

SKILLS NEEDED IN THE 21st CENTURY WORKPLACE: A COMPARISON OF FEEDBACK FROM UNDERGRADUATE BUSINESS ALUMNI AND EMPLOYERS WITH A NATIONAL STUDY

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ABSTRACT

The purpose of this research was to determine what skills alumni from Richard Stockton College of New Jersey (RSC) and regional employers think are important for the workplace. The results of the RSC study were compared to results from the report, College Learning for the New Global Century, sponsored by the Association of American Colleges and Universities.

Managing time, speaking/oral communications skills, and having strong interpersonal skills were in the top five skills identified by both employers and alumni of The Richard Stockton College. A statistically significant greater percentage of employers who participated in the study commissioned by the Association of American Colleges and Universities identified knowledge of global issues as being an essential learning outcome compared with the employers and alumni surveyed in the RSC study who identified knowledge of global issues as being a very important or important skill for the workplace. The lower priority given to global issues and international perspectives by employers and alumni in this study may have been due to the location of their workplaces. Respondents to the surveys were located primarily in the central and southern areas of New Jersey where industries and corporations had a regional rather than an international focus. Faculty in the School of Business should consider incorporating those skills identified as important or very important by the majority of alumni and employers into the curriculum as well as emphasizing global issues in their courses.

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INTRODUCTION

In this environment of accountability to consumers and stockholders, members of businesses and government agencies question how well college graduates are being prepared for work in the global economy. Accrediting bodies and legislators are calling for greater accountability on the part of higher education faculty regarding the quality and relevance of their curricula, their assessment of student-learning outcomes, and their commitment to continuous improvement in course content based on regular feedback from the external community. To demonstrate accountability, faculties at colleges and universities are incorporating TQM approaches in their strategic planning, assessment of student outcomes, and curriculum development (Wessel, 2007).

Accountability efforts focus on meeting the needs of the marketplace, establishing measurable standards and benchmarks, and providing evidence of student learning. In higher education, accreditation bodies set standards and call for proof of adherence to those standards (Academic Quality Improvement Program, 2005). For example, the Association to Advance Collegiate Schools of Business (AACSB) accreditation standards requires business programs to provide assurances of learning to external stakeholders and the students who are the consumers of academic programs (AACSB, 2006). To comply with the AACSB's

assurances of learning standards, business school faculty must develop, monitor, evaluate, and revise the substance and delivery of curricula and assess the impact of curricula on learners. This curriculum management process necessitates input from faculty, staff, administrators, students, alumni, and members of the business community.

With the formation of the Secretary of Education's Commission on the Future of Higher Education, a national effort was organized to hold higher education institutions accountable for the preparation of college students for jobs that meet the economic and workforce needs of the future (U.S. Department of Education, 2005). The Commission on the Future of Higher Education is renewing pressure on colleges and universities to be accountable for student outcomes. Accountability issues raised by the commission focus on the need for graduates to receive academic preparation that is aligned with the employment needs of the 21st century. Accrediting agencies and faculty at colleges are encouraged to provide assessments that indicate students leave college with the skills they need to be productive workers and citizens (Lederman, 2006; Quevedo, 2007; Yankelovich, 2005).

This study was designed to assess if the feedback from alumni and employers of alumni in an undergraduate business program at The Richard Stockton College, a public, 4-year college, with a focus on liberal arts, correlates with the results of the study commissioned by the Association of American Colleges and Universities and presented in the report *College Learning for the New Global Century*. The report focused on the knowledge, skills, and competencies college graduates should have for workplace success (Association of American Colleges and Universities, 2008).

The purpose of the study at The Richard Stockton College was to address the following research questions:

1. According to employers and business alumni from The Richard Stockton College, what knowledge, skills, and competencies are considered most valuable for successful performance in the workplace?
2. According to employers and business alumni from The Richard Stockton College, what knowledge, skills, and competencies are considered to be least essential for successful performance in the workplace?
3. What knowledge, skills, and competencies are identified by employers as important for workplace success in the study commissioned by the Association of American Colleges and Universities, *College Learning for the New Global Century* (Association of American Colleges and Universities, 2008)?
4. How do the results from the surveys of employers of The Richard Stockton College business graduates and the business alumni at the college correlate with those indicated as essential learning outcomes in the study commissioned by the Association of American Colleges and Universities, *College Learning for the New Global Century* (Association of American Colleges and Universities, 2008)?

Findings of this research will be used to guide revisions to the business curricula at The Richard Stockton College to ensure that the skills and competencies taught are relevant to the needs of the business community and graduates develop the skills and competencies they need for success in the workplace.

This paper will present a review of the literature, the methodology used in the study, the results and analysis of the data, the limitations to the study, and recommendations for future research.

