

**IDENTIFYING THE EMPLOYABILITY SKILLS NEEDED IN THE WORKPLACE
ACCORDING TO SUPERVISORS OF COLLEGE OF AGRICULTURE, FOOD AND
NATURAL RESOURCES GRADUATES**

J. Shane Robinson, Oklahoma State University
Bryan L. Garton, University of Missouri
Robert Terry, Jr., University of Missouri

Abstract

Graduates are entering the workforce without the necessary skills demanded in industry (Atkins, 1999; Peddle, 2000). Because of this, supervisors of College of Agriculture, Food and Natural Resources graduates at the University of Missouri were surveyed to determine the employability skills most important to their careers and the perception with which they were able to perform those skills. Supervisors perceived the three most important employability skills for graduates to possess were: “working well with others,” “functioning well in stressful situations” and their “ability to work independently.” Supervisors perceived graduates to be most competent at: “maintaining a positive attitude,” “relating well with supervisors” and their “ability to work independently.” The Borich (1980) needs assessment model revealed that 23 items could be employed to modify and enhance the existing college curriculum. The employability skills most in need of curriculum enhancement included problem solving, while the employability skills least in need of curriculum enhancement included written communications.

Introduction/Theoretical Framework

According to supervisors, graduates are entering the workforce without the skills needed for career success (Atkins, 1999; Peddle, 2000). A disparity exists in the types of skills taught at university and those that are demanded in industry (Andrews & Wooten, 2005; Askov & Gordon, 1999; Atkins, 1999; Evers, Rush, & Berdrow, 1998; Kivinen & Aloha, 1999; Kivinen & Silvennoinen, 2002; Morley, 2001; Robinson, 2000; Shivpuri & Kim, 2004). Atkins (1999) posited that “there is currently a skills gap between what employers need and what universities are producing” (p. 271). Evers et al. (1998) echoed that “the skills most in demand are least in supply” (p. 16). Specifically, the types of skills in demand include those that are transferable to a variety of situations (Billing, 2003). These transferable skills, also known as employability skills, include the ability to “solve complex, multidisciplinary problems, work successfully in teams, exhibit effective oral and written communication skills, and practice good interpersonal skills” (Schmidt, 1999, p. 31).

While it is assumed that most, if not all, companies provide employees with some form of technical training needed for fulfilling their respective jobs, far less offer training in employability skill development. Surmacz (2005) studied 1,420 informational technology companies and found that approximately half of the respondents acknowledged that they had taught some form of employability skill development to their employees. Surmacz opined that those who do provide such training are failing “because they do not improve individual comprehension, understanding, insight, or motivation” (p. 15).

Fuhrmann and Grasha (1983) concluded that colleges could better meet the needs of their students by adjusting how and what they teach. Therefore, higher education must assess its curriculum and evaluate its purpose in helping students attain employment. Shivpuri and Kim (2004) suggested that higher education should listen to the needs of its stakeholders in industry:

Although employment of their graduates is not the only goal of colleges, it is still important for college administrators and employers to strive for open channels of communication and continuous dialogue in order to recognize, discuss, and resolve these outstanding discrepancies and more effectively serve their common link: the students (p.44).

A possible reason for higher education institutions failing to address the employability skills of its students could be because college faculty have do not understand what the lacking skills are and do not possess the necessary resources to teach them (Hofstrand, 1996). While higher education faculty may not know what the lacking skills are, corporate employers do, and as such, can have an influence on the enhancement of these skills in education (Taylor, 1998). Further, corporations are willing to partner with higher education institutions in an effort to teach the necessary skills for industry success (Paulson, 2001).

Carnevale, Gainer, & Villet (1990) stated that “Employers depend on educators to provide job-ready and training-ready entry-level employees” (p. 236). Teichler (1999) concluded that higher education institutions should serve three functions when preparing students: the educational function, based on the cognitive and intellectual capabilities needed to conceive

broad knowledge; the training function, based on the competencies needed to assist students in specific, specialized work; and the socialization function, based on the “values, attitudes, social behavior and the communication skills relevant for action in socio-communicative contexts” (p. 183).

