ top five skills perceived to be important, only one (oral communication) was considered to be important to students. When expanded to the top ten skills, students perceived only three to be relatively important (listening, oral communication, and problem solving).

**TABLE 5**  
**RELATIVE IMPORTANCE OF SKILLS IDENTIFIED BY EMPLOYERS AS**  
**COMPARED TO STUDENTS**

Skill	Ranking by		Received Less Priority	No Difference in Priority
	Employers*	Student		
Listening	1	8	*	
Teamwork	2	18		*
Oral Communication	3	5	*	
Ambition/motivation	4	11		
Interpersonal	5	19		*
Problem solving	6	3	*	
Ethical awareness	7	14	*	
Self-management	8			
Intellectual curiosity	9	13	*	
Written communication	10	12	*	
General business awareness	11			
General computer skills	12	17	*	
Presentation	13			
Leadership	14	21	*	
Accounting software	15	6	*	

\*Low et al., (2016)

Jones (2014) identified the ability to ‘absorb/digest/apply technical knowledge’ and ‘intellectual flexibility’ as important professional skills. Despite the fact that students ranked independent thought and logical argument fairly low on their list of importance, these two skills are critical to being able to apply knowledge to new fact patterns or situations. Thus, a comparison of the results among to these two prior studies appears to indicate that the expectation gap continues to exist between employers and students.

One can argue that the disparity between the expectations between students and faculty also exists. Although faculty expectations were not directly measured in the current study, the students did perceive that less priority was given to a number of skills/attributes during their academic preparation. Using the information provided in Table 5, one can infer that a wider disparity may exist between employers’ and faculty perceptions of the relative importance of skills. Within the ranking of the most important skills identified by employers, students considered that less priority had been given to nine of the skills; six of the top ten skills were identified as receiving less priority in their academic programs. Although greater

priority was provided to six skills, it is interesting to note that those six skills (see Table 3) were not considered as most important to employers.

## CONCLUSION

Prior researchers suggested additional investigation was needed into students' perceptions of important skill/attributes to help identify a potential 'expectation gap' (Low et al., 2016). Such an 'expectation gap' or 'skills gap' has been posited to put the accounting profession at risk and possible diminish the profession's ability and commitment to serve its public interest and responsibilities.

The results of the current study indicate the expectation gap continues to exist among students in the United States. Differences were found between students' perceptions of important skills/attributes and the level of priority attributed to some of these skills/attributes during their academic careers. In comparison to prior studies, one can argue that the expectation gap exists among students, faculty, and employers on a global basis. However, the current and prior studies generally focus on one groups' perceptions (i.e., professionals/employers, students, or faculty). Additionally, many of the research efforts addressing the expectations gap limit the data collection to a single institution or a small group of professionals. To gain a better understanding of the extent to which the expectation gap exists, it would be advantageous to conduct a study in which participants include all three groups (professionals/employers, students, and faculty). Inclusion of multiple 'traditional' accounting programs as well as alternate delivery programs (e.g., on-line programs) may differences resulting from the various content delivery methods. It is expected that as the profession continues to evolve or different instructional methods are utilized, differences will occur in the students' perceptions of the importance of accounting skills/attributes and in their perceptions of the priorities given to these skills/perceptions.

Additionally, the perceived importance of the various skills/attributes may change over time. It appears that academics may be more attuned to these changing skills/attributes as they incorporate content and skill sets to meet professional expectations. As Jones (2014) concluded, it is imperative that faculty members and accounting professionals continue to identify and communicate the relative importance of skills/attributes to students. Such communication may be in the form of presentations (in class or at student organizational meetings), recruitment efforts, internship opportunities, or classroom assignments. As students become more aware of the expectations imposed by professionals, professional organizations, regulatory agencies and businesses, their perceptions of the relative importance of skills/attributes may more closely align with those of the professionals and faculty.

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