DISCERNING PRIORITIES FOR SOFT SKILL DEVELOPMENT FOR ENVIRONMENTAL AND NATURAL RESOURCE UNDERGRADUATE STUDENTS

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ABSTRACT

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Employers are looking for new graduates to enter the work force with strong technical skills as well as the ability to communicate, make decisions and problem solve, self-manage, work on a team, act professionally, gain strong experiences, and lead. The Association of Public and Land Grant Universities commissioned a study to understand the priorities of employers, and compare them to students, faculty, and alumni. The study included a ranking survey of seven core skills, each with seven characteristics. The survey respondents represented 50 states, Puerto Rico, and Guam and 45+ majors/employment types. This study uses the commissioned survey (Crawford, et al., 2011a) as a base to begin analyzing the differences between Environmental and Natural Resource Specialists (ENRS) as compared to those in other employment fields to understand how to prioritize and focus skill development in students. Ordinal regression highlights a variety of differences including the priorities of the core skills' rank order and within each cluster, including communication, self-management, and experiences. Major differences occur such as the ENRS greatly value cross-disciplinary experiences and the ability to adapt and apply technology while significantly undervaluing leadership experience, leading change efforts, and being trust worthy as compared to the other fields. The ENRS field is most different from the medical and service professions, indicating that students are least likely to attain the prioritized soft skill development of their employers and what they may come to expect in their core classrooms.

This thesis is dedicated to the family and friends
that have supported me through my undergraduate
and graduate education at Michigan State University.
Their determination and discipline continue to inspire me.

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CHAPTER 1: INTRODUCTION

The importance of soft skills (such as communication, decision-making, and teamwork) is being extolled internationally - from government reports to university research studies. The need to complement professional and technical skills with soft skills is universally accepted. There is also acknowledgement that development of soft skills is a lifetime process. What is missing is where to focus scarce time and resources in academia. Which soft skills are the most important to address before they graduate? Are the priorities the same across the university, the college, and the school? This study explores the *priorities* of soft skills for entry level employment in environmental stewardship, design and construction and compares priorities across Agricultural Services, Education and Knowledge Development, Government, Human and Animal Medicinal and Health Services, Product Creation and Manufacturing, Service Industry, and all other fields.

United States employers encourage students to place higher importance on their sense of urgency, being a quick study, being a team player and managing one's own time when in the work place (SCANS, 2000; Agricultural Future of America and Millennium Research, 2009). Employers in the United Kingdom are looking for more skills in 'oral communication,' 'customer handling,' 'problem-solving,' and 'team-working' (UK Commission on Employment and Skills, 2009). Communication skills include a strong foreign language component for employment in Asian and European markets (Arocena, Nunez & Villanueva, 2007; Zaharim et al., 2009). In terms of international experience and study abroad, US studies are finding both ends of the spectrum: highly value to least valued for new employees (Gardner, 2007; Scholar Ship, 2007).

A baseline study in South Africa speaks to gaps in the skills needed for new employees to "hit the ground running" and the mutual responsibility of employers and educators to address the gap (Griesel & Parker, 2009). Sensitivity to culture and diversity are also cited as important skills new employees should bring to the workplace (Barry, 2007). The Australia Department of Education and Training published a guide addressing core skills such as communication, teamwork and problem-solving in the social and work context of Western Australia (Commonwealth of Australia, 2009).

Universities may be lagging in preparing our future workforce with the skills and values they will need for success (Bolmen & Gallos, 2011). Studies in the US, Europe and Asia are finding employers feel university/college graduates need to expand their basic communication skills (Jagger, 2001; Stevens 2004; Zaharim et al., 2009). Phil Gardner, in his US nationwide study of recruiting trends observed that "employers do not believe young people are not smart. In summary, employers believe young people lack the skills they need in the workplace: meaningful work experience; maturity to deal with the situations they will face as an employee; and command of the skills that allow them to converse with diverse colleagues, handle multiple assignments, and manage themselves" (2013, p. 30). University administrators and faculty are exploring how they can revitalize education and make their graduates more competitive in the job market. It's more than just a matter of professional or technical knowledge, the soft skills of communication, decision-making, self-management and teamwork are critical skills employers are looking for in applicants (Crawford et al., 2011b).

While the literature explores a host of soft skills important for entry into the job market, many fail to discern differences in priorities. All of the soft skills are important. The literature also ranges from very broad, blanketing multiple industries, jobs and profession, to very specific,

such as for computer technicians or engineers. Responsibility, asserts Lowden, et al., 2011, for learning and implementing these skills in their lives falls three ways: the public body or university, the employer, and the individual. Tagg (2003) asserts that student attitudes play a large part in the ability for students to develop skills beyond the basic graded product. Each specific sector of the market, however, requires specific competencies and skills for employment [US Secretary's Commission on Achieving Necessary Skills (SCANS), 2000).

The United States Association of Public and Land-grant Universities (APLU) commissioned report on soft skills creates a starting point for identifying soft skill priorities in Agriculture and Natural Resources related industries and connecting this information with US Universities. The APLU, located in Washington, D.C, focuses on higher education policies and gives a national voice to university concerns. The organization includes 221 member public universities, land-grant universities and state university systems with over 3.5 million undergraduate students (Fink, 2011; APLU, 2007-2011).

The 2011 APLU National Academic Programs Summit theme was "Creating Change: Reforming Curricula for a 21st Century Education." (see http://www.aplu.org/page.aspx?pid=1992 for more information on the Summit). The planning committee discussed the need to address broader 'soft' or 'employability' skills in addition to discipline specific skills as an important issue for 21st century education. With the support of committee Chair, Josef Broder (University of Georgia) the committee decided data would be the key to engaging the national audience of University administrators and faculty. A survey was proposed to reach the Summit goal to "…focus on curricular reform with respect to what we teach. While our colleges are well-regarded for their teaching of the disciplines and technical skills, employers often take our institutions (and higher education as a whole) to task for not preparing students with

transferable skills beyond the disciplines." (APLU, 2011). The Comparative Analysis of Soft Skills (CASS) survey provided information to help prioritize soft skills and discern differences in priorities between four key stakeholder groups - student, faculty, alum, and faculty.

The CASS study team included the summit planning committee Chair from the University of Georgia (Dr. Josef Broder), the director of the Academic Programs Section of APLU from Washington, D.C, (Ms. Wendy Fink), two faculty members from Michigan State University (Drs. Pat Crawford and Suzanne Lang), and two students from Michigan State University (Mr. Robert Dalton and Ms. Laura Fielitz). The team presented the study findings at the Summit in Indianapolis, IN. (Crawford 2011b).

The CASS study team identified seven soft skill clusters, with seven descriptive characteristics each, from a literature review and cluster analysis process. Survey respondents' priority ranked the soft skill clusters and descriptive characteristics within each cluster. The use of a forced-ranking response system required respondents to prioritize their responses, rather than giving equal value to multiple skills or characteristics. The study included 8,111 viable responses; from 282 employers, 4,262 alum, 898 faculty and 2,669 students from 31 Universities across the United States. The CASS Report analysis used the mean forced ranking results to compare value perceptions across the stakeholder groups participating in the survey. Employers ranked Communication, Decision-making/Problem-Solving, and Self-Management as the three top soft skills. Teamwork, Professionalism and Experiences followed with Leadership as the 7th skill (Crawford et al., 2011b). Within each cluster, participants also ranked the descriptive characteristics. For example, employers ranked listening as the most important characteristic within the Communication cluster, followed by communicating concisely and oral (verbal) communication skills. While each of the skills is important, the CASS study begins to discern

priorities to focus training and education efforts. The full results of stakeholder mean comparisons are published by APLU and available on-line at: http://www.aplu.org/document.doc?id=3414.

This study anticipates significant differences when comparing the Environmental and Natural Resource Specialists to the other fields. The null hypothesis would indicate the ENRS field do not differ from the other 7 fields within Colleges of Agricultural and Natural Resources. This study can help undergraduates as well as faculty to adjust curriculum and course objectives to include the prioritized soft skills within their field. It will also help students to understand where soft skill development in the classroom may differ when working outside of the discipline's field.

CHAPTER 2: LITERATURE REVIEW

This literature covers over 110 published articles, government reports, and surveys based in the employment potential of undergraduates and recent graduates. The Bureau of Labor Statistics sets the stage to prove the growing field among Environmental and Natural Resource Specialists. The articles transition to analyze the potential of recent graduates to earn employment within their discipline and examine the responsibility of the University, the employers, and the individual. International perspectives vary, but continue to stress the importance of soft skill development during the pivotal university development. Doyle (2011) suggests that such development can occur through authentic learning, and the literature covers the intricacies of implementing authentic learning in the academic world.

Bureau of Labor Statistics

The United States Bureau of Labor Statistics (2013) predicts an increase in employment across the general fields of environmental stewardship, design and construction (as shown in Table 1). Growing populations in need of housing and other developments in the south, an increasing emphasis on environmental protection, and a demand to fix degrading infrastructure have spurred growth across the construction and design fields. In each of these fields, one should expect to work long work weeks, and regularly meeting with clients outside of the traditional work hours. Landscape Architects possess great fluidity among the aforementioned fields as a variety of specializations can direct employments towards botany, drafting and computer aided design, environmental protection, or planning. However, up to 29% of the employed US Landscape Architects are in positions other than traditional design, engineering and planning firms or agencies (U.S. Bureau of Labor Statistics, 2013). A prioritized study of skills can redirect those graduating with design based Bachelor degrees to their chosen field.

Table 1: Occupational Outlook to 2020 (USBLS, 2013)

Field	Job Outlook (2010-2020)
Architecture	24% (Above Average); 27,900 jobs
Civil Engineers	+19% (Average), 51,100 jobs
Construction Management	+17% (Average); 86,600 jobs
Interior Design	+19% (Average); 10,900 jobs
Landscape Architecture	+16% (Average); 3,500 jobs
Urban and Regional Planning	+16% (Average), 6,500 jobs

Employability

Employability is a key factor for young adults entering the workforce. They are looking for jobs that are: interesting and engaging, include benefits and job security, and allow for promotion and the ability to learn new skills (Chao and Gardner, 2007, 2008). While many recent graduates have finished their Bachelor's without securing a job, the market is actually expanding. In the mid-2000s, globalization and changing markets resulted in the reorganization of firms that lead to fewer employees, especially in the United States (Arocena, 2007). Many businesses do not want to hire recent graduates because of ever increasing healthcare cost, competition among businesses in a global market, and an inability to cover costs and ventures through bank loans or federal/state government assistance, but fast growth and large organizations are looking to hire candidates with Bachelor's degrees, MBAs, and PhDs (Gardner, 2011).

During the 2010-2011 school year, the College Employability Research Institute predicted a 3% increase in hiring across all majors and a 10% increase in hiring specifically for

those with a Bachelor's degree as compared to the previous year (Gardner, 2011). More jobs could be available based on businesses reporting a 59% boost in sales, but only 44% of these businesses are still looking to hire. This suggests a continued fear of recession and the resulting lower hiring rates. Across all disciplines, 34% of employers anticipate 10 or less new hires over the next three years, but 27% anticipate to hire between 101-1000 (Crawford, et al., 2011b). Given the current hiring climate, the most secure majors for employment after earning a Bachelor's degree are Accounting, General Business, Technical degrees, Marketing, and Finance (Gardner, 2011).

Recruiters at college fairs are not looking for the standard classroom skills such as taking notes or perfecting the art of multiple choice tests (Doyle, 2011). The recruiters are in fact looking for a broad set of skills in their candidates that include not only strong technical expertise but also "soft skills" in their candidates. Soft skills are those skills needed in all lines of employment, rather than specific hard, or technical, skills specific to performing the tasks required in the profession (Robinson, et al, 2007). These soft skills range across many different attributes and abilities including adaptability (Plamondon, et al, 2000), proper communication (Mallet-Hammer, 2005), and working with others (Conference Board of Canada, 2000). Each of these broad soft skill sets contain multiple elements. For example, flexibility, including the applying feedback and remaining alert and open to all opinions, goes hand in hand with adaptability (Trilling and Fadel, 2009). Adaptability includes handling urgent, ambiguous, and work related stress, utilizing creativity to solve tasks, updating technological skills and office procedures, modifying self for interpersonal conflicts, and understanding a variety of views and backgrounds,. (Plamondon, et al, 2000). Communication includes reading and understanding as well as speaking and writing (Conference Board of Canada, 2000).