The human capital theory serves as a theoretical lens for assessing skill development in an effort to achieve success in the workplace. Kivinen and Silvennoinen (2002) stated that “for any given individual, skills are the single best source of escaping from underprivilege” (p. 53). In its purist form, human capital is an investment in the skills and knowledge of people (Swanson, 2001; van Loo and Rocco, 2004). Institutions of higher education can enhance human capital by focusing on the skill sets of its graduates (Knight & Yorke, 2003). Becker (1993) stated that education is one of “the most important investments in human capital” (p 17). A focus on human capital allows for an investment in enhancing the knowledge, skill level, and productivity of the workforce (Swanson, 2001; van Loo & Rocco, 2004).

Swanson (1994) conceptualized a Systems Model for Performance Improvement (SMPI) to serve industry personnel as they assess employees on their performance within the organization (Figure 1). The SMPI was designed to increase individual performance and productivity. The factors affecting the model consist of the environment, organization, and performance improvement of the individual within the organization. Specifically, environmental factors (i.e., economic, political, and cultural forces) are those derived from the environment that have a direct impact on the organization. Organizational factors consist of the mission and strategy of the organization, which can assist in defining the organization.

The performance improvement factor includes both inputs (i.e., graduates) and outputs (i.e., level of competency) and is designed to provide quality services to the customer by increasing productivity of the employee and maximizing financial gains of the organization. For the model to work effectively, a systematic process consisting of five phases has to be carried out. The five phases consist of: analysis, design, development, implementation, and evaluation. Attending to these five phases ensures performance of employees will be maximized to its fullest potential.