LITERATURE REVIEW

Addressing Workplace Knowledge, Skills, and Abilities

Colleges and universities have many stakeholders: students, faculty, students' parents, employers, public officials, community leaders, and the general public. These stakeholders share a common need to know whether institutions of higher learning are preparing students adequately for future jobs (Association of American Colleges and Universities, 2008; Gumpert, 2001). In the 21st century higher education institutions are expected to do more to assure that students leave colleges and universities with the skills they need to be productive workers and citizens than in the past.

The reports by task forces, commissions, and accrediting bodies expressed concern about the quality of undergraduate student learning related to skills that are needed in the workplace. In their undergraduate education, students should develop the necessary skills, abilities, attitudes, and values that are essential to success in the complex business world. Faculty in higher education must address the diverse demands placed on graduates rather than concentrate on narrowly focused, job-specific technical skills. If higher education is to provide graduates with the knowledge and skills they need in the workplace of the 21st century, curricula must change to reflect the dynamic needs of business (Association of American Colleges and Universities, 2008; RAND, 2004; Zekeri, 2004).

Changing Business Environment

Changing global economic forces, innovations in technology, and the growth of cultural diversity in the workplace create a business environment that is different from that of a generation ago. Today corporations are flatter, less hierarchical, and more focused on quality in product production and customer satisfaction. Terms such as *global competition*, *customization*, *deregulation*, *outsourcing*, *pay for performance*, *downsizing*, and *TQM* describe the business environment of the 21st century (Association of American Colleges and Universities, 2008; Stasz, 2001; Warren, 2003; Yankelovich, 2005). These changes influence the competencies and skills that graduates of college business programs need to be successful.

The skills students bring to the workplace should be those that businesses need (Association of American Colleges and Universities, 2008; RAND, 2004). Increasingly, employers are searching for employees who have strong abilities in problem solving, teamwork, oral and written communications, leadership, learning, managing others, handling customer relations, and system thinking (Association of American Colleges and Universities, 2008; E. A. Jones, 2002; Peterson, 2004; Zekeri, 2004). According to RAND (2004) and Archer (2002), shortages of candidates who are qualified for employment exist in many sectors of the economy and are expected to increase in the future as the baby boomers continue to retire. Business programs that offer curricula that are based on market needs will produce more graduates who are prepared for the demands of the workplace (Cleary & Fichtner, 2007; RAND, 2004).

To create relevant curricula, business college faculty members need to become aware of the skills and competencies needed in the workplace and the entry-level job criteria for graduates of their programs (Association of American Colleges and Universities, 2008; Peterson, 2004; Yankelovich, 2005). To identify these skills and competencies, educators need to engage members of the business community in the evaluation of student competencies. This process requires outreach to alumni and employers (Association of American Colleges and Universities, 2008; Roberson et al., 2002). Stakeholder feedback can assist faculty members as they review and update courses and programs.

Curriculum Development

By obtaining input from the business community, faculties can determine how to meet the needs of graduates and other stakeholders. It is important to understand what graduates need to know as they enter the workforce and what skills will serve them well during their careers (Ferguson, 2004).

Stiehl and Lewchuk (2002) stated that one of the first steps in curricula design should be for faculty to learn what their students need to be able to do in the workplace. With input from external stakeholders, faculty can make informed decisions about what particular skills and competencies are most important for their students and for the employers of their graduates. Once the necessary skills are identified, faculty should design curricula that incorporate those skills and competencies. With feedback from external stakeholders, faculty can develop curricula that are structured around management, marketing, and finance courses in which the teaching of academic skills is embedded (Ferguson, 2004).

METHODOLOGY

Development of the Survey

In evaluation research there is formative and summative evaluation. In instructional design, formative evaluation is one method that can be used to improve curriculum content through receiving feedback from stakeholders and experts; based on this feedback, the curricula can be improved by identification and remediation of the problem areas which have been identified. Summative evaluation lets stakeholders know if the program or curricula accomplished what it was designed to accomplish (Trochim, 2002; Weston, Mc Alpine, & Bordonaro, 1995).

As part of the evaluation methodology that was used to develop the survey instrument, a formative committee was assembled to identify the business skills and competencies that are important to students' success in the workplace and should be in the business curricula. The formative committee consisted of two tenured business faculty members, the assistant provost for academic affairs, and the director of career services at The Richard Stockton College of New Jersey. The tenured professors on the formative committee are senior faculty who teach classes in the required academic core for general business courses. The formative committee members knew the skills and competencies being taught in the business curricula. The committee members examined sample survey questions about graduates' skills and competencies that are needed in the workplace from four AACSB accredited schools of business. These universities were Auburn University, University of Wisconsin, and Western Carolina University. From their knowledge and reference to the sample questions on skills and competencies, the committee members made recommendations about questions that should be included on the selected college's survey for alumni and for employers. There were 24 skills and competencies selected to be evaluated by alumni and employers as very important, important, limited importance, or not important.