According to the United States' government, five general competencies include: resources (being able to allocate time, money, and resources), information (acquiring, evaluating, organizing, and interpreting), interpersonal (being a member of the team, teaching others), systems (monitoring and correcting technical performance), and technology (applying appropriate technology to the task). The report also lists three general skill sets including: Basic Skills (reading, writing, math, listening, speaking), Thinking Skills (creativity, decision making and problem solving), and Personal Qualities (responsibility, esteem, integrity). According to the SCANS report, the most desired competencies are being a member of the team and allocating time, while the most important skills are responsibility and integrity. Each specific sector of the market, however, requires specific competencies and skills for employment (US Secretary's Commission on Achieving Necessary Skills, 2000).

The 2000 SCANS report begins to group the skills, and identifies skills for varying disciplines. College graduates, however, need a multitude of skills, and these skill sets change over time (Hanneman and Gardner, 2011). Many of the employability studies carry different definitions for skill sets. The Conference Board of Canada (2000) lists many skills for communication, such as listening, speaking, and writing, but groups this key skill (Crawford, et al., 2011b) with other fundamental skills like critical thinking. The Conference Board of Canada (2000) further groups a variety of self-management skills under "Personal management" (p. 2) while other studies dissect this skill set as "autonomy" (Nyhus and Pons, 2005 p. 377) or "Individualist Efforts" (Johnson and Johnson, 1999, p 7-8) that gear toward student centered learning and negate the classroom's learner centered environment (Johnson and Johnson, 1999, p 17).

University Preparation and Responsibility

While employers are looking for these soft skills, they worry that their new hires lack specific soft skills, such as communication In addition to communication, which 37.1% of employers viewed as important, employers view problem solving and team work as important soft skills (33.9% and 30.9% respectively). Employer's ranking for state university graduates' written and oral communication skills has fallen from approximately 3.7/5 to 3.37/5, demonstrating a need for recent graduates and new hires to expand beyond the technical skills of their discipline (Jagger, et al., 2001).

Other publications assert that employability skills vary by region, job type, or size of the organization and soft skills are non-transferable through these aforementioned demographics. In addition to an undergraduate degree, Atkin claims that these skills are not required by employers (1999). Responsibility, asserts Lowden, et al., 2011, for learning and implementing these skills in their lives falls three ways: the public body or university, the employer, and the individual. While Lowden, et al., did identify important soft skills, the study was limited to interviews and did not use a larger sample size possible in a survey. Communication is a skill needed in every job type (Crawford, et al., 2011b). Responsibility for teaching skills varies between employer and university, and could result in the skills not being taught in any environment. The respondents from Crawford, et al. (2011a) put half of the responsibility each on the university and the workforce.

Successes in the Workforce

New hires can be successful in the workplace. *The First Two Years of Employment: Strategies and Pitfalls* and Ivanevich, et al. (2009) highlight various strategies new hires can use to earn promotions as well as shortcomings that result in termination Attitude plays a large part in creating a positive relationship with coworkers and supervisors. Ivanevich's survey indicates

the best practices for a new hire include showing initiative and seeking responsibilities, being a team player by working past regular work hours, and demonstrating passion for new knowledge through strategic questioning and reading. New hires easily tarnish their reputations, however, with poor work ethics such as "'taking too many breaks'" and "'failure to pay attention to detail, unprofessional behavior, such as flirting or off color jokes, and acting as a 'free rider." In fact, the most common reasons for termination of employees are unethical behavior and a lack of motivation/work ethic. In contrast, the most common reasons for advancement within an organization include taking initiative (16%), self-management (13%), personal attributes (9%), and commitment (9%) (Gardner, 2007).

Nancy Barry (2007) argues that a college curriculum cannot completely prepare a student for the real-world situations they will face in the office. In her book, Barry explores various skills needed in the workplace. Proper communication techniques, she believes, are vital in the workplace, such as tone of voice, asking appropriate questions, and using technology like cell phones and smart phones discreetly. Barry especially mentions sensitivity to culture and diversity as an important craft for success in the workplace. College professors cannot teach good attitudes or how to be a team player (though it may be enforced in the classroom), but these personal qualities help office workers succeed in their business. Coworkers can demonstrate these qualities with a smile and appropriate laughter, as well as listening and providing informative input. "Honesty, integrity, respect, and trust" create the "package every employer is looking for" (Barry, 2007). Barry's publication, however, focuses on implementation of skills in the work place to maintain professional relationships with coworkers. Many of these techniques pertain to any employed person, and not only college graduates.

International Perspectives

In addition to technical and practical skills, employers in the United Kingdom are looking for more hires with skills in oral communication, customer handling, problem solving, and team working (Commission for Employment Skills, 2009). The same study demonstrates that employers are most dissatisfied with their college graduate hires in the areas of foreign language skills, customer awareness, and relevant work experience. In a study performed in the UK with close proximity to the linguistically diverse European continent, foreign language skills may have ranked higher in this study than in American surveys. In Hong Kong, one quarter of the skills mentioned include foreign language proficiency, while Hong Kong, Singapore, Japan, and Malaysia each mention communication skills as an important component for employment (Zaharim, et al., 2009). In contradiction, in the United States over half of the employers surveyed rank study abroad with 'little importance' in new hires (Gardner, et al., 2008).

According to a Wilton's survey in the United Kingdom (2011), higher education has the ability to create equal opportunity in the workplace assuming the individual will take responsibility for their learning. Universities, however, are not teaching all of the necessary soft skills for employability. "Written communication," "ability to work in teams," and "research skills" each have a rating above 2.5 (2.66, 2.57, 2.56 respectively) out of 3 on a scale where 3 signifies high competence. "Management skills," "leadership skills," "creativity," "entrepreneurial skills," and "advanced IT or software skills" are the lowest rated skills from 2.2/3 to 1.3/3. While this study does analyze the ratings by demographic, it applies only to those in business management, and not for university wide disciplines, in the United Kingdom (Wilton, 2011). A simple 3 to 1 rating scale allows the respondents to easily understand it but does not allow for a variety of responses. The low range in rating scale creates the potential for more significant differences and correlations as well as a minimized standard deviation.

Wickramasinghe and Perera, 2010, explore the differences in opinion between three stakeholders: graduates, faculty, and employers in Sri Lanka.. This study used literature to define many of the aforementioned soft skills and a survey to discern differences. While the research team found significant differences, the study was limited to a computer science discipline in Sri Lanka. Each of the stakeholders, regardless of gender, rate "problem solving, self-confidence, and teamwork as the most important employability skills." Although Robinson, et al, (2007) rated different skills, "problem solving and analytic" similarly remains the top rated skill regardless of stakeholder.

Learning Environments

Universities have moved students out of the forefront of faculty priorities, failing to give students communication and critical thinking skills adequate for employer standards (Bok, 2006). This deviates from literature that indicates a growing importance to create professional relationships and respond to incoming data (Hanneman and Gardner, 2011). In the past, universities used a variety of methods to instill a responsibility to learn in their students, including the Religious Stage (1880-1910), the Scientific Stage (1900-1920), and the Humanistic and Extracurricular Stage (1915-1930). The religious stage included the teaching of Christian (Protestant) scriptures and encouraging civic leadership; The Scientific Stage included the teaching of the best facts of the time; the Humanistic and Extracurricular Stage encouraged social and academics beyond the confines of the classroom and a cooperative learning environment (Reuben, 1996). John Dewey (1938), researching during and after the Humanistic and Extracurricular Stage, asserts that students can learn by experiencing the task and actively engaging with it, while the educator serves to guide the experiences to success and help the students mentally organize the value of the experiences. Colleges have always competed for

students, garnering international attention through their academics, athletics, and facilities, and connecting research and teaching to prepare students for life outside the university walls (Arum and Roksa, 2011). However, the trend since the 1940s indicates a shift from student learning to a business model of financial success (Bok, 2006, Hacker and Dreifus, 2010), placing students in large lecture halls and increases in tuition (Reuben, 1996).

In order to succeed in the university, professors must publish before focusing on student learning, a rapidly increasing trend in four-year universities (Boyer, 1990). While Universities can attribute this in partly to their historical trend to model like corporations, the Bayh-Dole Act (1980), attempting to counteract funding cuts, encourages universities to focus on research and patents. Though not achieved through student learning alone, tenure, an academic "Everest," or esteemed goal, protects the professor and allows degrees of "academic freedom" (Hacker and Dreifus, 2010). Academic Freedom, according to www.brittanica.com, permits "the freedom of teachers and students to teach, study, and pursue knowledge and research without unreasonable interference or restriction from law, institutional regulations, or public pressure." Tenure allows the teaching of non-traditional (and even controversial) subjects through experimental methods to expand student learning, thus increasing communication abilities and critical thinking skills. Testing to gauge student proficiency within a subject, which partly contributes to the tenure process, often does not analyze one's ability to critically engage but to repeat facts (Kalantzis, et al., 2005).

While students have the obligation to learn, the faculty has the obligation to teach. A four-year education at a publicly funded university can cost over $100,000, while the university industry is worth up to $450 billion (Hacker and Dreifus, 2010). These high costs, in addition to credit card debt and employment outside of academics, allow students to think critically over

their finances but also create high pressure and mounting distractions from academics (Arum and Roksa, 2011). Using the Collegiate Learning Assessment (CLA) and a survey of students and faculty, Arum and Roksa (2011) demonstrate that students have marginal increases in critical thinking and, even with mounting financial pressures, spend more time socializing than studying. While *Academically Adrift* (2011) drew immediate criticism for the interpretation of the aforementioned results, the transparency of methods allowed replication and repeated results (Pascarella, et al., 2011). The interpretation of the data created debate, but the very statistic of students not learning remains alarming. Kalantzis, et al. (2011, p. 94-97) suggest a three level rubric to measure aptitude, as opposed to standardized testing like the CLA, from "assisted competence," to "autonomous competence," and finally "collaborative competence" for varying skills and attributes including critical thinking and experiences. Michigan State's University Committee on Liberal Learning (2009) suggest a four-level rubric to develop students learning across skills such as "Communication" and "Effective Citizenship" from a freshman level in the University through graduation.

"Authentic learning is a pedagogical approach that allows students to explore, discuss, and meaningfully construct concepts and relationships to contexts that involve real-world problems and projects that are relevant to the learner" (Donovan et al., 1999). During authentic learning processes, the learners not only master the technical requirements but develop necessary and more complex 'soft skills' for success in today's competitive work environments (Levy and Murnane, 2005; Doyle 2011). The North Central Regional Educational Laboratory (2011) stipulates that authentic learning must: have a real-world application, contain interdisciplinary elements, allow for multiple approaches, position the teacher as a facilitator rather than a lecturer, encourage teamwork, and produce a product. The University of Arizona lead a project

in authentic learning which required students to construct the physical environment they were studying (astronomy) and literally immerse the class within it. Studies indicate that students need seven to eight hours of sleep to process the day's learning, but an informal class poll reports most students getting less sleep (Doyle, 2011).

While authentic learning is implemented through the curriculum and syllabi, the places in which it occurs can encourage its productivity. Weinstein and Novadvorsky (2011), in a Maslow-like pyramid, define five elements for a successful classroom:

1. Safety – The classroom must allow students to feel safe from physical aggression as well as the weather elements like rain, snow and cold.
2. Social Interaction – Classrooms should encourage interaction among students as well as interaction between the student and the instructor. Students can engage in the classroom when allowed input into the creation of the syllabus and classroom rules such as attendance and due dates (Doyle, 2011).
3. Symbolic Identification – Students should understand by the décor what they will learn in the provided space and personally identify with the design.
4. Instrument – Classrooms should have and make use of emerging and successful technologies and pedagogies.
5. Pleasure – Students should enjoy the material.

The classroom itself and the technology and equipment provided can aid in retention of new material. Learning capabilities increase with the production of new neurons and synapses, new cell growth (especially in parts of the brain for memory), and brain-derived neurotropic factors, a protein that allows for synaptic connections (Stern, 2009; Mattson, et al., 2004; Modie, 2003). All three situations occur during exercise (Doyle, 2011). Simple aerobic exercise, such as

walking, as well as exercise requiring skill acquirability like tennis, promotes learning (Weuve et al., 2008). A variety of schools at the university and secondary education levels have implemented exercise into their learning process by allowing for treadmills and other exercise equipment in the building or replacing chairs at desks with exercise balls. These small changes have positive correlations with student performance (Doyle, 2011).