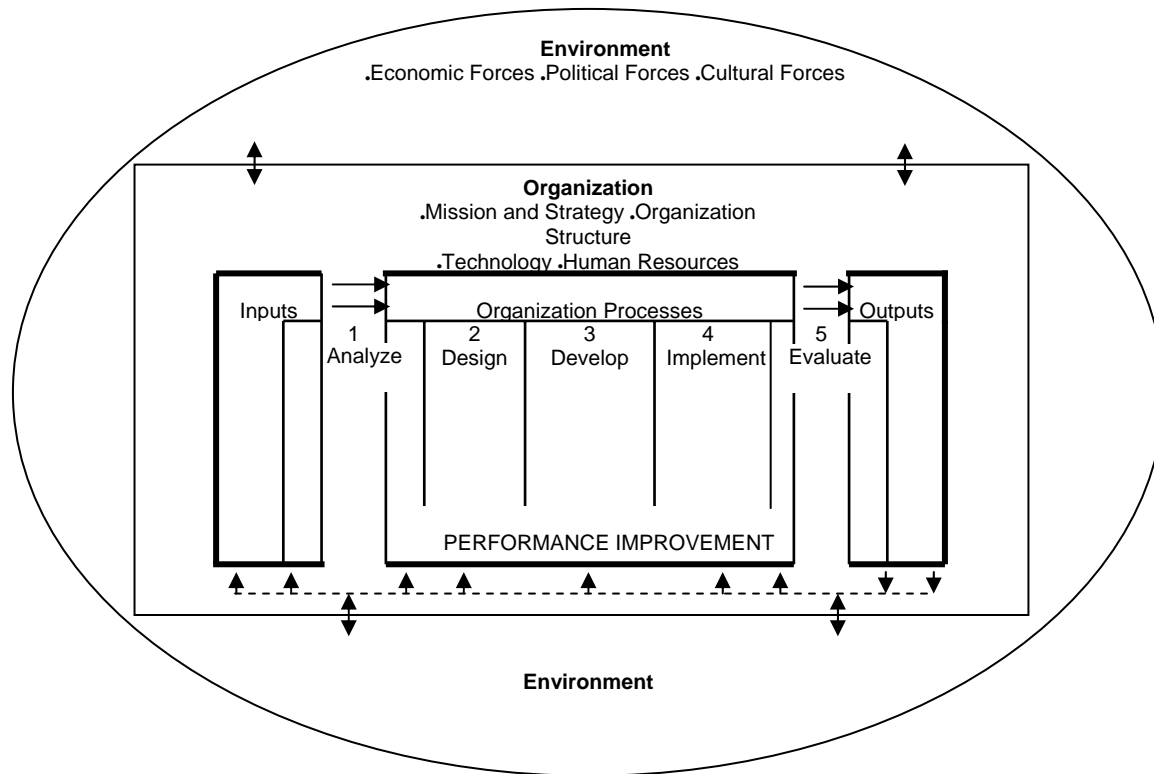


Figure 1. Swanson's (1994) Systems Model for Performance Improvement (SMPI).

According to Swanson (1994), the most critical phase to the success of an organization is the first phase (analysis). In this phase, developers and managers determine the needs of the organization based on its goals and standards. They determine what people should know and “. . . be able to do to perform in the workplace” (p. 19-20) and which actions should be addressed in an effort to assist people in meeting the goal.

The remaining four phases build on the information gathered in the analysis phase. According to Finch and Crunkilton (as cited in Swanson, 1994):

The *design* phase includes both program and training design, whereas the *development* phase focuses on materials development and pilot testing. In the *implementation* phase, program plans and training are incorporated into the organization. And last, the *control* phase includes evaluating programs and training as well as deciding whether or not to continue these efforts (p. 31).

For the purpose of this study, College of Agriculture, Food and Natural Resources graduates were considered inputs and were analyzed according to which employability skills supervisors believed was important for them to be able to perform (Swanson, 1994).

Methods

The purpose of the study was to assess the employability skills needed by graduates of the College of Agriculture, Food and Natural Resources (CAFNR) at the University of Missouri as perceived by graduates' supervisors. The following objectives guided the study:

1. Assess supervisors' perceptions of the importance of the employability skills needed by graduates in industry.
2. Assess supervisors' perceptions of the competence level of their graduate employees at performing the employability skills.
3. Prioritize the employability skills, according to supervisors, in need of curriculum enhancement using the Borich needs assessment model.

The design of this study was survey research. A need existed to determine the employability skills desired in industry from the immediate supervisors of college of agriculture graduates. Because CAFNR has no frame for such supervisors, 290 randomly selected graduates were contacted to solicit the name and contact information of their immediate supervisor. Upon contacting the graduates, seventy-five willingly provided the information needed to serve as the frame for the supervisors, which comprised the population for this study ($N = 75$).

The Dillman (2004) Tailored Design Method was employed to collect data from the supervisors. A postcard was sent to all seventy-five supervisors informing them that a study was being conducted to assess the perceptions of the employability skills most in demand for graduates entering industry. Questionnaires were mailed two weeks after the postcards. The questionnaires were accompanied with a cover letter and pre-paid return envelope. Follow-up procedures consisted of a postcard sent to non-respondents ten days after the initial mailing of the complete package. A second complete package was mailed to non-respondents ten days after the follow-up postcard. After the initial mailing and follow-up procedures, 42 usable questionnaires were received from the supervisors for a 56% response rate.

A questionnaire was developed to collect the data and consisted of 67 employability skills identified through the literature by Evers, Rush and Berdrow (1998). Supervisors responded to their perception of how important the employability skills were to the success of the graduates in his/her employment and how competent they perceived the graduate to be at performing the skills. The 67 skills were measured on a 4-point response scale consisting of: 0 – no importance (or competence), 1 – minor importance (or competence), 2 – moderate importance (competence), and 3 – major importance (or competence). The importance and competence skills were further analyzed using the Borich (1980) needs assessment model. The nature of the model is to determine if and where discrepancies exist. Borich (1980) noted the importance of calculating a discrepancy score, weighted discrepancy score, and a mean weighted discrepancy score in an effort to emphasize areas in need of curriculum enhancement and modification.

