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Secondary Agricultural Education Program and Human Influences on Career Decision Self-Efficacy

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Abstract

The purpose of this study was to determine the relationship between career decision self-efficacy (CDSE) and components of the secondary agricultural education program. Additionally, the authors sought to describe secondary students' CDSE and career decision influences. This study's design was descriptive and relational and incorporated high school junior and senior student responses (n = 114) to surveys. Taylor and Betz' (1983) Career Decision Self-Efficacy Scale, Short Form (CDSE-SF) was incorporated in addition to instruments developed solely for this study. This study's findings revealed secondary agricultural education students were mostly confident in their career decisiveness across all five constructs of the CDSE-SF. Participation in Career Development Events (CDEs) revealed low correlations with four constructs in the CDSE-SF. Supervised Agricultural Experiences (SAEs) did not highly influence this group of participants' career decisions. The authors also discuss the perceived influence of identified persons and other components of the secondary agricultural education program based on student responses. Recommendations are made to teachers and parents to improve secondary students' career decision-making.

Keywords: career decision-making, career decision self-efficacy, secondary agricultural education, involvement

Adolescence is a critical period where decisions about future careers develop (Hartung, Porfeli, & Vondracek, 2005). It is also a time when children develop knowledge about themselves, which fosters their decisions regarding their career options (Gati & Saka, 2001). The awareness of self in adolescence leads to self-efficacy around career decisions and consequently, personally satisfying career choices setting the stage for success into adulthood (Bandura, Barbaranelli, Caprara, & Patorelli, 2001). Bandura et al. stated, "Perceived self-efficacy is…posited as a pivotal factor in career choice and development" (p. 187). Hence, effective career education programs are essential in aiding student progress toward satisfactory career choice and forming a career identity (Conroy, Scanlon, & Kelsey, 1998).

Julien (1999) reported that high school seniors found it difficult to gather information on careers and lacked clarity on the career decision process. As a result, many adolescents leave their high school experience with indecision about their future careers (Vidal-Brown & Thompson, 2001). Secondary agricultural education programs purport to provide students with

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career-founded and career-directed experiences. For example, McCormick and Cox (1988) stated,

> It has been the National FFA Organization (formerly Future Farmers of America) and the Supervised Agricultural Experience (SAE) program which have characterized the effectiveness of vocational education in agriculture programs to produce occupationally competent students…(*FFA and SAE*) have contributed to the vocational dimension of the program (p.17).

Considering the increasing demand for people with expertise in agriculture, food systems, and natural resources through 2015 (Goecker, Smith, Smith, & Goetz, 2007), secondary agriculture programs will need to nurture the career decision process for tens of thousands of students. However, the empirical evidence supporting the success of these programs' vocational/career thrust is not clear. Thus, it is important to determine whether or not students are being prepared to make career decisions and if there is evidence identifying which activities in agricultural education facilitate that preparation.

In addition to program activities in agricultural education, an identification of factors students perceive to influence their career decisions could also be important for teachers in secondary agriculture to reference when developing educational opportunities. Educational experiences are not the only influence on students; however, influences on students' career decisions can be extended to interactions with identified influential individuals (Gianakos, 1999). Considering the career-directed activities in which secondary agriculture students participate, students should be prepared to identify both the program activities and the people that influenced them the most.

Review of Literature

Agricultural education programs provide students with an awareness of their interests and prepare those students for the future (Wardlow & Osborne, 2010). These programs also build capable students and develop positive self-concept through the various activities and personal experiences (Phipps, Osborne, Dyer, & Ball, 2008). Conroy, Scanlon, and Kelsey (1998) described the elements of school-based agricultural education programs that motivate students to make career decisions by stating,

> Effective career education programs must not only provide factual information about agricultural careers; they must also contribute to the formation of students' occupational identity by challenging stereotypic notions of probable success…(p.30).