Future Study Potential

Many of the existing studies also focus on a specific discipline, such as agriculture (Barkley, et al., 1999), business management (Wilton, 2011) and computer science (Wickramasinghe and Perera, 2010). Additionally, the only author to explore the skills of Agriculture and Natural Resource graduates, Robinson et al. 2007, used the aforementioned rating system instead of ranking. However, the changing global market has caused recent graduates' fluidity among careers. An understanding of the world dynamics is vital for the success of Americans in the work force (Kay, 2010). Recent graduates may look for employment in many fields related to their undergraduate degree, but not specifically in employment for their limited degree. A wider scope of findings will allow students to focus their soft skill learning based on the distinct preferences of their chosen field and the universally accepted soft skill priorities.

University professors hold ever-mounting pressures, including frequent publications, grants, and expanding class sizes. As new graduates do not possess the competence to meet the requirements in an office (Gardner, et. al 2011), faculty and students must make changes to bridge graduates into employment. Authentic learning pedagogies, and the classroom environments, provide the potential to teach both discipline-specific, technical skills and implicitly improve the student abilities to communicate, think critically, and work in teams

(Crawford, et al., 2012). To fully develop authentic learning, students must reflect on their skills after each learning process, including both technical and soft skills.

As hiring increases after years of layoffs, faculty and students can prioritize their methods to increase employment potential. As each skill has value, the common rating system fails to give the stakeholders priorities for implementation and adjustments in syllabi and curricula. While most studies focus on one discipline, a study across multiple disciplines and comparison among them can ignite and inform the change to increase the hiring potential of new graduates.

CHAPTER 3: RESEARCH METHODS

Original Study

The data used in this study comes from a survey, funded by the APLU, from Crawford, et al., 2011a. The original research team, of which this author was a part, gathered over 80 articles and government reports from around the world to understand the importance of soft skills for recent graduates. After reading each piece of literature, the information was summarized into outlines. These outlines served for a cluster analysis to group skills, experiences, and characteristics into seven core skill sets. The APLU and University-Industry Consortium were then consulted to ensure the groupings contained universal language across multiple disciplines, all necessary soft skills were included, and the correct characteristics fit into the correct skill. While the original survey was intended for distribution to two universities using www.surveymonkey.com, nearly 40 universities participated through the APLU. Each University consisted of three distinct links to be emailed to their list serves in the Colleges of Agriculture and Natural Resources, including one for each students, faculty, and alumni. Each participating survey was sent a general link for the employers within the list serve of the College.

The respondents to the original survey represented all 50 states, Washington D.C., Guam, and Puerto Rico. The greatest number of employers responded that the headquarters of the organization were in states found within in the Western Great Lakes and the Midwest regions. The survey contained 8,124 responses, with approximately 2700 students, 900 faculty, 4,300 alumni and 300 employers. The exact response rate was indeterminable as the survey was sent to university emails and then spread through word of mouth.

Research Design

This work is a new line of inquiry building off the APLU Report *Comparability of Soft Skills: What is Important for New Graduates?* (Crawford et al, 2011b), also known as the CASS Report. After a cluster-analysis to group the 45+ possible employment fields in the CASS study, and consultation with the Association of Public and Land Grant Universities, the eight employment fields allow for in depth analysis. As part of the CASS research team, the author utilizes the CASS data set (2011a) for the new in-depth analysis, focusing on soft skill values of those in the Environmental and Natural Resource Specialists subset as compared to other fields.. The ENRS field represents employment and studies in areas such as architecture, civil engineering, construction, fisheries, wildlife, and forestry, golf course design and management, interior design, landscape architecture, landscape design, natural resource management, and park design and management. The eight fields are:

1. Agricultural Services
2. Education and Knowledge Development
3. Environmental and Natural Resource Specialists
4. Government
5. Human and Animal Health and Medicinal Services
6. Product Creation/Manufacturing
7. Service Industry
8. Other (Those who responded Other in the CASS data set or did not respond to employment field)

Breakout percentages can be found in Figure 1 (The Eight Studied Fields as Represented by the Percentage of the Total Study's Respondents) while the fields and their defining disciplines from the CASS Report that fit into these eight fields can be found in Appendix A.

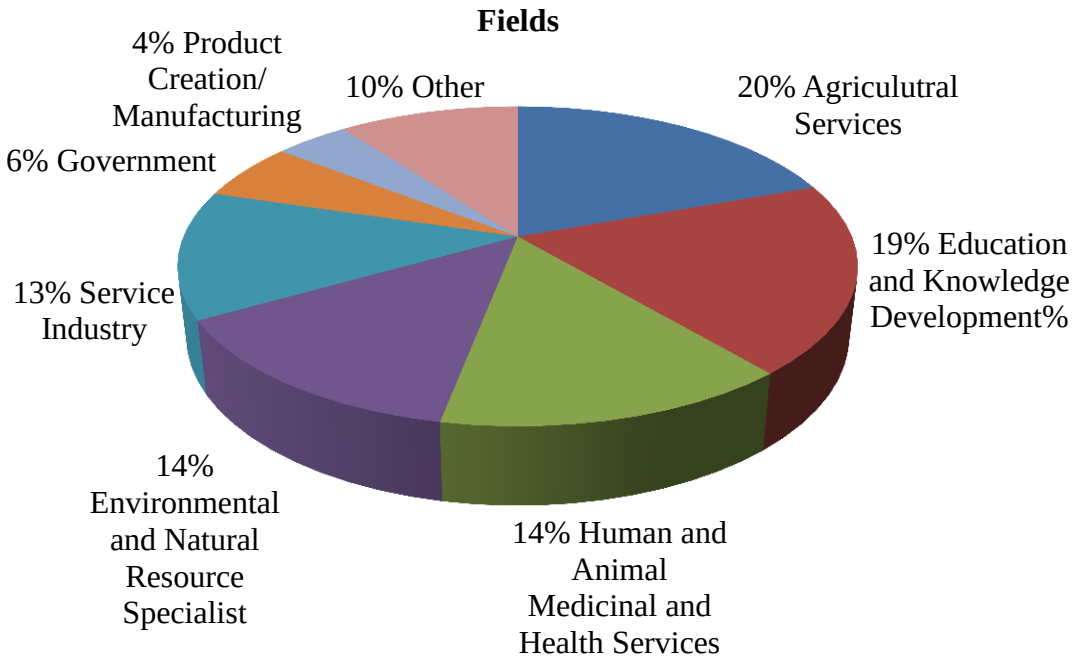

Figure 1: The Eight Studied Fields as Represented by the Percentage of the Total Study's Respondents. For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this thesis.

Data Analysis

The *Comparability of Soft Skills: Data Set* (Crawford et al, 2011a) is used for analysis with the Statistical Package for Social Science 19 (SPSS - IBM Statistics Software Editor). Before the publication of the CASS report, 11 additional responses arrived and are included with this study but not the original report. For his study, the data is explored for significant differences of ranking of the soft skills by ENRS to the other Fields using ordinal regression. This technique is selected due to the forced ranking of data used in the CASS study which places an "order" on the variables but does not indicate a scale or distance between the variables (IBM,

2011). Ordinal regression also allows for multiple independent variables. In this study, the field type is designated as the independent variable.

The soft skill clusters and characteristics are designated as the dependent variables. Using the 'cellinfo' option it was determined that all of the cells were populated allowing for analysis of the full data set. The analysis was run 56 times, once for each dependent variable (7 clusters plus 49 characteristics). The findings include significant differences from the Environmental and Natural Resource Specialists to the other Fields. Due to the large sample size (n=8,124), the Wald statistic is used and differences equal to or less than 0.05 are considered significant. To further interpret the findings and provide feedback for faculty and employers training young adults, another ordinal regression dissected the rank order of the employers, faculty, alum, and students within the ENRS cluster

CHAPTER 4: DATA RESULTS

Overall Differences

Each cluster has the possibility of 49 differences when comparing the ENRS to the other seven fields. In comparison to the ENRS, this study found 152 out of 392 possible significant differences, or 38.8%. The most differences (33 and 29, more than 50% of possible differences) occur when comparing to the Service Industry and Health Services. The clusters with the most differences are the Experiences, with 26 significant differences (or 53.1% of possible Experience differences) and Core Skills and Communication, each with 24 (or 49%) (Table 2: Significant Difference Count as Compared to ENRS).

Table 2: Significant Difference Count as Compared to ENRS

	Core	Com.	D.P.	Self.	Exp.	Team.	Prof.	Lead.	Total
Ag. Services	3	2	1	5	6	1	3	2	22
Education	2	4	3	3	2	3	2	2	21
Government	2	3	2	1	4	0	2	3	15
Health Services	4	6	4	4	2	3	2	2	29
Product Creation	2	2	1	3	2	1	1	2	14
Service Industry	6	5	2	5	4	4	3	4	33
Other	5	2	1	5	2	1	0	1	18
Total	24	24	14	22	26	13	13	16	152

The order of both the ENRS and the non-ENRS mean ranking mirror each other. The order is Communication, Decision-Making/Problem-Solving, Self-Management, Experiences, Team Skills, Professionalism, and Leadership (See Appendix B: Soft Skill Clusters and Characteristics as Ranked the ENRS). The rank order of characteristics in these fields, however, differs from the original study's ranking, which ordered the skills and characteristics according to the overall employer mean.

Core Skills

The ENRS respondents rank order the soft skill clusters with Communication, Decision-making/Problem-solving and Self-management as the most important with Leadership as the least important. However, ENRS respondents significantly value Communication less than the Government, Health Services, Service Industry, and Other fields, while placing significantly more emphasis on Decision-making/Problem-solving than Education, Government, Health Services, Production Creation, Service Industry, and Other fields (Table 3: Core Skills' Significant Differences, Wald Statistic, and Standard Error as Compared to ENRS; Table 4: Core Skills' Mean, Sample Size, and Standard Error) ENRS continue to place more emphasis on Self-Management (compared to Health Services), Experiences (as compared to Agricultural Services, Service Industry, and Other fields), and Team Skills (as compared to Agricultural Services and the Service Industry). At the end of the core skills ranking, ENRS place significantly less emphasis on Professionalism (as compared to Health Services, Service Industry, and other fields), and significantly less emphasis on Leadership than all fields except the Government.

Table 3: Core Skills Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

		Com.	D.P.	Self.	Exp.	Team	Prof.	Lead.
Ag. Services	Sig	0.379	0.252	0.225	0.000	0.016	0.858	0.000
	Wald	0.774	1.311	1.473	14.575	5.802	0.032	33.389
	Std. Err	0.075	0.075	0.075	0.076	0.075	0.075	0.076
Education	Sig	0.599	0.000	0.127	0.526	0.607	0.440	0.000
	Wald	0.277	15.001	2.330	0.401	0.264	0.596	21.401
	Std. Err	0.076	0.076	0.076	0.076	0.076	0.076	0.076
Product Creation	Sig	0.220	0.002	0.764	0.057	0.901	0.507	0.006
	Wald	1.504	9.774	0.090	3.609	0.016	0.440	7.607
	Std. Err	0.105	0.122	0.122	0.122	0.122	0.122	0.123
Government	Sig	0.011	0.035	0.570	0.210	0.406	0.700	0.226
	Wald	6.492	4.436	0.322	1.568	0.690	0.149	1.468

Table 3
(cont'd)

	Std. Err	0.105	0.105	0.105	0.105	0.105	0.105	0.106
Health Services	Sig	0.099	0.002	0.000	0.232	0.129	0.003	0.042
	Wald	2.718	9.917	15.517	1.426	2.309	8.822	4.143
	Std. Err	0.082	0.081	0.081	0.082	0.081	0.082	0.082
Service Industry	Sig	0.000	0.000	0.175	0.003	0.027	0.017	0.000
	Wald	13.980	40.629	1.842	8.758	4.913	5.673	51.951
	Std. Err	0.084	0.084	0.084	0.084	0.084	0.084	0.084
Other	Sig	0.044	0.000	0.800	0.006	0.667	0.037	0.022
	Wald	4.055	13.778	0.064	7.585	0.185	4.349	5.234
	Std. Err	0.090	0.090	0.090	0.090	0.090	0.090	0.091

significant ENRS LOWER PRIORITY than comparison field

significant ENRS HIGHER PRIORITY than comparison field

Table 4: Core Skills Mean, Sample Size, and Standard Deviation

		Com.	D.P.	Self.	Exp.	Team.	Prof.	Lead.
ENRS	Mean	3.100	3.178	3.641	4.012	4.218	4.650	5.150
	N	915	914	908	913	905	906	913
	Std. Dev.	1.726	1.787	1.893	2.253	1.787	1.855	1.780
Ag. Services	Mean	3.017	3.263	3.544	4.374	4.401	4.658	4.685
	N	1354	1355	1354	1344	1352	1351	1345
	Std. Dev.	1.649	1.786	1.906	2.289	1.785	1.874	1.892
Education	Mean	3.040	3.501	3.771	4.070	4.258	4.576	4.764
	N	1316	1324	1313	1310	1318	1322	1315
	Std. Dev.	1.646	1.905	1.938	2.272	1.803	1.909	1.917
Product Creation	Mean	2.952	3.569	3.593	4.285	4.218	4.553	4.792
	N	269	269	268	267	266	266	264
	Std. Dev.	1.664	1.789	1.859	2.332	1.889	1.915	1.870
Government	Mean	2.828	3.415	3.573	4.174	4.297	4.625	5.005
	N	406	405	407	403	404	400	403
	Std. Dev.	1.601	1.842	1.880	2.272	1.792	1.797	1.851
Health Services	Mean	2.965	3.449	3.995	3.861	4.345	4.392	4.967
	N	951	954	949	951	948	948	945
	Std. Dev.	1.672	1.841	1.924	2.304	1.808	1.863	1.857
Service Industry	Mean	2.803	3.743	3.770	4.321	4.402	4.443	4.484
	N	842	841	839	841	839	837	841
	Std. Dev.	1.635	1.873	1.932	2.277	1.835	1.847	1.976