A panel of experts consisting of CAFNR faculty established face and content validity on the instrument. To account for reliability, a pilot study was performed on CAFNR graduates not randomly selected to the study and resulted in a Cronbach's alpha of .94. Non-response error was

handled by comparing early and late respondents (Miller & Smith, 1983) on the variables of interest. No differences were found to exist. Therefore, non-response error was accounted for.

Results and Discussion

Objective one sought to assess supervisors' perceptions of the importance of the employability skills needed by graduates in industry. Working well with fellow employees ($M = 2.93$) was the employability skill perceived to be the most important by supervisors (Table 1).

Table 1
Supervisors' Perceptions of the Importance of the Employability Skills (n = 42)

Rank	Employability Skill	<i>M</i>	<i>SD</i>
1.	Working well with fellow employees	2.93	.26
2.	Functioning well in stressful situations	2.90	.30
3.	Ability to work independently	2.90	.30
4.	Solving problems	2.88	.34
5.	Maintaining a positive attitude	2.88	.40
6.	Setting priorities	2.85	.36
7.	Allocating time efficiently	2.85	.36
8.	Meeting deadlines	2.83	.38
9.	Identifying problems	2.80	.40
10.	Recognizing the effects of decisions made	2.80	.40
11.	Responding positively to constructive criticism	2.80	.41
12.	Adapting to situations of change	2.78	.57
13.	Functioning at an optimal level of performance	2.76	.44
14.	Listening attentively	2.76	.44
15.	Prioritizing problems	2.73	.45
16.	Managing/overseeing several tasks at once	2.73	.50
17.	Gaining new knowledge from everyday experiences	2.73	.51
18.	Conveying information one-to-one	2.71	.46
19.	Relating well with supervisors	2.71	.51
20.	Responding to others' comments during a conversation	2.68	.47
21.	Identifying essential components of the problem	2.68	.52
22.	Sorting out the relevant data to solve the problem	2.66	.48
23.	Keeping up-to-date on developments in the field	2.66	.53
24.	Maintaining a high energy level	2.66	.53
25.	Decisions on the basis of thorough analysis of the situation	2.63	.54
26.	Establishing the critical events to be completed	2.63	.54
27.	Recognizing alternative routes in meeting objectives	2.61	.54
28.	Communicating ideas verbally to groups	2.59	.63
29.	Understanding the needs of others	2.58	.50
30.	Identifying potential negative outcomes of a risky venture	2.54	.60
31.	Knowing ethical implications of decisions	2.54	.60
32.	Using proper grammar, spelling, and punctuation	2.54	.75
33.	Making decisions in a short time period	2.51	.60

Table 1 (Continued)

Rank	Employability Skill	<i>M</i>	<i>SD</i>
34.	Assessing long-term effects of decisions	2.49	.60
35.	Initiating change to enhance productivity	2.49	.71
36.	Combining relevant information from a number of sources	2.46	.75
37.	Gaining new knowledge in areas outside the immediate job	2.45	.68
38.	Contributing to group problem solving	2.41	.63
39.	Resolving conflicts	2.41	.84
40.	Identifying sources of conflict among people	2.37	.77
41.	Keeping up-to-date with external realities of a company's success	2.37	.77
42.	Establishing good rapport with subordinates	2.34	1.02
43.	Monitoring progress toward objectives in risky ventures	2.33	.77
44.	Revising plans to include new information	2.29	.75
45.	Taking reasonable job-related tasks	2.28	.65
46.	Monitoring progress against the plan	2.28	.72
47.	Reconceptualizing your role to changing corporate realities	2.25	.81
48.	Providing novel solutions to problems	2.24	.70
49.	Empathizing with others	2.20	.79
50.	Applying information to new or broader contexts	2.15	.82
51.	Integrating information into more general contexts	2.15	.88
52.	Giving direction and guidance to others	2.07	.96
53.	Making effective business presentations	2.05	.97
54.	Integrating strategic considerations in the plans made	2.02	.69
55.	Coordinating the work of peers	2.00	.95
56.	Writing reports	2.00	1.04
57.	Supervising the work of others	2.00	1.16
58.	Providing innovative paths for the company for future development	1.97	.99
59.	Identifying political implications of the decisions to be made	1.95	.87
60.	Making impromptu presentations	1.93	.85
61.	Assigning/delegating responsibility	1.93	.88
62.	Conceptualizing a future for the company	1.90	1.01
63.	Writing internal business communication	1.85	.99
64.	Coordinating the work of subordinates	1.82	1.10
65.	Delegating work to peers	1.80	1.04
66.	Delegating work to subordinates	1.79	1.13
67.	Writing external business communication	1.68	1.08