Data Collection

A survey packet was mailed during April 2008 to 2,383 alumni and 145 employers of The Richard Stockton College of New Jersey that explained the study, provided information on informed consent for participation in the study and presented the questions for the study.

Alumni were asked to place a check mark in the column that best represents their views regarding the importance of 24 different skills or competencies in performance of their job. Employers were asked to rate the importance of the same 24 skills and competencies in their organization. Both employers and alumni rated the skills as very important, important, limited importance, or not important. Of the 24 survey questions agreed to by the members of the formative and summative committee members, 12 of

the questions related to the data presented the *College Learning for the New Global Century* (Association of American Colleges and Universities, 2008).

RESULTS AND ANALYSIS

Research Question 1: According to employers and business alumni from The Richard Stockton College, what knowledge, skills, and competencies are considered most valuable for successful performance in the workplace?

To answer research question number one the researchers ranked the top five skills identified by alumni and employers as very important or important. After ranking the top five skills we determined whether there were statistically significant differences in the percentage of alumni and employers who thought the skill was very important. Finally, we assessed all of the 24 skills to determine which skills had a statistically different percentage of alumni and employers who identified that skill as very important or important.

Table 1 lists the 24 skills and the percentage and number of alumni who reported that the skill was very important or important for the workplace. The numbers were determined by adding the number of respondents who identified the skill as very important with the number of respondents who identified the skill as very important or important.

Table 1 Alumni and Employers Identifying Skills as Very Important or Important for the Workplace

Skill	Percent Alumni (Number Alumni)	Percent Employer (Number Employer)	p-value	Is Percent Difference Significant?
Managing Time	96% (153)	100% (45)	0.007	Yes
Interpersonal Skills	96% (154)	100% (45)	0.013	Yes
Speaking/Oral Communication	96% (155)	98% (44)	0.571	No
Ethical Understanding	81% (128)	98% (44)	0.000	Yes
Adapting to Change and Being Flexible	94% (152)	96% (43)	0.748	No
Locating, Organizing, Evaluating Relevant Information	97% (156)	95% (42)	0.674	No
Written Communication Skills	94% (150)	93% (42)	0.808	No
Leadership/ Motivation Skills	87% (139)	91% (41)	0.398	No
Thinking Creatively to Solve Problems	92% (148)	91% (41)	0.864	No
Working Independently	94% (151)	91% (40)	0.461	No
Teamwork Skills	92% (147)	89% (40)	0.563	No
Thinking Critically/Analytically:	98% (156)	86% (38)	0.036	Yes
Computer Skills/Information Technology	93% (150)	84% (38)	0.130	No
Respecting and Valuing Diversity Issues	77% (123)	84% (38)	0.233	No
Understanding Market Trends in the Industry	71% (108)	79% (33)	0.305	No
Understanding Law/ Regulations on Business Decisions	72% (114)	77% (33)	0.533	No
Basic Knowledge of Management Principles	75% (119)	71% (32)	0.579	No
Basic Knowledge of Marketing Principles	59% (91)	71% (30)	0.136	No
Basic Knowledge of Economic Principles	57% (88)	69% (27)	0.138	No
Quantitative Reasoning: Ability to use mathematics or statistics	72% (113)	61% (27)	0.194	No
Basic Knowledge of Accounting Principles	71% (111)	60% (24)	0.192	No
Knowing Basics of Financial Theories and Analysis	74% (116)	57% (25)	0.033	Yes
Understanding the Influence of Political, Social Issues on Business Decisions	57% (89)	53% (23)	0.678	No
Basic Knowledge of Global Issues/International Perspectives	38% (58)	43% (17)	0.620	No

Table 1 lists the 24 skills and the percentage and number of alumni that reported that the skill was very important or important for the workplace sorted in descending order on the percent employer column. The p-value calculated by using the method for statistical inference for the difference of two sample proportions with different sample sizes is reported in the third column of Table 1. The last column of table 1 tells whether the difference is significant.

The researchers hypothesized that there would be differences between what skills the alumni and employers thought were very important or important for the workplace. Statistical hypothesis testing was used to evaluate the significance of the percent differences between the two samples. The null hypothesis for a factor, such as managing time, for example, is that alumni and employers have the same percentage of respondents who think the skill is very important. The p-value was calculated by using the method for statistical inference for the difference of two sample proportions with different sample sizes. The null hypothesis is rejected if the p-value is less than 0.05. Rejecting the null hypothesis implies that a significant difference exists between the percentage of alumni and employers that identified the skill as very important. The p-value is reported in the third column of Table 1. Whether or not the percent difference is significant is reported in the last column of Table 1. The top 5 skills that alumni identified as very important or important were: Thinking critically/analytically (98%); Locating, Organizing, Evaluating Relevant Information (97%); Interpersonal skills (96%); Time management (96%); and Speaking/oral communications (96%)

The top five skills that employers identified as very important or important were: Interpersonal skills (100%); Time management (100%); Speaking/oral communications (98%); Ethical Understanding (98%); and Adapting to change/being flexible (96%).