Table 4
(cont'd)

Other	Mean	2.912	3.526	3.671	4.318	4.178	4.444	4.919
	N	660	658	656	663	667	656	655
	Std. Dev.	1.635	1.890	1.938	2.304	1.752	1.917	1.890
Non-ENRS	Mean	2.954	3.472	3.721	4.188	4.318	4.533	4.774
	N	5798	5806	5786	5779	5784	5780	5768
	Std. Dev.	1.647	1.850	1.925	2.294	1.803	1.880	1.906

Communication

ENRS rank listening effectively as significantly more important that Education, Government and Health Services (Table 5: Communication Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 6: Communication Characteristics' Mean, Sample Size, and Standard Error). The other seven fields combined rank communicating accurately and concisely ahead of listening. The second ranked characteristic, ENRS rank accurate and concise ahead of the Service Industry. ENRS place significantly less emphasis on oral communication (as compared to Education and Health Services), pleasant and professional communication (as compared to Health Services, Product Creation, Service Industry, and Other fields), and written communication (as compared to the Government). ENRS, however, place significantly more emphasis on written communication than Agricultural Services, Health Services, Product Creation, and the Service Industry as well as asking good questions than Agricultural Services, Government, Health Services, and the Service Industry. Education places significantly more emphasis on asking good questions. ENRS place more emphasis on communicating professionally with social media than education but not as much as Health Services, Service Industry, or Other fields.

Table 5: Communication Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.708	0.423	0.153	0.543	0.000	0.011	0.092
	Wald	0.140	0.642	0.204	0.370	12.506	6.516	2.840
	Std. Err	0.074	0.074	0.074	0.073	0.074	0.074	0.089
Education	Sig	0.009	0.996	0.021	0.133	0.924	0.002	0.004
	Wald	6.854	0.000	5.287	2.254	0.009	9.935	8.515
	Std. Err	0.074	0.074	0.074	0.074	0.074	0.074	0.086
Product Creation	Sig	0.578	0.255	0.961	0.003	0.000	0.813	0.274
	Wald	0.310	1.294	0.002	8.672	17.204	0.056	1.195
	Std. Err	0.119	0.119	0.118	0.118	0.118	0.119	0.138
Government	Sig	0.048	0.977	0.171	0.948	0.001	0.036	0.746
	Wald	3.895	0.001	1.875	0.004	11.506	4.411	0.105
	Std. Err	0.103	0.103	0.102	0.102	0.102	0.103	0.123
Health Services	Sig	0.006	0.307	0.039	0.000	0.000	0.001	0.004
	Wald	7.511	1.044	4.282	36.482	20.155	11.369	8.073
	Std. Err	0.079	0.080	0.079	0.079	0.079	0.080	0.092
Service Industry	Sig	0.081	0.010	0.375	0.000	0.007	0.001	0.000
	Wald	3.048	6.585	0.788	19.456	7.181	10.547	38.295
	Std. Err	0.082	0.082	0.082	0.081	0.082	0.082	0.093
Other	Sig	0.519	0.240	0.899	0.040	0.936	0.144	0.019
	Wald	0.415	1.383	0.016	4.209	0.006	2.138	5.543
	Std. Err	0.087	0.087	0.087	0.087	0.087	0.087	0.101

significant ENRS LOWER PRIORITY than comparison field

significant ENRS HIGHER PRIORITY than comparison field

Table 6: Communication Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	2.904	2.939	3.401	3.787	3.887	4.767	6.215
	N	964	960	965	964	964	960	968
	Std. Dev.	1.624	1.675	1.637	1.858	1.721	1.768	1.462
Ag. Services	Mean	2.893	2.874	3.300	3.741	4.131	4.594	6.340
	N	1409	1401	1405	1391	1393	1395	1405
	Std. Dev.	1.666	1.632	1.594	1.815	1.733	1.752	1.304
Education	Mean	3.098	2.949	3.248	3.674	3.897	4.991	6.085
	N	1395	1399	1400	1389	1396	1386	1396
	Std. Dev.	1.696	1.702	1.632	1.885	1.679	1.723	1.504
Product	Mean	2.962	2.819	3.422	3.418	4.361	4.736	6.236

Table 6
(cont'd)

Creation	N	288	287	287	287	288	284	284
	Std. Dev.	1.624	1.665	1.639	1.885	1.687	1.804	1.268
	Mean	3.106	2.939	3.265	3.791	3.548	4.993	6.283
Government	N	424	424	426	426	425	420	424
	Std. Dev.	1.711	1.669	1.559	1.844	1.699	1.677	1.353
Health	Mean	3.112	2.866	3.254	3.279	4.240	5.042	6.116
Services	N	1014	1007	1012	1002	1006	1001	1003
	Std. Dev.	1.656	1.669	1.617	1.849	1.642	1.682	1.460
Service	Mean	3.048	3.143	3.340	3.417	4.099	4.998	5.827
Industry	N	900	902	898	905	1006	897	894
	Std. Dev.	1.681	1.716	1.661	1.923	1.642	1.768	1.689
	Mean	2.962	3.056	3.398	3.605	3.896	4.884	6.123
Other	N	711	709	712	709	709	708	707
	Std. Dev.	1.651	1.755	1.644	1.936	1.656	1.767	1.447
Non-	Mean	3.024	2.952	3.301	3.574	4.034	4.885	6.136
ENRS	N	6141	6129	6140	6109	6108	6091	6113
	Std. Dev.	1.674	1.687	1.622	1.880	1.705	1.744	1.464

Decision-Making/Problem-Solving

ENRS place significantly more emphasis on identifying and analyzing problems than Education and the Service Industry (Table 7: DMPS Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 8: DMPS Characteristics' Mean, Sample Size, and Standard Error). They place less emphasis on the second ranking characteristic (take effective action) than Health Services. While transferring knowledge contains no significant differences, it is the third ranking characteristic for the ENRS but the fourth ranking characteristic for Non-ENRS fields. The Other field places more emphasis on realizing the effect than the ENRS. ENRS put more emphasis on the fifth ranked characteristic (creative and innovative) than Government, Health Services, and Product creation as well as the seventh characteristic (think abstractly) than Agricultural Services, Education, Government, and

Health Services. Life-long learning, however, is not prioritized with the ENRS as much as Education, Health Services, and Service Industry.

Table 7: DMPS Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.152	0.111	0.396	0.214	0.720	0.116	0.000
	Wald	2.056	2.536	0.720	1.542	0.128	2.468	16.852
	Std. Err	0.077	0.075	0.074	0.075	0.075	0.076	0.076
Education	Sig	0.000	0.174	0.440	0.274	0.428	0.000	0.022
	Wald	13.636	1.852	0.597	1.195	0.629	24.620	5.232
	Std. Err	0.077	0.075	0.075	0.075	0.075	0.076	0.076
Product Creation	Sig	0.622	0.222	0.499	0.799	0.033	0.302	0.351
	Wald	0.243	1.494	0.456	0.065	4.523	1.065	0.870
	Std. Err	0.125	0.122	0.121	0.121	0.122	0.123	0.123
Government	Sig	0.119	0.096	0.308	0.083	0.005	0.381	0.001
	Wald	2.436	2.767	1.038	3.000	7.975	0.769	11.912
	Std. Err	0.108	0.104	0.104	0.104	0.104	0.106	0.106
Health Services	Sig	0.136	0.006	0.896	0.314	0.001	0.000	0.002
	Wald	2.219	7.678	0.017	1.014	10.134	15.737	9.754
	Std. Err	0.082	0.081	0.080	0.081	0.081	0.082	0.082
Service Industry	Sig	0.037	0.871	0.533	0.118	0.249	0.000	0.089
	Wald	4.343	0.026	0.388	2.448	1.330	16.733	2.890
	Std. Err	0.085	0.083	0.083	0.083	0.083	0.084	0.084
Other	Sig	0.081	0.955	0.326	0.001	0.544	0.588	0.060
	Wald	3.046	0.003	0.966	11.119	0.369	0.293	3.543
	Std. Err	0.091	0.089	0.088	0.089	0.089	0.091	0.090

significant ENRS LOWER PRIORITY than comparison field

significant ENRS HIGHER PRIORITY than comparison field

Table 8: DMPS Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	2.445	3.485	3.884	3.915	4.013	5.070	5.118
	N	928	932	932	930	927	930	931
	Std. Dev.	1.597	1.777	1.767	1.691	1.749	2.156	1.869
Ag. Services	Mean	2.372	3.362	3.958	3.821	3.985	4.972	5.441
	N	1363	1363	1368	1366	1359	1259	1358
	Std. Dev.	1.604	1.710	1.757	1.659	1.735	2.144	1.715

Table 8
(cont'd)

Education	Mean	2.720	3.588	3.834	3.838	4.079	4.618	5.283
	N	1341	1337	1339	1326	1334	1335	1331
	Std. Dev.	1.713	1.790	1.793	1.754	1.772	2.283	1.829
Product Creation	Mean	2.432	3.312	3.805	3.933	4.268	5.015	5.246
	N	271	269	272	270	269	271	268
	Std. Dev.	1.680	1.634	1.755	1.662	1.860	2.168	1.789
Government	Mean	2.277	3.312	3.779	3.734	4.315	5.015	5.493
	N	412	413	412	410	409	414	412
	Std. Dev.	1.483	1.717	1.765	1.607	1.715	2.099	1.699
Health Services	Mean	2.575	3.254	3.889	3.842	4.272	4.713	5.404
	N	973	967	973	972	969	971	969
	Std. Dev.	1.659	1.699	1.768	1.743	1.788	2.219	1.698
Service Industry	Mean	2.633	3.473	3.945	3.793	4.107	4.664	5.312
	N	856	853	855	852	857	858	847
	Std. Dev.	1.710	1.764	1.831	1.712	1.833	2.235	1.716
Other	Mean	2.614	3.465	3.804	3.631	4.061	5.027	5.333
	N	679	677	679	678	678	676	678
	Std. Dev.	1.689	1.694	1.847	1.709	1.809	2.136	1.704
Non-ENRS	Mean	2.547	3.418	3.880	3.801	4.116	4.813	5.363
	N	5895	5879	5898	5874	5875	5884	5863
	Std. Dev.	1.665	1.733	1.789	1.705	1.783	2.204	1.741

Self-Management

ENRS prioritize working efficiently and effectively more than Agricultural Services, Product Creation, Service Industry, and Other fields (Table 9: Self-Management Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 10: Self-Management Characteristics' Mean, Sample Size, and Standard Error). They further value self-starting more than Health Services but less the Agricultural Services and Government. ENRS do not value working under pressure as much as Health Services, Service Industry, and Other fields. Agricultural Services places more emphasis on urgency than ENRS, but ENRS value urgency more than Education and Government as well as technology more than

Agricultural Services, Health Services, Product Creation, Service Industry, and Other fields. Technology is valued as the sixth characteristic for ENRS but the seventh for Non-ENRS fields. ENRS significantly value professional development more than Agricultural Services but less than Education, Health Services, and Service Industry.