Note. Scale: 0 = No Importance, 1 = Important, 2 = Moderate Importance, 3 = Major Importance

In addition to “working well with fellow employees,” six other employability skill items were found to possess a mean importance of 2.85 or higher. The remaining skills were “functioning well in stressful situations” ($M = 2.90$), “ability to work independently” ($M = 2.90$), “solving problems” ($M = 2.88$), “maintaining a positive attitude” ($M = 2.88$), “setting priorities” ($M = 2.85$), and “allocating time efficiently” ($M = 2.85$). Four employability skill items had means lower than 1.85. These items consisted of “coordinating the work of subordinates” ($M = 1.82$), “delegating work to peers” ($M = 1.80$), “delegating work to subordinates” ($M = 1.79$), and “writing external business communication” ($M = 1.68$).

Objective two sought to assess supervisors' perceptions of the competence level of their graduate employees at performing the employability skills. "Maintaining a positive attitude" ($M = 2.73$), "relating well with supervisors" ($M = 2.68$), "ability to work independently" ($M = 2.63$), "working well with fellow employees" ($M = 2.61$), and "meeting deadlines" ($M = 2.54$) rounded out the top five employability skills supervisors perceived their employees to be most competent at performing (Table 2).

Table 2
Supervisors' Perceptions of the Competence of their Employee at Performing the Employability Skills (n = 42)

Rank	Employability Skill	<i>M</i>	<i>SD</i>
1.	Maintaining a positive attitude	2.73	.59
2.	Relating well with supervisors	2.68	.61
3.	Ability to work independently	2.63	.58
4.	Working well with fellow employees	2.61	.74
5.	Meeting deadlines	2.54	.55
6.	Conveying information one-to-one	2.54	.67
7.	Maintaining a high energy level	2.51	.60
8.	Responding to others' comments during a conversation	2.51	.60
9.	Listening attentively	2.46	.67
10.	Functioning at an optimal level of performance	2.46	.71
11.	Making decisions in a short time period	2.44	.60
12.	Responding positively to constructive criticism	2.43	.75
13.	Allocating time efficiently	2.41	.67
14.	Adapting to situations of change	2.41	.84
15.	Identifying problems	2.40	.59
16.	Gaining new knowledge from everyday experiences	2.40	.67
17.	Keeping up-to-date on developments in the field	2.39	.67
18.	Recognizing the effects of decisions made	2.39	.77
19.	Establishing the critical events to be completed	2.38	.71
20.	Functioning well in stressful situations	2.38	.74
21.	Knowing ethical implications of decision	2.37	.73
22.	Managing/overseeing several tasks at once	2.37	.77
23.	Using proper grammar, spelling, and punctuation	2.37	.80
24.	Combining relevant information from a number of sources	2.34	.73
25.	Gaining new knowledge in areas outside the immediate job	2.33	.76
26.	Setting priorities	2.32	.69
27.	Identifying essential components of the problem	2.30	.61
28.	Sorting out the relevant data to solve the problem	2.29	.68
29.	Empathizing with others	2.28	.78
30.	Establishing good rapport with subordinates	2.27	1.02
31.	Prioritizing problems	2.25	.59
32.	Communicating ideas verbally to groups	2.24	.80
33.	Solving problems	2.23	.62
34.	Monitoring progress against the plan	2.21	.62

Table 2 (Continued)

