Are We Preparing Our Students Correctly? An Employability Skills Analysis within a College of Agriculture.

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Introduction/Theoretical Framework

In order for the United States to continue to provide for an ever-growing population, today's college students must be prepared to fill the vacant agricultural jobs of tomorrow (Goerker, Smith, Fernandez, Ali, & Goetz, 2015). Now, more than ever, employers are seeking graduates who possess not only career-specific technical skills, but also the higher-order behavioral skills that can be applied to a variety of issues (Bentley University, 2014; Casner-Lotto, Barrington, & Wright, 2006; Landrum, Hettich, & Wilner, 2010; Paranto & Kelkar, 2000; Partnership for 21st Century Learning, 2015; Rateau, Kaufman, & Cletzer, 2015). These are known as *employability skills*, and the term is often considered to be interchangeable with *soft skills*, *transferable skills*, or *key skills* (Graduate Prospects, 2009). Hillage and Pollard (1998) state that the concept of employability skills points to three main ideas: gaining a job, maintaining a job, and obtaining a new job, if required. There is growing evidence that reveals adults lack the work ethic and skills required for jobs that pay middle-class wages, leading to the percentage of young adults who have jobs being the lowest since World War II (Symonds, Schwartz, & Ferguson, 2011). Knight and Yorke (2003) state that over the last 50 years, the expectations of higher education institutions have grown, and it can be argued that the subject matter has also grown in complexity. With employer groups being vocal in their demand of universities to provide graduates who are willing to make a significant contribution in the workplace, the quality of university programs must be measured by their ability to meet the specific needs of employers (Clarke, 2018). Thus, the burden of the ever-growing employability skills gap is placed directly on educational institutions.

This study sought to determine if differences exist in employability skill levels across demographics including class level, gender, ethnicity, and hometown community, within California State University, Fresno's Jordan College of Agricultural Sciences and Technology (JCAST). The results from this study will assist the institution in better preparing all students to work in the agricultural industry regardless of age, gender, ethnicity, or background. Determining these differences could serve as a tool for the university to pinpoint areas where there is a need for greater emphasis and skill development.

The Human Capital Theory served as the theoretical framework for this study. The theory is known to address training issues and predicts how individuals, governments, and organizations will invest in resources at which the marginal cost of investments equals the same in benefits (Van Loo & Rocco, 2004). Investments in human capital take different forms, and between them, Becker (1994) states, "education and training are the most important investments" (p. 17).

Methodology

The researchers conducted a census study of all students enrolled in JCAST during the fall of 2019. An email was sent to 2,303 undergraduate and graduate students with a link to the instrument in the beginning of the semester followed by two reminders at two-week intervals. The instrument for this study was the Life Effectiveness Questionnaire - Version H (LEQ-H),

developed by Dr. James T. Neill. The 24 item, 8-factor model measures the following constructs: Time Management, Social Competence, Achievement Motivation, Intellectual Flexibility, Task Management, Emotional Control, Active Initiative, and Self Confidence. In a study of 960 participants, the Tucker-Lewis index (TLI) and relative noncentrality index (RNI) were utilized to determine the instruments reliability with desirable coefficients of .945 and .959, respectively (Neill, Marsh & Richards, 2003). The instrument utilizes 24 Likert-type questions with a scale of 1-8 "not like me" to "like me." Each construct consisted of three items, which were used to calculate a grand mean, and analyzed to determine students' self-perceived competency levels. Demographic data were collected from students (club involvement, pursuing agricultural careers, etc.) and combined with personal demographic data (ethnicity, gender, etc.) provided by the university. Descriptive statistics were utilized to determine if differences existed between various demographic factors. Additionally, to control for non-response error a comparison of early to late respondents was conducted with demographic data (Linder, Murphy & Briers, 2001). One-way ANOVA's were used and found that no significant differences existed between early and late respondents.

Results/Findings

Usable responses were received from 615 of the 2,303 students for a response rate of 26.7%. Results from freshman (n = 100) and juniors (n = 151) indicated differences for the construct of Emotional Control (5.41 vs. 6.09). Men (n = 161) and women (n = 454) also showed differences for the same construct (6.25 vs. 5.70). An analysis of the two largest ethnic populations in the college, Hispanic (n = 278) and Caucasian (n = 258), found that Caucasian students indicated higher competency levels in five of the eight constructs: Time Management (5.73 vs. 5.46), Social Competence (6.29 vs. 5.89), Achievement Motivation (7.13 vs. 7.06), Task Management (6.35 vs. 6.21), and Active Initiative (6.44 vs. 6.21). While Hispanic students reported higher competency levels than Caucasian students in Intellectual Flexibility (6.60 vs. 6.21), Emotional Control (5.94 vs. 5.83), and Self Confidence (6.69 vs. 6.61). Students were also asked to indicate which best described their childhood home (rural-on farm, rural-not on farm, suburban, or urban). Those indicating "rural-on farm" reported the highest competency level for all constructs with the exception of Intellectual Flexibility.

Conclusions/Recommendations

This census study sought to determine if differences exist between various demographics factors and students' self-perceived employability skill levels. The descriptive analysis indicates that there is a discrepancy between the competency of certain grade levels, women, Hispanic students, and those not from a farm or ranch, when compared to their counterparts. For JCAST to better serve the needs of a diverse community of students, regardless of background, it is recommended that standards, curricula, and programs be implemented to more effectively serve these groups. This study and its recommendations remain consistent with *The Secretary's Commission on Achieving Necessary Skills (SCANS),* which calls to communicate standards, conduct assessments that gauge areas needing progress, and inject competencies into the school's curriculum (SCANS, 2000). To better understand the program's shortcomings as it relates to employability skill development, it is further recommended that the same instrument be utilized for a longitudinal study, which will gauge student's skill development as they progress through their degree program.

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