Table 9: Self-Management Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.000	0.000	0.971	0.921	0.012	0.008	0.047
	Wald	17.080	23.553	0.001	0.010	6.276	6.986	3.956
	Std. Err	0.076	0.075	0.075	0.075	0.075	0.076	0.076
Education	Sig	0.087	0.694	0.554	0.808	0.004	0.882	0.000
	Wald	2.928	0.154	0.350	0.059	8.148	0.022	15.717
	Std. Err	0.077	0.075	0.075	0.075	0.075	0.076	0.076
Product Creation	Sig	0.013	0.892	0.823	0.161	0.303	0.010	0.224
	Wald	6.212	0.018	0.050	1.968	1.061	6.692	1.477
	Std. Err	0.123	0.122	0.122	0.121	0.122	0.124	0.123
Government	Sig	0.245	0.004	0.186	0.099	0.027	0.654	0.339
	Wald	1.349	8.226	1.753	2.720	4.878	0.201	0.915
	Std. Err	0.106	0.106	0.105	0.105	0.105	0.106	0.107
Health Services	Sig	0.552	0.000	0.811	0.000	0.833	0.000	0.000
	Wald	0.354	13.524	0.057	12.977	0.045	17.135	15.887
	Std. Err	0.082	0.081	0.081	0.081	0.081	0.082	0.082
Service Industry	Sig	0.000	0.504	0.210	0.000	0.820	0.000	0.004
	Wald	23.356	0.446	1.569	13.028	0.052	13.436	8.323
	Std. Err	0.085	0.084	0.084	0.084	0.083	0.085	0.084
Other	Sig	0.008	0.818	0.915	0.006	0.468	0.047	0.401
	Wald	7.119	0.053	0.011	7.520	0.527	3.929	0.705
	Std. Err	0.090	0.089	0.089	0.089	0.089	0.090	0.090
	significant ENRS LOWER PRIORITY than comparison field							
	significant ENRS HIGHER PRIORITY than comparison field							

Table 10: Self-Management Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	2.494	3.183	3.407	4.156	4.254	5.145	5.308
	N	923	923	920	921	918	918	920
	Std. Dev.	1.548	1.905	1.981	1.671	1.772	1.638	1.739
Ag.	Mean	2.698	2.787	3.412	4.157	4.073	5.334	5.471
Services	N	1363	1363	1363	1359	1365	1350	1361
	Std. Dev.	1.479	1.765	2.012	1.719	1.738	1.569	1.648
	Mean	2.598	3.211	3.463	4.128	4.471	5.120	4.990
Education	N	1326	1329	1226	1326	1328	1318	1324
	Std. Dev.	1.574	1.891	2.013	1.755	1.790	1.676	1.860
Product	Mean	2.744	3.137	3.459	3.971	4.119	5.391	5.138
Creation	N	270	271	268	271	268	266	269
	Std. Dev.	1.624	1.816	2.078	1.682	1.789	1.648	1.837
	Mean	2.559	2.851	3.561	3.973	4.489	5.090	5.395
Government	N	404	403	403	405	405	399	405
	Std. Dev.	1.501	1.771	1.950	1.708	1.774	1.677	1.717
Health	Mean	2.494	3.511	3.403	3.860	4.285	5.441	4.981
Services	N	967	964	968	967	963	957	961
	Std. Dev.	1.467	1.964	2.048	1.739	1.732	1.566	1.826
Service	Mean	2.809	3.259	3.299	3.854	4.274	5.383	5.055
Industry	N	848	852	854	848	853	846	852
	Std. Dev.	1.573	1.956	1.993	1.711	1.753	1.649	1.844
	Mean	2.670	3.234	3.422	3.905	4.193	5.306	5.210
Other	N	673	675	671	666	668	666	668
	Std. Dev.	1.555	1.984	1.989	1.701	1.765	1.595	1.820
Non-	Mean	2.647	3.143	3.419	4.007	4.272	5.293	5.170
ENRS	N	5851	5857	5853	5842	5850	5802	5840
	Std. Dev.	1.532	1.899	2.012	1.729	1.765	1.623	1.799

Experiences

Overall, the Experience cluster has the lowest mean standard deviation (1.5209) of the seven cluster and the core skills. The rank order for each field is the same except for the Service Industry, which instead ranks leadership and teamwork two and three respectively. However, as

previously shown and discussed in Table 2: Significant Difference Count as Compared to ENRS, the ENRS have the most significant differences in this cluster.

ENRS significantly place the second highest ranking of the fields on related work experience, significantly more than Agricultural Services, the Service Industry, and Other fields. Human and Animal Medicinal and Health Services, however, value this characteristic more than all other fields and significantly more than ENRS. (Table 11: Experience Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 12: Experience Characteristics' Mean, Sample Size, and Standard Error). Though placing the second highest emphasis on Teamwork, ENRS value this characteristic significantly more than the Service Industry. Leadership is valued significantly less by the ENRS in comparison to all fields except the Government. ENRS value project management less than Agricultural Services and Product Creation. Similar to the leadership characteristic, ENRS place the second highest emphasis on cross disciplinary experience, significantly more than all fields except the Government. Community engagement earns significantly higher priority for the ENRS than Agricultural Services, but a significantly lower priority than Education, Human and Animal Medicinal and Health Services, the Service Industry, and Other fields. Lastly, ENRS place more emphasis on international experience than Government and less than Other fields.

Table 11: Experience Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.002	0.541	0.000	0.000	0.001	0.000	0.656
	Wald	9.934	0.374	31.777	21.061	11.198	16.070	0.198
	Std. Err	0.076	0.073	0.073	0.073	0.073	0.074	0.083
Education	Sig	0.186	0.137	0.000	0.203	0.018	0.049	0.998
	Wald	1.747	2.206	13.459	1.617	5.564	3.861	0.000

Table 11
(cont'd)

	Std. Err	0.077	0.073	0.073	0.073	0.073	0.074	0.083
Product Creation	Sig	0.246	0.253	0.000	0.005	0.000	0.088	0.351
	Wald	1.345	1.309	15.164	7.833	13.027	2.911	0.871
	Std. Err	0.121	0.117	0.116	0.116	0.116	0.117	0.135
Government	Sig	0.108	0.831	0.437	0.575	0.556	0.510	0.012
	Wald	2.577	0.046	0.605	0.315	0.346	0.433	6.343
	Std. Err	0.107	0.103	0.102	0.102	0.102	0.103	0.122
Health Services	Sig	0.033	0.186	0.000	0.101	0.000	0.021	0.774
	Wald	4.572	1.746	14.995	2.682	35.226	5.332	0.082
	Std. Err	0.084	0.079	0.078	0.078	0.078	0.079	0.089
Service Industry	Sig	0.003	0.041	0.000	0.085	0.000	0.005	0.220
	Wald	8.684	4.161	84.135	2.966	72.468	7.754	1.502
	Std. Err	0.084	0.081	0.081	0.080	0.081	0.081	0.091
Other	Sig	0.002	0.400	0.011	0.303	0.000	0.021	0.004
	Wald	9.664	0.709	6.448	1.059	18.415	5.353	8.244
	Std. Err	0.090	0.086	0.086	0.085	0.086	0.087	0.095

significant ENRS LOWER PRIORITY than comparison field

significant ENRS HIGHER PRIORITY than comparison field

Table 12: Experience Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	2.195	2.768	3.380	3.917	4.088	5.165	6.217
	N	997	995	994	991	994	997	1003
	Std. Dev.	1.568	1.459	1.491	1.668	1.652	1.434	1.371
Ag. Services	Mean	2.383	2.783	3.040	3.607	4.324	5.400	6.242
	N	1432	1408	1398	1413	1422	1405	1433
	Std. Dev.	1.636	1.409	1.523	1.610	1.571	1.362	1.269
Education	Mean	2.296	2.879	3.161	3.992	4.238	5.028	6.251
	N	1419	1417	1414	1717	1412	1407	1428
	Std. Dev.	1.652	1.546	1.526	1.628	1.667	1.521	1.270
Product Creation	Mean	2.323	2.841	3.007	3.604	4.483	5.298	6.306
	N	307	301	306	303	302	309	307
	Std. Dev.	1.666	1.393	1.500	1.549	1.500	1.449	1.290
Government	Mean	2.309	2.775	3.310	3.955	4.012	5.088	6.351
	N	424	427	429	420	424	423	428
	Std. Dev.	1.556	1.446	1.545	1.616	1.642	1.507	1.309

Table 12 (cont'd)

Health Services	Mean	2.036	2.848	3.116	4.025	4.507	4.995	6.256
	N	1044	1038	1032	1031	1036	1031	1056
	Std. Dev.	1.468	1.455	1.462	1.553	1.622	1.532	1.293
Service Industry	Mean	2.422	2.891	2.774	3.777	4.714	4.944	6.162
	N	930	935	939	928	931	933	955
	Std. Dev.	1.696	1.464	1.474	1.555	1.558	1.593	1.374
Other	Mean	2.463	2.763	3.203	3.989	4.505	4.974	6.024
	N	726	747	730	745	733	731	744
	Std. Dev.	1.745	1.593	1.532	1.628	1.697	1.560	1.515
Non-ENRS	Mean	2.313	2.831	3.076	3.857	4.388	5.105	6.219
	N	6282	6273	6248	6257	6260	6239	6351
	Std. Dev.	1.636	1.481	1.514	1.605	1.626	1.509	1.326

Teamwork

ENRS rank being productive more than the Service Industry and punctuality more than Education. Agricultural Services, Health Services, and Service Industry rank positive attitude significantly higher than ENRS (Table 13: Teamwork Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 14: Teamwork Characteristics' Mean, Sample Size, and Standard Error). Accountability is more important with ENRS than Education and working with multiple approaches than Health Services and Service Industry. Sharing ideas with multiple audiences ranks higher with the Service Industry than ENRS. ENRS place less emphasis on diversity than Education, Health Services, and Other fields but more than Product Creation.

Table 13: Teamwork Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.361	0.114	0.001	0.850	0.526	0.196	0.058
	Wald	0.836	2.501	10.630	0.036	0.403	1.676	3.604

Table 13
(cont'd)

	Std. Err.	0.074	0.074	0.074	0.073	0.073	0.075	0.077
	Sig	0.310	0.042	0.607	0.001	0.483	0.092	0.000
Education	Wald	1.032	4.150	0.264	11.364	0.491	2.847	19.402
	Std. Err.	0.074	0.074	0.073	0.073	0.074	0.075	0.076
Product	Sig	0.784	0.524	0.598	0.960	0.495	0.103	0.018
Creation	Wald	0.075	0.406	0.278	0.003	0.467	2.656	5.643
	Std. Err.	0.119	0.118	0.118	0.117	0.117	0.120	0.125
	Sig	0.778	0.705	0.493	0.844	0.847	0.082	0.523
Government	Wald	0.080	0.144	0.470	0.039	0.037	3.022	0.408
	Std. Err.	0.104	0.102	0.102	0.102	0.102	0.104	0.107
Health	Sig	0.232	0.598	0.020	0.458	0.028	0.077	0.014
Services	Wald	1.427	0.279	5.379	0.550	4.824	3.127	6.011
	Std. Err.	0.080	0.079	0.079	0.079	0.079	0.080	0.081
Service	Sig	0.006	0.538	0.036	0.913	0.021	0.034	0.445
Industry	Wald	7.622	0.378	4.392	0.012	5.286	4.487	0.583
	Std. Err.	0.082	0.081	0.081	0.081	0.081	0.082	0.084
	Sig	0.520	0.256	0.988	0.381	0.285	0.371	0.001
Other	Wald	0.410	1.292	0.000	0.767	1.142	0.801	10.384
	Std. Err.	0.087	0.086	0.086	0.086	0.086	0.088	0.089

significant ENRS LOWER PRIORITY than comparison field
significant ENRS HIGHER PRIORITY than comparison field

Table 14: Teamwork Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	2.549	2.885	3.208	3.507	4.403	5.565	5.722
	N	974	977	972	984	967	979	979
	Std. Dev.	1.566	1.541	1.777	1.574	1.745	1.442	1.595
Ag.	Mean	2.583	2.982	2.979	3.503	4.453	5.467	5.878
Services	N	1406	1405	1400	1396	1405	1401	1390
	Std. Dev.	1.517	1.537	1.765	1.594	1.715	1.515	1.453
	Mean	2.621	3.076	3.176	3.755	4.446	5.398	5.445
Education	N	1402	1403	1406	1398	1388	1396	1409
	Std. Dev.	1.602	1.728	1.788	1.684	1.800	1.622	1.680
Product	Mean	2.560	2.856	3.141	3.493	4.507	5.415	5.931
Creation	N	293	292	290	292	292	287	291
	Std. Dev.	1.531	1.625	1.730	1.604	1.645	1.467	1.505

Table 14 (cont'd)								
	Mean	2.564	2.961	3.281	3.565	4.366	5.418	5.705
Government	N	427	430	423	425	423	428	420
	Std. Dev.	1.548	1.671	1.800	1.674	1.781	1.493	1.529
Health	Mean	2.599	2.866	3.017	3.569	4.579	5.652	5.579
Services	N	1028	1027	1033	1024	1027	1024	1027
	Std. Dev.	1.506	1.592	1.720	1.636	1.691	1.444	1.610
Service	Mean	2.719	2.859	3.051	3.512	4.574	5.401	5.669
Industry	N	914	910	916	908	904	906	916
	Std. Dev.	1.555	1.589	1.705	1.659	1.759	1.539	1.615
	Mean	2.607	3.011	3.206	3.587	4.481	5.483	5.469
Other	N	726	734	729	727	725	721	729
	Std. Dev.	1.603	1.676	1.765	1.662	1.797	1.497	1.712
Non-	Mean	2.614	2.962	3.092	3.586	4.490	5.468	5.641
ENRS	N	6196	6201	6197	6170	6164	6163	6184
	Std. Dev.	1.553	1.630	1.757	1.647	1.748	1.528	1.604

Professionalism

ENRS place more emphasis on effective relationships than Education but less than Government and Service Industry (Table 15: Professionalism Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 16: Professionalism Characteristics' Mean, Sample Size, and Standard Error). ENRS also place more emphasis on accepting critique than Agricultural Services and Service Industry. Trustworthiness is more important with Agricultural Services, Education, Health Services, and Service Industry than the ENRS. ENRS rank the mentor relationship higher than Government and Product Creation and dealing with ambiguity higher than Agricultural Services and Health Services.