Rank	Employability Skill	<i>M</i>	<i>SD</i>
35.	Understanding the needs of others	2.20	.82
36.	Making thorough decisions by thorough analysis of the situation	2.17	.70
37.	Contributing to group problem solving	2.15	.70
38.	Keeping up-to-date with external realities of a company's success	2.15	.73
39.	Initiating change to enhance productivity	2.13	.79
40.	Providing novel solutions to problems	2.12	.68
41.	Assessing long-term effects of decisions	2.12	.71
42.	Identifying sources of conflict among people	2.12	.75
43.	Applying information to new or broader contexts	2.12	.78
44.	Integrating information into more general contexts	2.12	.78
45.	Writing reports	2.10	.75
46.	Taking reasonable job-related risks	2.08	.66
47.	Revising plans to include new information	2.08	.69
48.	Recognizing alternative routes in meeting objectives	2.07	.72
49.	Resolving conflicts	2.05	.82
50.	Reconceptualizing your role in response to changing corporate realities	2.05	.83
51.	Coordinating the work of peers	2.03	.64
52.	Monitoring progress toward objectives in risky ventures	2.03	.75
53.	Writing external business communication	2.03	.79
54.	Making effective business presentations	2.03	.80
55.	Identifying potential negative outcomes of a risky venture	2.00	.63
56.	Writing internal business communication	2.00	.80
57.	Supervising the work of others	2.00	.91
58.	Giving direction and guidance to others	1.98	.85
59.	Delegating work to peers	1.97	.83
60.	Providing innovative paths for the company to future development	1.97	.83
61.	Integrating strategic considerations in the plans made	1.93	.62
62.	Making impromptu presentations	1.93	.83
63.	Coordinating the work of peers	1.92	.87
64.	Assigning/delegating responsibility	1.84	.75
65.	Conceptualizing a future for the company	1.84	.93
66.	Delegating work to subordinates	1.81	.89
67.	Identifying political implications of the decision to be made	1.75	.84

Note. Scale: 0 = No Competence, 1 = Competent, 2 = Moderate Competence, 3 = Major Competence

Seven employability skill items possessed mean scores less than 1.95. These skills consisted of “integrating strategic considerations in the plans made” ($M = 1.93$), “making impromptu presentations” ($M = 1.93$), “coordinating the work of peers” ($M = 1.92$), “assigning/delegating responsibility” ($M = 1.84$), “conceptualizing a future for the company” ($M = 1.84$), “delegating work to subordinates” ($M = 1.81$), and “identifying political implications of the decision to be made” ($M = 1.75$).

Objective three sought to prioritize the employability skills, according to supervisors, in need of curriculum enhancement using the Borich needs assessment model. A discrepancy score was calculated by taking the summated mean importance rating minus the summated mean competence rating of each employability skill (Table 3).

Table 3
Supervisors' Perceptions of the Importance of the Graduates' Employability Skills and their Competence at Performing the Skills (n = 42)

Category	Employability Skill	MWD S
I	Solving problems	1.78
	Setting priorities	1.49
	Functioning well in stressful situations	1.45
	Recognizing alternative routes in meeting objectives	1.37
	Identifying problems	1.33
	Identifying potential negative outcomes when considering risky venture	1.33
	Prioritizing problems	1.24
	Allocating time efficiently	1.22
	Making decisions on the basis of thorough analysis of the situation	1.19
	Recognizing the effects of decisions made	1.13
	Responding positively to constructive criticism	1.00
	Adapting to situations of change	.99
	Managing/overseeing several tasks at once	.98
	Identifying essential components of the problem	.96
	Sorting out the relevant data to solve the problem	.95
	Understanding the needs of others	.92
	Working well with fellow employees	.91
	Assessing long-term effects of decisions	.89
	Initiating change to enhance productivity	.89
	Communicating ideas verbally to groups	.86
Gaining new knowledge from everyday experiences	.85	
Meeting deadlines	.81	
Resolving conflicts	.80	
II	Functioning at an optimal level of performance	.79
	Listening attentively	.79
	Keeping up-to-date on developments in the field	.70
	Ability to work independently	.76
	Monitoring progress toward objectives in risky ventures	.67
	Relating well with supervisors	.65
	Contributing to group problem solving	.63
	Establishing the critical events to be completed	.63
	Identifying sources of conflict among people	.56
	Revising plans to include new information	.55
Keeping up-to-date with external realities related to company's success	.51	