For years, students in agricultural education programs gained necessary skills in addition to developing self confidence through activities in the classroom/laboratory, SAE, and the FFA (National Research Council, 1988). The agricultural education classroom and laboratory should provide foundational knowledge about the diverse industry of agriculture, which students utilize to develop additional exploratory activities. SAEs involve paid and unpaid experiential learning opportunities outside the classroom where students learn effective recordkeeping and gain valuable experiences toward career and educational goals (Phipps et al., 2008). Participation in FFA and student SAEs provide awareness of and exposure to the agricultural industry, which increases the likelihood of agriculture as a career choice (Adedokun & Balschweid, 2008; Swan, 2002). Talbert and Balschweid (2006) supported those findings and reported that nearly one-third of their 340 respondents connected their agriculture career intent to their membership in FFA and involvement in activities such as Career Development Events (CDEs). CDEs are competitions tied to agricultural content allowing students to apply classroom content as teams or individuals and develop their specific interest areas in agriculture (Phipps et al., 2008). Examples of recognized CDEs include public speaking, land evaluation, and natural resources.

Students achieve the desired outcomes of an agricultural education program through developing beliefs and attitudes around the industry of agriculture. Simply exposing students to

more diverse agricultural subject matter can improve their disposition toward the agriculture industry as a potential career option (Fraze, Wingenbach, Rutherford, & Wolfskill, 2011). Career decision outcomes result from students experiencing educational opportunities and acquiring knowledge to form attitudes which lead to decision-making behavior concerning careers (Faulkner, Baggett, Bowen, & Bowen, 2009). Therefore, it is important for students to have the opportunity to not only learn about career options but to take steps to plan educational opportunities directing them toward a career (Hughey & Hughey, 1999). This can be facilitated through the complete agricultural education programs because of the curricular and developmental focus on the individual (Phipps et al., 2008). Consequently, students' career maturity and the ability to make agriculturally related career decisions have a positive association to participation in FFA and related activities (Bakar & McCracken, 1994).

Factors other than students' involvement in agricultural education could influence career decision-making. Other venues of external influence and characteristics of a person including, but not limited to, are: self-efficacy, socioeconomic status, gender roles, familial influence, parental education level, environment, and curriculum, among others (Lent, Brown, & Hackett, 1994). Students with consistently stable human influences related to career tasks and goal selection presented significantly higher self-efficacy toward career decisions (Gianakos, 1999). In Orndorff and Herr's (1996) survey of freshmen and sophomore students at Pennsylvania State University, students who declared their college majors prior to entrance to college, reflected a balance of influence from professionals, teachers, and parents.

Agricultural education studies (Conroy, Scanlon, & Kelsey, 1998; Faulkner et al, 2009; Rocca & Washburn, 2005) found parents extend the greatest influence on their own children's career decisions. Conversely, Esters and Bowen (2005) described parents had little influence on the career choice of former urban agricultural education students. Kotrlik and Harrison (1987) found family members, as well as those people in a specific occupation of interest, had a pronounced influence on career decisions—more so than school-related officials. Thompson and Russell (1993) determined the agricultural belief structures of parents and high school counselors had a strong association with students choosing agriculture as a career area. However, for parents to be a positive part in encouraging students toward careers in agriculture, programs must facilitate agricultural literacy of the parents and involve them in the career decision process (Conroy et al., 1998).

When considering the degree of exposure agriculture teachers have in regard to their interaction with students through all facets of the program, it seems reasonable they should have a positive influence on students' career decisions. Newcomb, McCracken, Warmbrod, and Whittington (2004) discussed that agriculture teachers play an important role in guiding students to create career objectives. Methany, McWhirter, and O'Neil (2008) noted supportive adult influences, such as teachers in particular, tend to give students higher personal expectations related to career decisions. The support and direction from teachers was found to be more strongly correlated to vocational/educational self-efficacy (decision ability) than even parents, siblings, or peers (Ali & McWhirter, 2006). In a similar study, Priest, Ricketts, Navarro, and Duncan (2009) recommended further study into individual influencers on students' career decisions and the relationship to students' career self-efficacy. Thus, the people adolescents encounter along their career exploration path provides notable influence in shaping career outcomes and warrants further exploration.