Managing time, speaking/oral communications skills, and having strong interpersonal skills were in the top five skills identified by both employers and alumni. Alumni rated thinking critically/analytically and locating, organizing, evaluating relevant information as two of the top five skills as being very important or important whereas employers did not rate these skills in their top five choices. Ethical understanding and adapting to change and being flexible were in the employer's top five skills, but not the alumni's. There was a statistically significant greater percentage of alumni (98% versus 86%) than employers who rated critical thinking as being a very important or important skill. There was a statistically significant greater percentage of employers than alumni that rated ethical understanding (98% versus 86%), interpersonal skills (100% versus 96%), and time management (100% versus 96%) as being a very important or important skill. Despite the statistically significant difference in the percentage of employers and alumni identifying interpersonal skills and time management, both of these skills were in the top five skills that alumni rated as important or very important.

The researchers also examined the results from the hypothesis testing to determine what other skills there were significant percent differences. Although not in the top five choices of employers and alumni, alumni had a statistically significantly greater percentage of respondents who thought Knowing Basics of Financial Theories and Analysis was a very important or important skill (74% versus 57%). This difference could be attributed to the employer's industry and the industry in which the alumni work.

Research Question #2: According to employers and business alumni from The Richard Stockton College, what knowledge, skills, and competencies are considered to be least essential for successful performance in the workplace?

Table 2 lists the 24 skills and the percentage and number of alumni who reported that the skill was not important for the workplace. The researchers hypothesized that there would be differences between what skills the alumni and employers thought were not important or of limited importance for the workplace. Statistical hypothesis testing was used to evaluate the significance of the percent differences between the two samples. The top 5 skills that alumni identified as being of limited importance or not important were: Basic knowledge of global issues/international perspectives (62%); Basic knowledge of economic principles (43%); Understanding the influence of political and social issue on business decisions (43%); Basic knowledge of marketing principles (41%); and Understanding marketing trends in the industry (29%).

The top five skills that employers identified as being of limited importance or not important were: Basic knowledge of global issues/international perspectives (58%); Understanding the influence of political and social issue on business decisions (47%); Knowing the basics of financial theory and analysis (43%); Basic knowledge of accounting principles (40%); and Quantitative reasoning: Ability to use mathematics or statistics (39%).

Both the alumni and employers identified basic knowledge of global issues/international issues as the least important skill. The Richard Stockton College of New Jersey is a state university in which the majority of the students attending the college are from New Jersey. The majority of employers surveyed are regional businesses that do not have a global presence. Hence, the survey respondents did not rate knowledge of global/international issues as important or essential since these issues do not influence regional businesses in the same way they affect multinational corporations with a global presence.

Table 2: Alumni and Employers Identifying Skills as Limited Importance or Not Important for the Workplace

Skill	Percent Alumni (Number Alumni)	Percent Employer (Number Alumni)	p-value	Is Percent Difference Significant?
Thinking Creatively to Solve Problems	8% (13)	9% (4)	0.864	No
Working Independently	6% (9)	9% (4)	0.461	No
Leadership/ Motivation Skills	13% (21)	9% (4)	0.398	No
Written Communication Skills	6% (9)	7% (3)	0.808	No
Basic Knowledge of Global Issues/International Perspectives	62% (94)	58%(23)	0.620	No
Locating, Organizing, Evaluating Relevant Information	3% (5)	5% (2)	0.674	No
Understanding the Influence of Political, Social Issues on Business Decisions	43% (67)	47% (20)	0.678	No
Knowing Basics of Financial Theories and Analysis	26% (40)	43% (19)	0.033	Yes
Basic Knowledge of Accounting Principles	29% (45)	40%(16)	0.192	No
Adapting to Change and Being Flexible	6% (9)	4% (2)	0.748	No
Quantitative Reasoning: Ability to use mathematics or statistics	28% (44)	39% (17)	0.194	No
Basic Knowledge of Economic Principles	43% (67)	31%(12)	0.138	No
Basic Knowledge of Management Principles	25% (39)	29%(13)	0.579	No
Basic Knowledge of Marketing Principles	41% (62)	29%(12)	0.136	No
Understanding Law/ Regulations on Business Decisions	28% (44)	23% (10)	0.533	No
Understanding Market Trends in the Industry	29% (44)	21% (9)	0.305	No
Speaking/Oral Communication Skills	4% (6)	2% (1)	0.571	No
Ethical Understanding	19% (31)	2% (1)	0.000	Yes
Computer Skills/Information Technology	7% (11)	16% (7)	0.130	No
Respecting and Valuing Diversity Issues	23% (37)	16% (7)	0.233	No
Thinking Critically/Analytically	3% (4)	14% (6)	0.036	Yes
Teamwork Skills	8% (13)	11% (5)	0.563	No
Managing Time	4% (7)	0% (0)	0.007	Yes
Interpersonal Skills	4% (6)	0% (0)	0.013	Yes