Table 3 (Continued)

Category	Employability Skill	MWD S
III	Conveying information one-to-one	.45
	Responding to others' comments during a conversation	.45
	Taking reasonable job-related risks	.43
	Reconceptualizing your role in response to changing corporate realities	.43
	Knowing ethical implications of decisions	.42
	Identifying political implications of the decision to be made	.42
	Using proper grammar, spelling, and punctuation	.42
	Maintaining a positive attitude	.41
	Maintaining a high energy level	.38
Assigning/delegating responsibility	.37	
IV	Supervising the work of others	.29
	Combining relevant information from a number of sources	.29
	Gaining new knowledge in areas outside the immediate job	.29
	Establishing good rapport with subordinates	.28
	Conceptualizing a future for the company	.27
	Providing novel solutions to problems	.27
	Integrating strategic considerations in the plans made	.24
	Coordinating the work of peers	.24
	Monitoring progress against the plan	.22
	Delegating work to subordinates	.21
	Giving direction and guidance to others	.20
	Providing innovative paths for the company for future development	.19
	Making decisions in a short time period	.18
	Making effective business presentations	.10
	Coordinating the work of subordinates	.09
	Making impromptu presentations	.05
	Applying information to new or broader contexts	.05
	Integrating information into more general contexts	.05
	Writing reports	-.05
	Delegating work to peers	-.04
Writing internal business communication	-.10	
Empathizing with others	-.16	
Writing external business communication	-.32	

^a0 = No Importance, 1 = Minor Importance, 2 = Moderate Importance, 3 = Major Importance

^b0 = No Competence, 1 = Minor Competence, 2 = Moderate Competence, 3 = Major Competence

^cMean Weighted Discrepancy Score

A weighted discrepancy score was then calculated by multiplying the discrepancy score by the mean importance rating of each independent employability skill. Lastly, a mean weighted discrepancy score was calculated by taking the sum of the weighted discrepancy score for each

employability skill and dividing by the number of observations ($n = 42$). To prioritize the skills for curriculum enhancement, four categories were defined as a result of the mean weighted discrepancy scores.

Category I was comprised of the highest discrepancy scores (MWDS = $< .80$). Category II was comprised of more moderate discrepancy scores (MWDS = $.50$ to $.79$). Category III was comprised of the lower discrepancy scores (MWDS = $.30$ to $.49$). Category IV was comprised of the items that had a negligible amount of discrepancy (MWDS $> .30$).

Items with the greatest need for curriculum enhancement were identified in category I due to possessing the highest discrepancy scores. Three of the skills had a MWDS equal to or greater than 1.45. These three skills consisted of “solving problems” (MWDS = 1.78), “setting priorities” (MWDS = 1.49), and “functioning well in stressful situations” (MWDS = 1.45). In all, twenty-three employability skills had a high discrepancy score and comprised category I.

Eleven items had a more moderate discrepancy score and comprised category II, indicating a more moderate need for curriculum enhancement. The top five items in category II were: “functioning at an optimal level of performance” (MWDS = $.79$), “listening attentively” (MWDS = $.79$), “keeping up-to-date on developments in the field” (MWDS = $.70$), “ability to work independently” (MWDS = $.76$), and “monitoring progress toward objectives in risky ventures” (MWDS = $.67$).

Ten items comprised category III due to possessing lower discrepancy score which indicated a lower need for curriculum enhancement. The top five skills in category III consisted of: “conveying information one-to-one” (MWDS = $.45$), “responding to others’ comments during a conversation” (MWDS = $.45$), “taking reasonable job-related risks” (MWDS = $.43$), “reconceptualizing your role in response to changing corporate realities” (MWDS = $.43$), and “knowing ethical implications of decisions” (MWDS = $.42$).