Theoretical Framework

Lent, Brown, and Hackett (1994) stated that although social and economic factors often intervene in adolescent choice, career development "dovetails" with the academic development of students. Lent et al. (1994) built their Social Cognitive Career Theory (SCCT) around Bandura's (1986) Social Cognitive Theory. Bandura (1986) posited that interaction between personal and

environmental factors leads to behavior outcomes and in turn affects future personal and environmental factors. Additionally, SCCT utilizes aspects of social learning theory (Krumboltz, Mitchell, & Jones, 1976), and Hackett and Betz's (1981) work connected self-efficacy to career development. SCCT focuses more directly on interest development, choice, and performance. Krumboltz, Mitchell, and Jones (1976) suggested that learning experiences, whether positive or negative, shape future attitudes, career decisions, and interest areas toward either of those directions. Lent et al. (1994) built a framework that focused on three mechanisms: self-efficacy, outcome expectations, and goals. SCCT (Figure 1) models the processes through which people develop and make career-relevant choices in their vocational and educational pursuits (Lent et al., 1994).

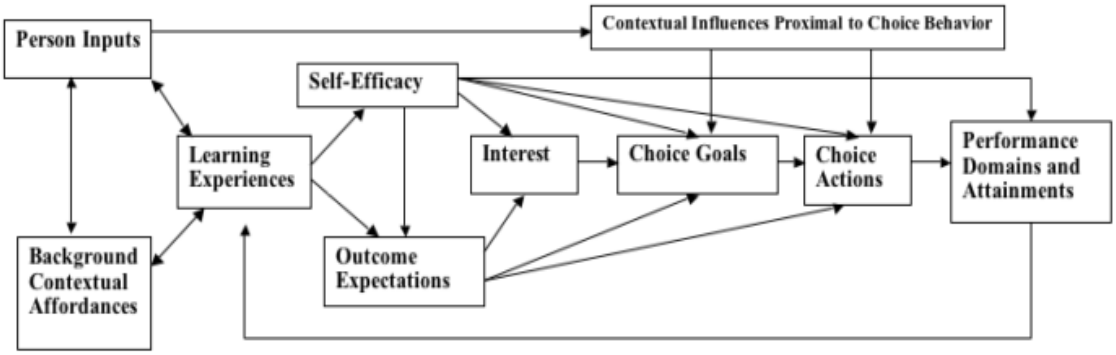

Figure 1. Model of personal, contextual, and experiential factors affecting career-related choice behavior. Permission to use copyright material granted. (Lent, Brown, and Hackett, 1994)

According to the model, the person and her background shape learning experiences. In turn, the resulting learning experiences serve to shape the person and add to her or his career choice background. Learning experiences impact an individual's career self-efficacy and her or his outcome expectations relative to a specific subject or career-related decision and aid in forming a person's interests. The interactions between learning experiences, self-efficacy, outcome expectations, and interest development produce choice goals, actions, and performance assessments culminating in a reciprocal influence on learning experiences (Lent, Brown, and Hackett, 1994).

This study focused on the specific interactions in SCCT between learning experiences, self-efficacy, outcome expectations, and interest development of the individual. Occupational identity is built through self-efficacy activities wherein students realize strengths and accomplishments or "belief in one's abilities in a specific domain." (Gushue, 2006, p.86). It is the importance of the development of interests and the focus on the individual that helps to develop career self-efficacy. One's perceived self-efficacy is fundamental to how career decisions are directed, especially during adolescence (Bandura, Barbaranelli, Caprara, & Patorelli, 2001). Betz and Hackett (1981) confirmed that career self-efficacy increases as a person completes vocational tasks related to setting goals, gathering occupational information, problem-solving, planning, and self-appraisal. Their work is an extension of Crites' (1978) who defined the development of career choice and the process of career maturity for individuals. According to SCCT, importance is placed on the individual and the influences, which act upon them to construct career maturity and decision making (Lent et al., 1994).