Table 15: Professionalism Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.792	0.041	0.021	0.767	0.660	0.675	0.028
	Wald	0.070	4.178	5.305	0.087	0.194	0.176	4.821
	Std. Err.	0.076	0.075	0.075	0.075	0.076	0.076	0.076
Education	Sig	0.006	0.828	0.000	0.636	0.711	0.193	0.075
	Wald	7.473	0.047	15.344	0.224	0.137	1.696	3.175
	Std. Err.	0.076	0.076	0.076	0.075	0.076	0.076	0.076
Product Creation	Sig	0.214	0.065	0.998	0.492	0.368	0.015	0.440
	Wald	1.545	3.415	0.000	0.473	0.809	5.869	0.596
	Std. Err.	0.124	0.122	0.122	0.122	0.123	0.076	0.123
Government	Sig	0.014	0.446	0.058	0.145	0.423	0.000	0.532
	Wald	5.999	0.580	3.594	2.119	0.643	14.595	0.390
	Std. Err.	0.106	0.105	0.105	0.104	0.105	0.106	0.105
Health Services	Sig	0.728	0.130	0.002	0.272	0.077	0.092	0.000
	Wald	0.121	2.289	9.149	1.206	3.137	2.833	20.001
	Std. Err.	0.082	0.081	0.081	0.081	0.081	0.082	0.082
Service Industry	Sig	0.000	0.000	0.000	0.075	0.825	0.079	0.051
	Wald	19.181	16.977	27.437	3.165	0.049	3.090	3.808
	Std. Err.	0.086	0.084	0.084	0.084	0.084	0.084	0.085
Other	Sig	0.302	0.315	0.516	0.141	0.469	0.066	0.965
	Wald	1.066	1.009	0.421	2.171	0.525	3.382	0.002
	Std. Err.	0.091	0.090	0.090	0.089	0.090	0.090	0.090

significant ENRS LOWER PRIORITY than comparison field

significant ENRS HIGHER PRIORITY than comparison field

Table 16: Professionalism Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	2.873	3.419	3.496	3.786	4.727	4.730	4.906
	N	913	912	909	915	908	911	906
	Std. Dev.	1.848	1.780	1.861	1.993	1.860	1.855	1.817
Ag.	Mean	2.848	3.553	3.302	3.763	4.696	4.758	5.061
Services	N	1349	1351	1343	1348	1334	1336	1335
	Std. Dev.	1.830	1.726	1.782	2.006	1.853	1.865	1.814
	Mean	3.085	3.421	3.197	3.828	4.770	4.625	5.040
Education	N	1325	1323	1319	1325	1318	1321	1312
	Std. Dev.	1.907	1.750	1.835	2.016	1.807	1.877	1.795
Product	Mean	2.678	3.647	3.491	3.681	4.597	5.015	4.808
Creation	N	267	266	267	266	263	264	266
	Std. Dev.	1.717	1.821	1.858	1.905	1.941	1.837	1.834
	Mean	2.625	3.479	3.276	3.958	4.656	5.136	4.837
Government	N	408	407	406	406	407	405	405
	Std. Dev.	1.769	1.707	1.779	2.001	1.804	1.773	1.732
Health	Mean	2.805	3.524	3.225	3.686	4.574	4.885	5.270
Services	N	957	960	957	957	952	9554	946
	Std. Dev.	1.739	1.761	1.765	1.987	1.897	1.791	1.716
Service	Mean	2.450	3.750	3.038	3.956	4.767	4.901	5.073
Industry	N	835	835	835	831	831	835	831
	Std. Dev.	1.589	1.766	1.769	1.949	1.778	1.775	1.782
	Mean	2.753	3.491	3.433	3.634	4.796	4.911	4.883
Other	N	661	658	660	664	662	659	656
	Std. Dev.	1.769	1.712	1.849	1.957	1.843	1.794	1.892
Non-	Mean	2.804	3.538	3.249	3.788	4.707	4.825	5.045
ENRS	N	5802	5800	5787	5797	5767	5774	5751
	Std. Dev.	1.795	1.747	1.804	1.989	1.840	1.832	1.804

Leadership

ENRS rank seeing the "big picture" higher than Education, Service Industry, and Other fields but rank dealing with conflict less than Government (Table 17: Leadership Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS; Table 18: Leadership Characteristics' Mean, Sample Size, and Standard Error). ENRS rank recognizing when to lead and when to follow as second and dealing with conflict third, while Non-ENRS rank them conversely. Respecting contributions is more important with the ENRS than Service Industry and motivating and leading more than Government, Health Services, and Product Creation. Leading others ranks fifth with ENRS and building professional relationships sixth, while the Non-ENRS rank the aforementioned skills conversely. As such, Agricultural Services and Government rank professional relationships higher than ENRS while the ENRS place more value on it than the Service Industry. Lastly, ENRS rank recognizing change and leading the change effort significantly lower than all fields except Government and the Other fields.

Table 17: Leadership Characteristics' Significant Differences, Wald Statistic, and Standard Error as Compared to the ENRS

Characteristic:		1	2	3	4	5	6	7
Ag. Services	Sig	0.915	0.174	0.154	0.258	0.882	0.046	0.009
	Wald	0.011	1.846	2.033	1.282	0.022	3.993	6.854
	Std. Err.	0.075	0.074	0.074	0.074	0.074	0.074	0.075
Education	Sig	0.004	0.702	0.264	0.643	0.732	0.324	0.015
	Wald	8.273	0.147	1.248	0.215	0.117	0.974	5.893
	Std. Err.	0.075	0.074	0.074	0.074	0.074	0.074	0.075
Product Creation	Sig	0.295	0.755	0.574	0.166	0.023	0.101	0.003
	Wald	1.096	0.098	0.316	1.916	5.203	2.696	8.751
	Std. Err.	0.121	0.120	0.120	0.120	0.120	0.120	0.121
Government	Sig	0.082	0.167	0.030	0.670	0.007	0.030	0.686
	Wald	3.018	1.909	4.731	0.181	7.275	4.715	0.164
	Std. Err.	0.104	0.103	0.103	0.103	0.104	0.103	0.105
Health Services	Sig	0.234	0.999	0.496	0.523	0.007	0.783	0.016
	Wald	1.418	0.000	0.464	0.407	7.249	0.076	5.823

Table 17
(cont'd)

	Std. Err.	0.080	0.080	0.080	0.080	0.080	0.080	0.081
Service Industry	Sig	0.030	0.491	0.356	0.000	0.778	0.000	0.004
	Wald	4.689	0.475	0.851	14.029	0.079	24.813	8.330
	Std. Err.	0.083	0.082	0.082	0.082	0.082	0.082	0.083
Other	Sig	0.004	0.313	0.854	0.945	0.536	0.445	0.098
	Wald	8.229	1.019	0.034	0.005	0.382	0.583	2.733
	Std. Err.	0.088	0.088	0.088	0.088	0.088	0.088	0.089

significant ENRS LOWER PRIORITY than comparison field
significant ENRS HIGHER PRIORITY than comparison field

Table 18: Leadership Characteristics' Mean, Sample Size, and Standard Error

Characteristic:		1	2	3	4	5	6	7
ENRS	Mean	3.109	3.361	3.784	3.866	4.291	4.334	5.199
	N	948	949	948	946	933	948	943
	Std. Dev.	1.989	1.938	1.709	1.807	1.896	2.092	1.800
Ag. Services	Mean	3.114	3.493	3.895	3.944	4.275	4.158	5.014
	N	1378	1380	1376	1380	1366	1372	1374
	Std. Dev.	2.047	2.007	1.728	1.748	1.921	2.047	1.819
Education	Mean	3.347	3.351	3.864	3.827	4.307	4.250	4.996
	N	1359	1362	1355	1359	1360	1358	1356
	Std. Dev.	2.018	1.999	1.730	1.784	1.965	2.055	1.902
Product Creation	Mean	3.252	3.426	3.714	4.033	4.586	4.098	4.826
	N	274	275	276	274	275	276	275
	Std. Dev.	2.052	2.010	1.663	1.820	1.900	2.137	1.910
Government	Mean	3.293	3.236	3.572	3.814	4.593	4.064	5.291
	N	416	416	416	419	415	421	416
	Std. Dev.	1.971	2.002	1.710	1.767	1.891	2.062	1.686
Health Services	Mean	3.214	3.370	3.737	3.805	4.518	4.307	5.006
	N	996	996	987	990	985	989	984
	Std. Dev.	2.021	1.958	1.751	1.732	1.925	2.098	1.846
Service Industry	Mean	3.307	3.440	3.866	4.171	4.301	3.845	4.975
	N	873	875	877	875	878	875	876
	Std. Dev.	2.039	1.991	1.697	1.831	1.982	2.123	1.830
Other	Mean	3.343	3.293	3.759	3.855	4.341	4.251	5.054
	N	694	694	692	688	690	689	688

Table 18 (cont'd)	Std. Dev.	1.991	2.016	1.676	1.817	1.955	2.104	1.846
Non-ENRS	Mean	3.260	3.388	3.811	3.912	4.370	4.159	5.018
	N	5990	5998	5979	5985	5969	5980	5969
	Std. Dev.	2.025	1.996	1.719	1.782	1.944	2.099	1.844

CHAPTER 5: DISCUSSION

Core Skills

ENRS rank the core skills in the same order as the mean of all Non-ENRS rankings. Both ENRS and non-ENRS put a priority on the base clusters of communication, decision-making/problem-solving, and self-management instead of the advanced clusters such as professionalism and leadership. Seventy-five percent of employers within the ENRS rank Communication within the top three core skills, and none of the employers rank Communication as the least important skill cluster. Regardless of field, a priority of resource allocation can promote communication, decision making, and self-management.

With the second largest range between the most and least prioritized core skills and the second lowest mean standard deviation of the eight fields, the ENRS have a clear delineation of prioritized skills. The ENRS field however, does not delineate between the top two core skills [Communication and Decision-making/Problem-solving (DMPS)] as much as the other eight fields. ENRS place a significant higher emphasis on DMPS than six of the seven other fields. As such, students must be able to eloquently and intelligently write and speak about their critical thinking skills throughout each academic exercise.

The employers within ENRS rank the DMPS as a critical cluster fourth (See Appendix C: Significant Differences of ENRS Stakeholders) (Table 19: ENRS Significant Differences Among the Stakeholders – Core Skills). Faculty and alum value DMPS significantly higher than students and employers. ENRS Faculty may want to emphasize critical thinking in the classroom, as research in college curriculums suggest (Arum and Roksa, 2011), but may face pushback from students who do not value this skill as much and may not experience it during their internship experiences. Undergraduate work experiences under senior level guidance instead may

emphasize Communication, Self-Management, and Teamwork while working with middle management may experience an emphasis of DMPS, Communication, and Self-Management (the rank order of top three core skills by ENRS alum).