Twenty-three items fell into category IV and were perceived by supervisors to possess negligible discrepancy scores. Nine items in category IV had a mean weighted discrepancy score of less than $.10$. These nine items consisted of “coordinating the work of subordinates” (MWDS = $.09$), “making impromptu presentations” (MWDS = $.05$), “applying information to new or broader contexts” (MWDS = $.05$), “integrating information into more general contexts” (MWDS = $.05$), “writing reports” (MWDS = $-.05$), “delegating work to peers” (MWDS = $-.04$), “writing internal business communication” (MWDS = $-.10$), “empathizing with others” (MWDS = $-.16$), and “writing external business communication” (MWDS = $-.32$). As a result, these nine items are a low need for curriculum enhancement.

Conclusions/Implications/Recommendations

All 67 employability skills are at least moderately important to supervisors. Of all the skills dealing with communication, “listening attentively” was perceived by supervisors to be the most important. Six of the top ten most important employability skills deal with motivation and organization and time management. Therefore, it can be implied that supervisors desire employees who are highly motivated, organized, and can manage their time well. In addition,

supervisors place less importance on the visualization and supervision skills of their entry-level employees. It could be implied that because these graduates are entry-level employees, they have not yet had the time and experience needed to develop a strong vision for their job. Further, Swanson's (1994) SMPI asserts that developers and managers analyze the organization based upon its goals and standards. It could be that visualization and supervision skills simply do not fit into the needs of organizational goals and standards (Swanson, 1994) per these entry-level employees. Or, it could be that these graduates need to gain experience on the job by working independently and with fellow employees and not by delegating their work to others.

Swanson (1994) stated that managers determine what employees should “. . . be able to do to perform in the workplace” (p. 19-20). Per this study, supervisors recognized that graduates are most competent at maintaining a positive attitude while on the job, while they are least competent at identifying political implications of the decision to be made. An implication could be that entry-level graduates simply cannot think about all the ramifications of their decisions at work due to their lack of work experience. It could be that graduates are still getting a feel for the proper protocol for the chain of command that has been established at their workplace. In addition, graduates are least competent at delegating and coordinating their work and being visionary leaders. While this is an area supervisors identified graduates as being least competent in, the question becomes, “How much should be expected of entry-level graduates in these areas?” Further, the last five skills listed on the competence scale deal with coordination, organization and time management, visioning, and decision making. Could it be that entry-level employees simply have not had the time or experience and do not possess the knowledge needed to effectively perform these skills?

Through the Borich needs assessment model, supervisors identified “solving problems” as the employability skill in greatest need. Specifically, seven of the twenty-three items comprising category I dealt with problem solving and decision making. The human capital theory posits that institutions of higher education focus on the skill needs of its graduates (Knight & Yorke, 2003). Therefore, a recommendation is for faculty to begin addressing the skills in category I. By addressing all the specific skills in category I, human capital can be enhanced allowing graduates to be more successful and productive (Swanson, 2001; van Loo and Rocco, 2004) in the workplace. Once those skills have been addressed and satisfied, professors should address those in category II and then those in category III.

In all, 34% of the employability skills were perceived to possess the highest discrepancy scores and thus were ranked in category I, indicating the highest need to enhance the existing curriculum to include these skills. Sixteen percent of the items were perceived to possess a more moderate discrepancy score and were ranked in category II, 15% of the items were perceived to possess the lowest discrepancy scores and ranked in category III, while the remaining 34% of the items were perceived to be negligible in terms of need and ranked in category IV. Interestingly, supervisors identified writing skills of graduates to be negligible in terms of curriculum enhancement need. Because this institution prides itself on its nationally renowned intensive writing program, this finding is understandable and as a result, implies that the curriculum is currently meeting the writing needs of CAFNR graduates in their entry-level employment positions.

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