Purpose of the Study

The purpose of this study was to determine the relationship between students' participation in a comprehensive high school agricultural education program and the ability to make career decisions. Additionally, the study identified and described specific influences over students' career decision making. This study aids in building knowledge around developing efficient and effective educational programs. More specifically, the study addressed outcomes and impact of secondary agricultural education programs on individuals as called for in the American Association for Agricultural Education's National Research Agenda (Doerfert, 2011). The following objectives were developed to address the purpose:

1. Describe the career decision self-efficacy of secondary students in agricultural education.
2. Describe secondary student involvement as operationalized by CDE participation and years of FFA membership.
3. Determine the relationship between secondary student involvement in an agricultural education programs and secondary students' career decision self-efficacy.
4. Describe the secondary agricultural education programs' influence on secondary students' career decisions.
5. Describe the individuals influencing secondary agricultural education students' career decisions.

Methods and Procedures

The design of this study was descriptive-relational in nature. The target population for this study was high school juniors and seniors enrolled in agricultural education courses at two participating high schools during the 2011-2012 academic year. Given resource constraints in collecting data from youth, the study incorporated a sample of two purposefully selected high schools in northeastern Missouri. The schools were selected in an effort to represent students from both a predominantly rural community and a suburban community. One high school was located in a rural area, which annually graduates approximately 35 students. The second school was located within a bedroom community of a large city and graduates approximately 420 students annually. The sample included 57 students from each school totaling 114 juniors and seniors. Nearly 58% (n = 66) of the respondents were graduating seniors at the time of data collection, and the majority of respondents were female (n = 59; 51.8%). Finally, some form of post-secondary schooling was an aspiration for 94% (n = 107) of respondents.

Instrumentation

High school student participating in the study completed a four-part questionnaire which included: 1) the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF) (Betz, Klein, & Taylor, 1996), 2) students' perception of school-based agricultural education programs and how those program activities influenced their career decisions, 3) student's perceptions of how mentors, leaders, or teachers influenced career decisions, and 4) demographics of participants.

The CDSE-SF measured the degree to which individuals had confidence in their ability to successfully complete tasks related to making career decisions (Taylor & Betz, 1983). The behavioral domain constructs of the CDSE were developed from Crites' (1978) model of career maturity coupled with the principles of self-efficacy. This combined theoretical foundation led to five subscales in the CDSE: self-appraisal, occupational information, goal selection, planning, and problem solving. Each subscale consisted of five items totaling 25 items and used a 5-point Likert-type scale measuring 1 (*no confidence at all)*, 2 (*very little confidence*), 3 (*moderate confidence*), 4 (*much confidence*), and 5 (*complete confidence*) (Betz, Klein, & Taylor, 1996).

Betz et al. (1996) reported the range of reliability coefficients for CDMSE-SF as .73 to .83 with a mean coefficient of .94 for the 25-item total score.

Section two of the instrument included 20 items measuring how students perceived the influence of the agricultural education program on their career decisions. Each item began with the question: How much influence on your career decisions did the following items have? Similarly, the 12 items of section three measured the value of influence students perceived as coming from individuals typically involved in a student's career decisions. Section three's items were led with the root question: How much influence have the following had on your career decisions? Both sections utilized a 5-point Likert-type scale measuring 1 (*no influence at all)*, 2 (*very little influence*), 3 (*moderate influence*), 4 (*much influence*), and 5 (*a great deal of influence*). Respondents could also choose *not applicable to me* (N/A) if they identified where an item or individual did not exist to influence their personal career decisions. Section four, demographics, assessed categorical items, such as current year in high school, years in FFA, CDE participation, and gender.