Table 2 lists the 24 skills and the percentage and number of alumni that reported that the skill was of limited importance or not important for the workplace sorted in descending order on percent employer.. The p-value calculated by using the method for statistical inference for the difference of two sample proportions with different sample sizes is reported in the third column of Table 1. The last column of table 1 tells whether the difference is significant.

Understanding the influence of political and social issues on business decisions was in the top five skills selected as being of limited importance or not important. Employers identified knowing the basics of financial theory and analysis, basic knowledge of accounting principles, and quantitative reasoning as the five least important skills. A statistically significantly greater percentage (43% versus 26%) of employers identified knowing the basics of financial theories and analysis as being of limited importance or not important for the workplace. Basic knowledge of economic principles, basic knowledge of marketing

principles, and understanding market trends in the industry were in the alumni's top five choices for skills of limited importance or not important for the workplace. There were no significant differences between the alumni and employees identifying basic knowledge of accounting principles, quantitative reasoning, basic knowledge of economic principles, and understanding market trends in the industry.

Analysis of Skills

After reviewing the top 5 skills identified as being important or very important with the top five skills that were rated as being of limited importance or not important by the alumni and employers it is evident that the skills both alumni and employers believe are important are skills that focus on the graduate's ability to manage the demands of the workplace rather than on narrowly focused job specific technical skills. Understanding accounting, economic, and marketing principles, and knowing the basics of financial theories/quantitative reasoning are narrowly focused job specific technical skills that were identified by employers and alumni to be the less essential skills needed for the workplace. However, over 50% of the respondents did identify basic knowledge of economic, accounting, and marketing principles to be important or very important. The only skill that was identified as being of limited importance or not important was basic knowledge of global issues/international perspectives. The survey respondents are primarily from Central and Southern New Jersey and did not rate knowledge of global/international issues as important or essential since these issues do not influence regional businesses in the same way they affect multinational corporations with a global presence.

Research Question #3: What knowledge, skills, and competencies are identified by employers as important for workplace success in the study commissioned by the Association of American Colleges and Universities, *College Learning for the New Global Century* (Association of American Colleges and Universities, 2008)?

In the report, *College Learning for the New Global Century* (Association of American Colleges and Universities, 2008), research findings were presented on the views of employers regarding assessment approaches used in institutions of higher education. Issues of access, affordability, and accountability, as well as what contemporary college graduates need to know and be able to do when they enter the workplace, were addressed. Educators and employers reached a consensus about the learning and skill sets American workers need from their college experience and recommended that presidents, trustees, school leaders, and employers work together to build public understanding of what knowledge and skills matter in a 21st-century college education. These stakeholders should champion and support essential learning outcomes in content and skill areas that college graduates need as they enter the workplace (Association of American Colleges and Universities, 2008).

In 2006 and 2007, Peter D. Hart Associates, Inc. was appointed by the AACU (2008) to quantitatively and qualitatively assess viewpoints of employers regarding students' learning in college. Interviews were conducted with 305 employers whose companies had at least 25 employees and reported that 25% or more of their new hires held at least a bachelor's degree from a 4-year college. In November and December of 2007, an additional 301 employers were interviewed. The following list summarizes the skills areas that the majority of employers would like colleges and universities to emphasize more when preparing graduates for the global economy and workplace: Concepts and new developments in science and technology (82%); Teamwork skills and the ability to collaborate with others in diverse group settings (76%); Communication skills, both oral and written (73%); Critical-thinking and analytical-reasoning skills (73%); Global issues and developments and their implications for the future (72%); The ability to locate, organize, and evaluate information from multiple sources; Innovative and creative thinking (70%); The ability to solve complex problems (64%); The ability to work with numbers and understand statistics (60%); An understanding of the role of the United States in the world (60%); A sense of integrity and ethics (56%); and An understanding of cultural values and traditions in America

and other countries (53%) (Association of American Colleges and Universities, 2008). These 12 skills are similar to skills identified in the RSC survey.

