

An Investigation of Soft Skills Development of Agricultural Education
Students Participating in an FFA Career Development Event

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Introduction

The 2016-2000 National Research Agenda identified the need for additional soft skill development for agricultural students. In Research Priority 3: Sufficient Scientific and Professional Workforce That Addresses the Challenges of the 21st Century, soft skills are identified as necessary for the modern workplace by the National Research Council, 2011. The National Research Council's 2009 and 2012 reports also called for the development of 21st century skills among U.S. students (Roberts et al, 2016). To address this need, numerous research studies have analyzed the relationships between soft skill development and experiential learning in agricultural education. As stated in Rayfield, Murphy, Briers, & Lewis (2012), "Agricultural education has always relied heavily on hands-on experiential learning as a method of instruction" (p. 48). Also in 2012, Crawford and Dalton stated in their study, *Making Our Graduates Competitive in the Workforce: What Soft Skills Do Students, Faculty, Alum and Employers Value?*, "The importance of soft skills are being extolled internationally - from government reports to university research studies. Employers, students, and faculty are aware of the need to complement professional and technical skills with soft skills" (p. 2).

This research study sought to determine changes in soft skills development by students enrolled in agricultural education programs at five high schools in California. The study also analyzed the difference in soft skill development between students who competed in a Career Development Event (CDE) called the Opening and Closing Ceremonies (O/CC) and those who did not compete. Soft skills were measured using the Life Effectiveness Questionnaire-H (LEQ-H). This instrument was developed by Neill, Marsh and Richards (1997) for the purpose of measuring the changes associated with adventure or other experiential education intervention programs" (McLeod & Craig, 2004, p. 4). The reliability of the LEQ-H was established by the researchers utilizing the Tucker-Lewis index (TLI) and relative noncentrality index (RNI), resulting in coefficients of .945 and .959, respectively (Neil, Marsh and Richards, 1997).

Theoretical Framework

Kolb's Experiential Learning Theory served as the theoretical framework for this study, which includes four stages, 1) concrete experiences, 2) reflection and observations, 3) abstract conceptualizations, and 4) active experimentation (Kolb, 1984). Roberts (2006) summarizes what is known about experiential learning theory as experiential learning beginning with an initial focus of the learner, followed by an experience, then the learner reflects on their observation, formulates a generalization, and then tests the generalization with experimentation. Once completed, the circle starts over in a spiral-like pattern (Roberts, 2006, p.22).

Methodology

The research design employed a descriptive study of how FFA members' soft skills changed through participation in the O/CC contest. Agriculture teachers from five California high schools were contacted in early August, 2016. Classrooms with students signed up to compete in the contest were identified and all students in the classes were asked to complete the LEQ-H Soft Skills Survey in mid-August prior to the competition and again after the completion at the end of September. The questionnaire consisted of 24 questions asking students to indicate their self-perceptions for the following soft skills on a scale of one (lowest) to eight (highest): time management, social competence, achievement motivation, intellectual flexibility, task leadership, emotional control, active initiative, and self-confidence (Kechagias, 2011). Each construct

consisted of three items, which were combined to calculate each participant's mean for the eight constructs. Of the 400 FFA members who participated in the survey, 164 FFA members completed both surveys (41%), prior to and following the O/CC contest. Paired Sample *t*-Tests compared scores for students who competed in the contest to those students who did not compete. There were 94 participants in the group who did not participate in the competition (Group 1) and 70 participants that competed in the O/CC competition (Group 2).

Results/Findings

Analyzing Group 1 results determined a mean increase in soft skills of 3.93 (6%), indicating that students enrolled in agriculture courses did acquire soft skills. A mean increase in soft skills of 8.64 (13.5 %) was experienced by Group 2, indicating that career development events doubled the overall gains in soft skills, as compared to Group 1. The researcher also conducted Paired Sample *t*-Test Statistics on Groups 1 and Group 2 to evaluate mean scores in each of the eight soft skill areas and analyze group differences. FFA members in Group 1 ($n = 94$) scored higher on the second survey in six of the eight soft skills. The results indicated a mean difference in growth in all areas except achievement motivation and intellectual flexibility. Time management ($p = .02$), task leadership ($p = .03$), and emotional control ($p = .02$) experienced significant change. An evaluation of 12th grade mean difference scores identified that selection bias had affected these last two skills dramatically due to the extremely high scores on survey one. FFA members in Group 2 ($n = 70$) gained soft skills in all eight categories. Significant increases were found in six of the eight soft skills: time management, social competence, intellectual flexibility, emotional control, active initiative, and self-confidence. The greatest improvements were in the areas of emotional control ($p = .00$) and social competence ($p = .00$).

Conclusions

Career and Technical Education programs can benefit from highlighting the need for 'soft' skills, as well as 'hard' or technical skills. Agricultural Education students can improve their soft skills development through classroom activities and continued participation in career development events. Continued involvement in Career Development Events and periodic soft skill assessments to track students' soft skill development can better prepare students to meet the challenges of the 21st Century.

Implications/Recommendations/Impact on Profession

Agricultural teachers are encouraged to include the following items in their departmental program planning: additional soft skills curriculum, annual evaluation of students' soft skills development, and utilization of Career Development Events to better prepare students to enter careers in the agricultural industry. Additionally a longitudinal study should be conducted to determine the effects of soft skills development for agricultural education students throughout their high school experience. Finally, the development of a soft skills certificate program to assist students in documenting their experiential learning activities as proof to employers of their career readiness skills is highly recommended.

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