The ENRS places the second highest emphasis, of the eight fields, on Experiences (the fourth ranked core skill), significantly differing from Agricultural Services, the Service Industry, and the Other fields. However, experiences, with the highest standard deviation of the seven clusters, is a polarizing cluster for the ENRS as 20.6% say it is the most important, while 17.7% say it is the least important. This could reflect either the great difference in quality of the student experiences or a great difference in the student's ability to communicate their experiences and transfer their learning into their new employment.

Students within the ENRS place a significantly higher emphasis on Experiences as a core skill than faculty, employers, and alum. If students remain motivated to find new experiences, faculty can help to better incorporate the outside learning experiences into the curriculum design. This includes a connection between internship experience (such as construction/engineering, design details, budgeting) and the exercises in the classroom, thus enhancing a well-thought through design. Experiences outside of the classroom for students in design professions may include helping to grade assignments in other classes, working in professional student organizations, and participating (under faculty guidance) in authentic design/planning projects with budgets, clients, and zoning restrictions.

The ENRS places the least emphasis on Leadership (the sixth ranked core skill) of the eight fields, significantly differing from all but the Government. Most professional firms within the ENRS cluster have a clear hierarchy of job titles, from designer through project manager and associate. The entry level employees are not selected for their leadership qualities, but can

develop these skills overtime with a firm or organization. ENRS faculty place the least emphasis on Leadership of the four stakeholder groups, though not significantly less than the employers. Possibly creating tension in the classroom and the office, students significantly emphasize Leadership more than the faculty and the alum.

Communication – The Highest Ranked Core Skill

Listening effectively and the ability to communicate accurately and concisely are the top two skills for each field, though only three of the eight (including ENRS) rank listening as number one. With an average range of .07 between the two characteristics' means, one of these skills may easily become the most important with any individual, regardless of discipline. Of the ENRS stakeholders, employers' ranking has the greatest difference between listening and accurate and concise. The close mean ranking for the ENRS and Non-ENRS fields may indicate the relatively few significant differences in the top ranked characteristics as compared to the characteristics on the opposite spectrum.

Across all fields, oral communication outranks written communication. ENRS place the second least emphasis on oral communication and the second highest emphasis on writing skills of the eight fields. This indicates the importance of technical writing to accurately explain construction drawings as well as the design as a whole. The faculty is the only ENRS stakeholder to rank written over oral, while students have the greatest difference between the two means (Table 20: ENRS Significant Differences Among the Stakeholders – Communication Skills). Frustration may exist in classrooms with faculty over-prioritizing written communication. Regardless, each skill has value for an entry level employee and should begin in the classroom. Other research shows a general trend towards less prepared recent graduates in oral AND written communication (Stevens, 2004).

Asking good questions and using social media are the least prioritized characteristics of the cluster, regardless of the field. Landscape Architects, however, asking rank good questions as more important than six of the other seven fields, significantly differing from five. Asking questions is a foundational component of the design process and may impact the increased importance. Given the breadth of Landscape Architecture as field, universities cannot teach every skill needed but can teach their graduates how to understand what they do not know and how to find solutions.

Decision-Making/Problem-Solving – The Second Ranked Core Cluster

The top four characteristics (identify and analyze problems, take effective and appropriate action, transfer knowledge from one situation to another, and realize the effect of decisions) are inherent in the basic design process. Designers, regardless of specific discipline, must begin with inventory analysis, proceed to use this information to make decisions, bring in past experiences and experts from other fields, and understand the future impact. The few significant differences in these four characteristics, as compared to the next three, indicate a universal process for entry level employees to master these basic skills.

Creative and innovative solutions spikes in popularity against the other Fields as the ENRS rank it with significant greater importance than the Product Manufacturers, Government, and Health Services. As artistically inclined people, ENRS push for functional creativity in the work place. Engaging in life-long learning is not as highly ranked with ENRS. This may reflect a higher priority on the creative solutions, or an assumption that entry level Landscape Architects will continue professional education to earn their license. ENRS put the highest importance on the ability to think abstractly in comparison to the other Fields, again proving that working and thinking outside of the box sets ENRS apart from the other fields.

Seven of the eight significant differences based on ENRS stakeholder ranking occur between the student and another stakeholder. Overall, employers find the mid ground in ranking as they do not have significant differences with any group (Table 21: ENRS Significant Differences Among the Stakeholders – Decision-making/Problem-Solving Skills). The future graduates should meet the average implicit needs of employers and work well with the mid-level employees (alum). The physical classroom environment can introduce creativity in the classroom by immersing students in the environment in which they will work, as Doyle, 2011, suggests for enhanced authentic learning.

Self-Management – The Third Ranked Core Skill

ENRS place the highest value on the efficiency and effectiveness characteristic of the eight fields. Of the seven characteristics, it has the lowest standard deviation, indicating the highest assurance of its ranking. Employers and faculty place the highest value on this skill, indicating that it can be implemented during internship or classroom experiences (Table 19: ENRS Significant Differences Among the Stakeholders – Self-Management Skills). No matter the learning environment, the bosses can teach the best processes to assemble and implement professional documents without the need for continued review. This includes teaching students to plan ahead to write term projects, creating assignments that can feed into the term projects, and assuring the students complete each portion of the term project to meet high standards that they do not need to redo them when the final is due. Faculty and employers should expose students to professional documents, including formal letterheads through to a complete and professional product.

Architects and engineers, under risk of losing a professional license, need their products done well, while the time-management characteristics (work well under pressure and sense of

urgency to address and complete tasks) rank further down the list as the fourth and fifth most important characteristics respectively. ENRS put the second least stress to work under pressure of the eight fields, significantly less than Health Services, Service Industry, and Other fields. Though it is the sixth ranked characteristic, adapt and apply appropriate technology is significantly more important for the ENRS than five of the other Fields. As new technologies emerge with more advanced features, ENRS expect their young hires to efficiently use the correct software for design, sales, and reports. Students in ENRS majors, compared to most fields, must learn to use multiple types of technology, keep up with software advancements, and know when to use which tool so as best complete the project. Faculty and employers rank this characteristic higher, though not significantly, than the compared stakeholders; entry level employees, raised in the age of computers, can easier adapt to technology and assist the senior level employees.

Experiences – The Fourth Ranked Core Skill

Overall, ENRS significantly differ from Agricultural Services, Service Industry, and Other fields for five of the seven skill characteristics. These three of seven field comparisons account for 58% of all differences within the cluster. Two key characteristics within the cluster include placing higher emphasis on cross disciplinary experience than six of the seven fields and less emphasis on leadership than six of the seven fields. As ranking suggest, recent graduates must be able to lead, but the ENRS should also be able to appreciate, communicate, and work with other professions. Landscape Architects (one discipline within the field), as the 2013 Labor Statistics indicate, will work with architects, builders, designers, artists, engineers, foresters, horticulturalists, planners, ecologists, and soil scientists and must come into their entry level employment having previous interacted with these professionals. Similarly to leadership, ENRS

place significantly less emphasis on project management than two of the fields, indicating less emphasis within this field for senior level tasks. As licensure increases across the nation for the ENRS fields, leadership qualities among entry level employees may grow as more important characteristic.

Related work or internship experience is the most important characteristic among all eight Fields, but ENRS put significantly more importance on it than the Agricultural Services, the Service Industry, and Other fields but less than Health Services. While the recent American recession could have impacted the value of internships, every field as well as the students, faculty, alum, and employers within the ENRS rank this characteristic first (Table 20 ENRS Significant Differences Among the Stakeholders – Experiences). With a general agreement among the ENRS stakeholders, employers and faculty can help bridge the learning environments in the classroom and the office.

International experience ranks last with every field, and ENRS is in the middle of the Fields' means. During international experience, students in design professions can expand their horizons but, as research indicates, do not articulate these skills (Gardner, et al, 2008). Instead, employers during the 2011 APLU Summit, discussed that students only grow personally during their study abroad and not professionally. An employer from the CASS Report (2011) writes "I would like to see more students who are able to tell me what the experience taught them and how it would make them a better fit for my company and the role they are pursuing." Authentic reflection, according to Doyle (2011) may include reports, portfolios, concept mapping, and evaluations of each other and of oneself.

Teamwork – The Fifth Ranked Core Skill

Ten of the thirteen significant differences among the ENRS and the other Fields are among Education, Health Services, and Service Industry (nearly 25% of all differences occur with the Service Industry).

Each Field ranks productive as a team member and punctual and meets deadlines as the most important characteristics. The design professions, however, place a stronger emphasis than all other fields on being a productive team member, significantly more than the Service Industry. Entry level employees will be expected to bring their skills to a team and complete their assignment on time. These recent graduates will not be master of all skills, but having a strong sense of self-awareness will enable them to bring their attributes to the table. Research indicates that students often overestimate their own abilities when transitioning skills in the classroom to a professional atmosphere (Ambrose, et al., 2010). Kalantzis, et al., (2005, p.93-94) suggest group assessments for the individual to better understand the group dynamics and the skills needed and accomplished for a project.

Designers place much less importance on the attitude of the employee. While this characteristic is still the third most important among the ENRS, more emphasis is placed on the quality of the work.

Similarly to stressing cross disciplinary experiences, working with multiple approaches ranks higher compared to all other fields except for the Government. Entry level employees within ENRS will be expected to think differently and evolve design ideas from abstract concepts to construction details. The relatively low value for sharing ideas to multiple audiences demonstrates that entry level employees may work on multiple types of projects but may not present the finished product until more seasoned.

The most differences for this cluster occur with the sensitivity to diversity as the ENRS undervalue this characteristic for three of the four significant differences. Unsurprisingly, Education and ENRS have the greatest significant difference as educators must work with students and parents from all backgrounds. The Non-ENRS value sensitivity more as historically architecture and most related professions are male dominated fields. This further demonstrates the trend among the ENRS that the quality of the product and the job-specific soft skills take precedent over the personal relationship characteristics of entry level employees.

Effective teamwork activities can be difficult to instill in the classroom, as students will have a variety of motivational levels. As a quote from the CASS report (Crawford, et al., 2011b) demonstrates, students and alum reflect that many teamwork activities allow the weakest members to rely upon the stronger members. The stronger members must work harder for equal grading and learn that independent work better befits their talents. On a positive note students can learn to work with varying personalities and adaptations during their extracurricular activities and value experiences with other disciplines (Table 21 ENRS Significant Differences Among the Stakeholders – Teamwork Skills).

Professionalism – The Sixth Ranked Core Skill

Though effective relationships with the customers, businesses, and the public is the most important Professionalism characteristic, ENRS place the second least importance on it among the eight fields. This further demonstrates that entry level employees will work in house with various disciplines, but not sell the final product. Instead, the ENRS place more emphasis on accepting and applying critique, further stressing the need for a quality product. Less emphasis is placed on trustworthy, indicating that entry level employees may not work with confidential client documents and should direct their attention to the quality of the product. As the ENRS

have the placed the second most emphasis on mentors, the new hires have a better chance of finding a mentor than in other field types. However, the ability to work with the mentor is a low ranked characteristic, indicating that entry level employees must be able to self-manage and produce quality work without depending on the senior level employees. Overall, ENRS tend to rank in the middle of the eight Fields and have a small gap between the most and least important characteristics, demonstrating ambiguity in the field. Similarly, the ENRS stakeholders contain relatively few significant differences (Table 22 ENRS Significant Differences Among the Stakeholders – Professionalism Skills). A general education for professionalism allows great fluidity for success in professions.

Leadership – The Seventh Ranked Core Skill

More than most employment fields, designers must understand relationships between spaces, from long term planning and neighborhood scales to site details. Most fields rank seeing the big picture as the most important characteristic, but ENRS significantly rank it higher than three of the seven fields. Entry level employees should quickly master the office organization while thinking strategically on site and at the desk. In contrast, most fields rank leading the change effort as the last characteristic, and ENRS emphasize it significantly less than five of the seven fields. Understanding when to lead and follow ranks as the second most important characteristic, indicating that entry level employees may lead in certain situations. The ENRS field does not want the entry level employees to change the structure and processes of the office. This characteristic can develop over time as one progresses to project manager and associate levels.

Faculty place significant more emphasis on the seeing the "big picture," a critical thinking skill (Table 23 ENRS Significant Differences Among the Stakeholders – Leadership).

This shift towards the first characteristic allows students to value the second characteristic (recognizing when to lead and when to follow) more than faculty, though not significantly. With the exception of characteristic two, the students place significantly more value than faculty on skills that specifically mention leading. Students will push for leadership opportunities, possibly overstepping boundaries, but can channel this motivation into student organizations. Faculty can foster a positive student attitude by listening to input for curriculum and course projects, thus following the suggestions of Weinstein and Novodvorski's for an effective classroom.