Table 3 lists the skills from the researchers’ survey and the corresponding skill from the AACU study that the researchers identified as being a similar skill. Note the wording in The Richard Stockton College (RSC) survey differs from the wording of the questions in the AACU study. In – the RSC survey the researchers identified oral communication skills/speaking and written communication skills as two separate skills whereas the AACU survey combined the skills as the ability to communicate orally and in writing. The researchers identified computer skills/information technology as similar to the skill understanding concepts and new developments in science and technology. The RSC survey questions did not address understanding the concepts of science and technology and may have been interpreted as being able to use a computer rather than understanding the concept and development of technology. The researchers combined the concepts of thinking creatively and problem solving whereas the survey conducted for the AACU delineated the skills separately as the ability to think creatively and the ability to solve problems. The survey conducted for the AACU was more specific in stating the essential outcome of identifying the role of the United States in the world compared to the wording of the RSC survey that generally identified global understanding as ~~having~~ a basic knowledge of global issues/international perspective.

Table 3: Comparison of Skills from the RSC Survey That Are Identified as Similar to the Skill in the AACU Survey

Skill (RSC Survey)	Similar Skill (AACU Survey)
Computer Skills/Information Technology	Concepts and new developments in science and technology (82%)
Teamwork Skills	Team work skills and the ability to collaborate with others in diverse group settings (76%)
Written Communication Skills	The ability to communicate orally and in writing (73%)
Speaking/Oral Communication Skills	The ability to communicate orally and in writing (73%)
Thinking Critically/Analytically: Evaluating and analyzing information; integrate information from sources	Critical thinking and analytical reasoning skills (73%)
Basic Knowledge of Global Issues/International Perspectives	Global issues and developments and their implications for the future (72%)
Locating, Organizing, Evaluating Relevant Information: Know where to locate information and how to evaluate information for relevance	The ability to locate, organize, and evaluate information from multiple sources (70%)
Thinking Creatively to Solve Problems	The ability to be innovative and think creatively (70%) The ability to solve complex problems (64%)
Quantitative Reasoning: Ability to use mathematics or statistics	The ability to work with numbers and understand statistics (60%)
Basic Knowledge of Global Issues/International Perspectives	The role of the United States in the world (60%)
Ethical Understanding	A sense of integrity and ethics (56%)
Respecting and Valuing Diversity/ Multicultural Issues	Cultural Values and traditions in America and other countries (53%)

Research Question #4. How do the results from the surveys of employers of The Richard Stockton College business graduates and the business alumni at the college correlate with those indicated as essential learning outcomes by the AACU study *College Learning for the New Global Century* (Association of American Colleges and Universities, 2008)?

When comparing the results of the RSC survey to the results of the AACU study it is important to note that the analysis is limited because some of the questions are a closer match to the essential learning outcomes identified in the AACU survey than others.

The first column of Table 4 identifies the skill from the RSC survey. The second column lists the percentage of employers in the study commissioned by the Association of American Colleges and Universities who identified each skill as an essential learning outcome. The percentage of employers who

identified the skill as very important or important is listed in the third column and the percentage of employers who identified the skill as very important is listed in the fifth column. The researchers hypothesized that there would be differences between the between what skills the employers thought were essential for the workplace and the skills the employers in the AACU survey identified as essential outcomes. Statistical hypothesis testing was used to evaluate the significance of the percent differences between the two samples.

Table 4: Comparison of the Responses of employers in the RSC Study to Responses from Employers Participating in the Study commissioned by the Association of American Colleges and Universities

Skill	Percent Employer From AACU Study (305 surveyed)	Percent Very Important or Important Employer (45 surveyed)	p-value	Is Percent Difference Rating as Very Important or Important Significant?	Percent Very Important Employer (45 surveyed)	p-value	Is Percent Difference Rating as Very Important Significant?
Computer Skills/Information Technology	82%	84%	0.734	No	47%	0.000	Yes
Teamwork Skills	76%	89%	0.014	Yes	58%	0.020	Yes
Written Communication Skills	73%	93%	0.036	Yes	71%	0.794	No
Speaking/Oral Communication Skills	73%	98%	0.000	Yes	80%	0.280	No
Thinking Critically/Analytically	73%	86%	0.025	Yes	50%	0.004	Yes
Basic Knowledge of Global Issues/International Perspectives	72%	43%	0.000	Yes	8%	0.000	Yes
Thinking Creatively to Solve Problems	70%	91%	0.000	Yes	60%	0.198	No
Locating, Organizing, Evaluating Relevant Information	70%	95%	0.000	Yes	43%	0.001	Yes
Quantitative Reasoning:	60%	61%	0.899	No	18%	0.000	Yes
Ethical Understanding	56%	98%	0.000	Yes	62%	0.440	No
Respecting and Valuing Diversity Issues	53%	84%	0.000	Yes	51%	0.802	No

Table 4 compares the responses from employers participating in the RSC study to the responses of employer participating in the study commissioned by the Association of American Colleges and Universities (AACU study).

The first hypothesis test was to determine whether there were significant differences between the percentage of employers in the RSC survey who identified the skill as important or very important and percentage of employers in the study commissioned by the Association of American Colleges and Universities who identified each skill as an essential learning outcome. The p-values for the hypothesis test and whether the result was significant are listed in the fourth and fifth columns. The results for the skills computer skills/information technology and quantitative reasoning did not show significant percentage differences between the employers and the RSC study and the study commissioned by the Association of American Colleges and Universities. Both groups had a similar percentage of employers that thought these skills were essential for graduates to have. However a statistically significantly greater percentage of employers from the RSC study thought teamwork skills, speaking/oral communication skills, written communication skills, critical thinking, thinking creatively to solve problems, locating, organizing, evaluating relevant information; quantitative reasoning, and ethical understanding than the employers in the study commissioned by the Association of American Colleges and Universities. However, a statistically significant percentage of employers from the AACU study identified basic

knowledge of global issues/international perspectives as an essential skill than the employers in the RSC study.

Since the employers in the researchers' study were asked to rate skills as important or very important and the employers in the study commissioned by the Association of American Colleges and Universities were asked to identify essential learning outcomes, the researchers decided that since all of the skills except basic knowledge of global issues/international perspectives and quantitative reasoning were identified as important or very important by over 80% of the employer respondents, the researchers decided to compare the results of the percentage of employers identifying a skill as very important to the percentage of employers identifying a skill as important. Statistical hypothesis testing was used to evaluate the significance of the percent differences between the two samples. The p-values and whether the results were statistically significant are listed in the last two columns of table 4. A statistically significantly greater percentage of employers in the study commissioned by the Association of American Colleges and Universities identified the following skills as essential learning outcomes than the employers in the RSC study identified as important for the workplace: Computer skills/information technology (82% versus 47%); Teamwork skills (76% versus 58%); Thinking critically/Analytically (73% versus 50%); Basic knowledge of global issues/perspectives (43% versus 8%); Locating, organizing, evaluating relevant information (70% versus 43%); and Quantitative reasoning (60% versus 18%).

A statistically significantly greater percentage of employers in the RSC survey identified ethical understanding as "very important" than the employers in the study commissioned by the Association of American Colleges and Universities who identified ethical understanding as an essential learning outcome.

Similar percentages were found between the two groups for oral communications/speaking, written communications, thinking creatively to solve problems, and respecting and valuing diversity when employers from the RSC study rated the skills as important.

Collectively statistically significant differences were found between the percentage of employers in the RSC study and the employers from the study commissioned by the Association of American Colleges and Universities regardless of whether the responses from employers in the RSC study was important or very important or only very important for the following skills: Teamwork skills; Thinking critically/analytically; and Locating, organizing, evaluating relevant information

These results are indicated by having a yes in both columns 5 and 8 to show the results are statistically significant for either criterion. For the skills teamwork skills, thinking critically/analytically, and locating organizing, evaluating relevant information a statistically significant greater percentage of employers from the RSC study rated the skill as important or very important than the employers from the study commissioned by the Association of American Colleges and Universities. However, when the percentage of employer who rated skills as very important from the RSC study was compared to the percentage of the employers from the study commissioned by the Association of American Colleges and Universities who rated the skills as essential learning outcomes the results were different. When the criteria was changed to the RSC employers rating the skill as important a statistically significant greater percentage of employers the study commissioned by the AACU rated teamwork skills, thinking critically/analytically, and locating organizing, evaluating relevant information skills as essential outcomes.

There was one finding that was true regardless of whether the employers rated a skill as very important or important or rated the skill as important. A statistically significantly greater percentage of employers from the study commissioned by the AACU considered basic knowledge of global issues/perspectives as an essential learning outcome compared to the employers from the RSC study regardless of whether the skill was rated as important or very important or rated as important. Hence, when comparing the results of the

RSC study with the study commissioned by the AACU whether or not statistically significant differences exist between the two studies depends on whether a skill was rated as important or very important.

Limitations

Several limitations existed in this study. One limitation is that data were collected from respondents associated with one college and the findings may not be generalized to other colleges. In addition, data collected from the employers and business alumni from the Richard Stockton College were limited by the region in which the business alumni and employers were located; the regional industries were in the following sectors: financial and insurance, hospitality, health care, tourism, education, and public service. There were few industries in the region that were nationally or internationally based.