Implications

Today's global market places ever-increasing demands on our future work force, and student must develop these vital skills to emerge as productive members in the 21st century. There remains a fear that recent graduates and current students have not learned these skills and have not learned to implement them in their field (Bolman and Gallos, 2011; Bok, 2006; Gardner, et al., 2008). This study quantifies the priorities of different Fields in Agriculture and Natural Resources to help bridge misunderstandings and guide improvement. Environmental and Natural Resource Specialists have a distinct set of soft skill priorities for new graduates entering the work force. Both the faculty and employers have an obligation to instill these skills in the entry level employees through multi-dimensional projects and assignments, experiential training during internships, and helping students connect the professional to the academic world. Students and recent graduates have an obligation to remain open to alternative training methods and authentically reflecting on their learning experience.

The ENRS respondents rank order of soft skills is: Communication, Decision-making/Problem-solving, Self-management, Experiences, Teamwork, Professionalism, and Leadership. The employers within the field rank the core skills as Communication, Self-

Management, Teamwork, Decision-making/Problem-solving, Experiences, Professionalism, and Leadership. Overall, ENRS most greatly differ from the Human and Animal Medicinal and Health Services and the Service Industry, encompassing over 40% of all differences. The classroom environment can involve conflict as the students constitute nearly 1/3 of all differences among the four stakeholders, while student-faculty comparisons contain the most significant differences (26 of the 99 total stakeholder differences). The two most emphasized characteristics (as compared to other fields) include adapting and applying technology and cross-disciplinary experience while the least emphasized characteristics include leadership, leading the change effort, a pleasant and professional attitude, and trustworthy with sensitive information. While some of these skills may not be emphasized as much as others, each characteristic was chosen from the literature as important components for success in the work force.

The findings can inform educational curriculum to match soft skill training with the professional path of their students. While there is much in common, and ALL of the soft skills are important, the priority rankings can aide in where to focus limited resources. The final solution will be a combined education, industry and individual effort.

Limitations

The study faces limitations stemming from the original data collection. As each university emailed the link to their list-serves, many of the employer links spread through word of mouth. As such, the employer response rate is impossible to determine. Furthermore, the demographic of the employer could influence their rank as they may serve as middle or upper management. The list-serves were also sent through Colleges of Agriculture and Natural Resources, while many of the design and construction disciplines remain in colleges based in planning or design. The Other field proposes limitations as the employment demographics of

such respondents are unknown. These respondents may be a true anomaly, as the survey allowed for an "Other" option, but those who left the demographic absent could have incorrectly answered the survey.

While the hypothesis that ENRS will have significantly different priorities is accepted, the ENRS do not significantly differ from the seven other fields in all characteristics. As such, this study accepts the Type I error. The null hypothesis is true for skills and compared fields without significant differences. Furthermore, a high Wald Statistic, as shown in the tables above indicates the possibility of a Type II error. As one narrows the parameters of the study (e.g. analyzing only ENRS students instead of all students, or further limiting to only female or male students with the ENRS instead of all ENRS students), the likelihood of significant differences without error increases (R value decreasing).

Future Study

Future work may include finding correlations of priorities so that students may take the most effective interdisciplinary elective courses and faculty of elective courses can adjust their learning objectives for each class depending on their student population. Each of the remaining six named fields will also contain significant differences and correlations as compared to the other fields and can help a multitude of students and faculty to direct curriculum, syllabi, and learning for key soft skills. While this study runs tests for differences among ENRS stakeholders to better interpret and understand field differences, a study is needed to further dissect and discuss ENRS significant differences and correlations among the four stakeholders (ENRS students, faculty, alum, and employers).

APPENDICES

Appendix A: Fields and Their Defining Disciplines

Agricultural Services

Faculty:

Agricultural Advocacy

Agricultural Production

Agricultural Supplies and Sales

Aquaculture or Fisheries

Biotechnology

Chemical, Pesticide, or Fertilizer Manufacturing

Food Manufacturing or Sales

Food Sales

Alum:

Agricultural Advocates

Agricultural Inputs, Manufacturing, or Sales

Agricultural Production

Biotechnology

Chemical, Pesticide, or Fertilizer

Food Manufacturing, Processing, or Sales

Agricultural Advocates

Chemical, Pesticide, or Fertilizer

Faculty:

Agricultural Business and Management

Agricultural Mechanization and Engineering

Agricultural/Public Services (including Communications, Extension Education, or Agricultural Education

Food Sciences

Plant Sciences (including Agronomy, Crop Sciences, Horticulture, and Production)

Education and Knowledge Development

Employers:

Education K-12

Higher Education

Research

Alum:

Education

Research

Student:

Educator or Education Administration

Researcher

Environmental and Natural Resource Specialists

Employers

Engineering and Construction

Environmental Management or Consulting

Forestry or Forest Product Industry

Landscape Design or Landscaping

Parks, Recreation, or Golf Industries

Alum:

Design, Engineering, and Constructions

Forestry or Forest Product Industry

Parks, Recreation, or Golf Industries

Environmental Management or Consulting

Faculty:

Forestry

Natural Resources Conservation, Management, Research, or Policy

Landscape Architecture, Design, Construction, Recreation and Community Development

Related Sciences (Biological sciences, Physics, Chemistry, Geology, Earth Sciences, Geography, Biotechnology)

Wildlife Sciences and Management, Fisheries, Ecology

Student

Professional/Specialist: ecology, fisheries, forestry, landscape architecture, management research or policy, Wildlife Science and Management

Product Creation/Manufacturing

Faculty:

Apparel/Textile Manufacturing or Sales

Energy Research, Production, or Distribution

Equipment Design, Manufacturing, or Sales

IT or Software Design

Sales or Manufacturing

Transportation

Alum:

Energy Production or Distribution

Transportation

Equipment Design, Manufacturing, or Sales

IT or Software Design

Faculty:

Apparel and Textiles

Student:

IT

Owner/Operator of Small Business

Professional/Specialist: apparel and textile

Government

Employers:

Federal Government – Non-regulatory

Federal Government – Regulatory

Military

State or Local Government – Non-regulatory

State or Local Government – Regulatory

Alum:

Government – Non-regulatory

Government – Regulatory

Military

Student:

Policy

Human and Animal Medicinal and Health Services

Employers:

Animal Health or Veterinary

Human Health or Medicine

Nutrition or Dietetics

Pharmaceuticals

Alum:

Animal Health or Veterinary

Human Health or Medical

Pharmaceuticals

Faculty:

Animal Sciences

Family and Consumer Sciences

Nutrition

Student:

Professional/Specialist: Animal science, family and consumer science nutrition

Service Industry

Employers:

Financial or Banking Industry

Hospitality Management/Hotel and Restaurant Management

Legal

Management Consultants

Marketing

Media or Communications

Real Estate

Social Services / Human Services

Alum:

Financial Industry or Banking Industry

Hospitality Management / Hotel and Restaurant Management

Real Estate

Legal

Marketing, Media and Communications

Management Consultants

Real Estate

Social Services / Human Services

Student:

Communications or Public Relations

Finance

Fundraising and Development

Human Resources

Management

Marketing and Sales

Retail

Other:

Responses of “Other” and those who did not answer the demographic question

Appendix B: Soft Skill Clusters and Characteristics as Ranked the ENRS

1. COMMUNICATION SKILLS:

- Listen effectively
- Communicate accurately and concisely
- Effective oral communications
- Communicate pleasantly and professionally
- Effective written communications
- Ask good questions
- Communicate appropriately and professionally using social media

2. DECISION-MAKING / PROBLEM-SOLVING SKILLS:

- Identify and analyze problems
- Take effective and appropriate action
- Transfer knowledge across situations
- Realize the effect of decisions
- Creative and have innovative solutions
- Engage in life-long learning
- Think abstractly about problems

3. SELF-MANAGEMENT SKILLS:

- Efficient and effective work habits
- Self-starting
- Well-developed ethic, integrity and loyalty
- Work well under pressure
- Sense of urgency to complete tasks

- Adapt and apply appropriate technology
- Dedication to continued professional development

4. EXPERIENCES:

- Related work or internship experiences
- Cross disciplinary experiences
- Leadership experiences
- Teamwork experiences
- Project management experiences
- Community engagement experiences
- International experiences

5 .TEAMWORK SKILLS:

- Productive as a team member
- Punctual and meets deadlines
- Positive and encouraging attitude
- Maintains accountability to the team
- Work with multiple approaches
- Share ideas to multiple audiences
- Aware and sensitive to diversity

6. PROFESSIONALISM SKILLS:

- Effective relationships with customers, businesses and the public
- Accept critique and direction in the work place
- Trustworthy with sensitive information
- Understand role, realistic career expectations

- Maintain appropriate decor and demeanor
- Select mentor and acceptance of advice
- Deal effectively with ambiguity

7. LEADERSHIP SKILLS:

- See the “big picture” and think strategically
- Recognize when to lead and when to follow
- Recognize and deal constructively with conflict
- Respect and acknowledge others contributions
- Motivate and lead others
- Build professional relationships
- Recognize change is needed and lead the change effort

Appendix C: Significant Differences of ENRS Stakeholders

Skills ranked in this appendix do not reflect the ENRS order of core skills and characteristics but the order of the employers within the ENRS. The letter indicates the stakeholder that places higher emphasis on the skill/characteristic: S= student, F=faculty, A=alum, E=employer

Table 19: ENRS Significant Differences Among the Stakeholders - Core Skills

	Employer -Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Comm.	0.047 E					
DM/PS		0.025 E	0.043 A	0.005 F		0.013 A
Self-Manage.	0.019 E			0.000 F	0.033 F	0.003 A
Experiences	0.024 S			0.006 S		0.001 S
Teamwork	0.003 E	0.003 E	0.011 E			
Profess.	0.041 S					
Leadership				0.000 S	0.001 A	0.016 S

Table 20: ENRS Significant Differences Among the Stakeholders - Communication Skills

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Listen						
Ac&Concise						
Pleasant		0.005 E		0.000 S	0.001 A	0.002 S
Oral						
Written		0.001 F		0.000 F	0.000 F	0.000 A
Questions	0.021 E			0.000 F		0.000 A
Social	0.017 S			0.000 S		0.000 S
Media						

Table 21: ENRS Significant Differences Among the Stakeholders – Decision-making/Problem Solving Skills

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Identify				0.000 F		0.035 A
Action					0.021 A	
Effect				0.001 S		
Transfer						
Creative				0.006 F		0.032 F
Life. Learn				0.029 S		0.007
Abstract						

Table 22: ENRS Significant Differences Among the Stakeholders – Self-Management Skills

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Effective			0.028 E		0.013	0.024 S
Self-Starting	0.000 E			0.000 F		0.000 A
Ethic						
Urgency				0.025 S	0.000 A	0.001 A
Pressure	0.027 S			0.000 S	0.001 A	
Technology			0.046 E			
Prof. Devel.	0.001 S			0.000 S	0.001 F	0.000 S

Table 23: ENRS Significant Differences Among the Stakeholders - Experiences

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Work						0.014 S
Teamwork						
Leadership				0.002 S	0.026 A	
Proj. Mngmt.					0.014 A	0.000 A
Cross Disc.		0.011 F		0.000 F	0.002 F	0.004 A
Community		0.001 E	0.004 E	0.000 S		0.000 S
International	0.027 S	0.001 F		0.000 F	0.000 F	

Table 24: ENRS Significant Differences Among the Stakeholders - Teamwork Skills

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Productive						
Attitude	0.009 E					0.000 A
Accountable						
Deadlines	0.013 S		0.018 A			
Approaches					0.022 F	
Audiences						
Diversity					0.038 A	0.000 A

Table 25: ENRS Significant Differences Among the Stakeholders – Professionalism Skills

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Customers		0.026 E		0.001 S	0.000 A	0.040 A
Critique						
Role	0.001 S					
Trustworthy		0.002 F			0.003 F	0.000 S
Ambiguity				0.000 F	0.017 F	
Décor						
Mentor					0.021 F	

Table 26: ENRS Significant Differences Among the Stakeholders - Leadership Skills

	Employer-Student	Employer-Faculty	Employer-Alum	Faculty-Student	Faculty-Alum	Student-Alum
Big Picture				0.041 F		
LeadFollow						
Respect				0.000 F	0.001 F	
Conflict						
Relationships						
Motivate				0.013 S		
Lead Change				0.000 S		0.010 S

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