Another limitation of the study was that the mailing addresses for the business alumni and for the employers were not kept current; mailed surveys were returned because of incorrect, undeliverable addresses for the alumni and for employers. Specifically of the 2,383 alumni who received the survey packets, 300 were returned due to undeliverable addresses. Of the 140 survey packets mailed to employers, 45 surveys were returned because of undeliverable addresses. The sample size of 45 employers is very limited.

Since a convenience sample was used, distribution of respondents was skewed more to two industries: of the respondents, 25% of the alumni and 16% of employers indicated they worked in the professional services sector, which includes accountants; 23% of the alumni and 24% of employers indicated they worked in the finance and insurance industries. The representation coming from the professional services, finance, and insurance industries may have influenced survey responses regarding skills and competencies needed in the workplace.

Finally the criteria for evaluating skills as important or very important versus rating them as very important showed different results when comparing the RSC study to the study commissioned by the Association of American Colleges and Universities . In order to make a more accurate comparison the researchers could have asked respondents to identify skills that they thought are essential learning outcomes.

CONCLUSION

This study was designed to assess if the feedback from alumni and employers of alumni in an undergraduate business program at The Richard Stockton College, a public, 4-year college, with a focus on liberal arts, correlates with the results of the study commissioned by the Association of American Colleges and Universities College Learning for the New Global Century.

A survey packet was mailed during April 2008 to 2,383 alumni and 145 employers of The Richard Stockton College of New Jersey that explained the study, provided information on informed consent for participation in the study and presented the questions for the study. Alumni were asked to place a check mark in the column that best represents their views regarding the importance of 24 different skills or competencies in performance of their job. Employers were asked to rate the importance of the same 24 skills and competencies in their organization. Both employers and alumni rated the skills as very important, important, limited importance, or not important. Managing time, speaking/oral communications skills, and having strong interpersonal skills were in the top five skills identified by both employers and alumni of The Richard Stockton College of New Jersey as important or very important. A statistically significant greater percentage of employers who participated in the study commissioned by the Association of American Colleges and Universities rated knowledge of global issues as being an essential learning outcome compared with the employers and alumni surveyed in the RSC study who

rated knowledge of global issues as being a very important or important skill for the workplace. The lower priority given to global issues and international perspectives by employers and alumni in this study may have been due to the location of their workplaces. Respondents to the surveys were located primarily in the central and southern areas of New Jersey where industries and corporations had a regional rather than an international focus. Faculty in the School of Business should consider incorporating those skills rated as important or very important by the majority of alumni and employers into the curriculum as well as emphasizing global issues in their courses.

The limitations of the study are that the data was collected from respondents associated with one college and the findings may not be generalized to other colleges, the sample was a convenience sample, the number of employers was limited, and the questions on our survey were not an identical match to the survey commissioned by the American Association of Colleges and Universities. The study could be replicated in the future using a national base of employers and from alumni from several universities. The survey, if conducted every few years, could be a barometer for the skills needed in a changing economy.

APPENDIX

Survey: Place a check mark in the column that best represents your views regarding the importance of the following skills or competencies in performance of your job.

	Very Important	Important	Limited Importance	Not Important	Not Applicable
Written Communication Skills					
Speaking/Oral Communication					
Respecting and Valuing Diversity/ Multicultural Issues					
Ethical Understanding					
Locating, Organizing, Evaluating Relevant Information: Know where to locate information and how to evaluate information for relevance					
Thinking Critically/Analytically: Evaluating and analyzing information; integrate information from sources					
Knowing Basics of Financial Theories and Analysis					
Quantitative Reasoning: Ability to use mathematics or statistics					
Understanding the Influence of Political, Social Issues on Business Decisions					
Understanding Market Trends in the Industry and the Company's Position in the Market					
Understanding Law/ Regulations on Business Decisions					
Computer Skills/Information Technology					
Teamwork Skills					
Managing Time					
Thinking Creatively to Solve Problems					
Working Independently					
Interpersonal Skills					
Adapting to Change and Being Flexible					
Leadership/ Motivation Skills					
Basic Knowledge of Global Issues/International Perspectives					
Basic Knowledge of Economic Principles					
Basic Knowledge of Accounting Principles					
Basic Knowledge of Marketing Principles					
Basic Knowledge of Management Principles					

Questions in this survey were adapted and reprinted with permission from Employer Survey 2010 (pp. 1-4) by Auburn University, College of Business, 2009. Retrieved November 26, 2009, from Auburn University, College of Business Web site: <https://www.business.auburn.edu/surveys/employerSurvey.cfm>. Questions were also adapted and reprinted with permission from Recruiter/Employer Survey (pp. 1, 3) by University of Wisconsin-Milwaukee, School of Business Administration, 2009. Retrieved November 26, 2009, from University of Wisconsin-Milwaukee, School of Business Web site: <http://www4.uwm.edu/business/faculty/upload/RecruiterEmployer.pdf>.

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