Face and content validity were established for influence scale items through a panel of experts (N = 5) comprised of faculty and graduate assistants in agricultural education at the University of Missouri. A test-retest pilot study was implemented to obtain internal reliability measures and was administered to a similar group (n = 30) of high school juniors and seniors enrolled in a school-based agricultural education program. The researchers established a coefficient of stability threshold for test-retest reliability of .70, *a priori* (Ary, Jacobs, Razavieh, & Sorensen, 2006). The coefficient range for the 33 test items across sections two and three of the instrument was .70-.96. No pilot items were eliminated.

Questionnaires were administered directly in the classroom during each of the scheduled periods in which junior and senior students were present at each high school. Students were offered an explanation and rationale for the study and were asked to complete the instrument. Useable response rate was 71% between the two schools based on the potential respondent frame. Due to high school schedule and resource restrictions, non-respondents were unable to be contacted. Thus, the findings are based upon the data provided by the accepting sample. A possible concern with the sample is that the groups (schools) could be different. As such, an independent samples t-test between the schools was calculated and the constructs of the CDSE indicated differences were not significant ($p > .05$) in four out of five constructs. The Goal Selection construct was significantly different $t(112) = 2.26$, $p < .05$; however, due to a low effect size (r = .21) the schools were collapsed into the final sample for analysis.

Data Analysis

Mean scores were calculated for each construct of the CDSE (self-appraisal, occupational information, goal selection, planning, and problem solving) in addition to an overall CDSE mean. Each item in sections two and three were scored for means and standard deviations to indicate each student's reported influence of each secondary agriculture program activity or person on their career decisions. Individually, the variables, CDE participation and years of FFA membership defined student involvement for the purposes of this study. Pearson product-moment correlation coefficients were calculated using CDSE construct scores and the CDE participation and years of FFA membership variables.

Findings

Objective One

The CDSE instrument assessed student's level of career decision self-efficacy and thereby their level of career decisiveness (Betz & Klein, 1996). The overall instrument mean for

this study was 3.87 (*SD* = .50), which signified respondents were in the real limits of self-efficacy in relation to whether or not they felt they could make career-related decisions. Mean scores for CDSE constructs are reported in Table 1. Students' efficacy for their ability in Self-Appraisal (*M* = 4.02, *SD* = .59) and securing Occupational Information (*M* = 4.00, *SD* = .57) fell within the real limits of 'much confidence'.. Planning and Problem Solving presented the lowest means: 3.74 (*SD* = .65) and 3.65 (*SD* = .66), respectively.

Table 1

Career Decision Self-Efficacy among High School Juniors and Seniors (n = 114)

CDSE Construct	Mean	SD
Self-Appraisal	4.02	0.59
Occupational Information	4.00	0.57
Goal Selection	3.94	0.58
Planning	3.74	0.65
Problem Solving	3.65	0.66

Note. Each construct included five items which were measured on a scale: 1 (no confidence), 2 (very little confidence), 3 (moderate confidence), 4 (much confidence), 5 (complete confidence).

Objective Two

The bulk of respondents (90.7%; *n* = 88) reported FFA membership for at least three years while four students reported a one-year FFA membership, six reported two years of FFA membership, and six respondents did not report. Found in Table 2, nearly two-thirds (64.6%; *n* = 74) of respondents competed in a district, state, or national level Career Development Event (CDE) while 35.4% (*n* = 40) did not participate in a CDE, or they competed only at the chapter level.

Table 2

Student Involvement as Measured by Years of FFA Membership and CDE Participation (n = 114)

Number of Years of FFA Membership (*n* = 108)	n	%
1 Year	4	3.7
2 Years	6	5.6
3 Years	43	39.8
4 Years	55	50.9
Highest CDE Participation (*n* = 113)		
Never	34	30.1
Chapter	6	5.3
District	8	7.1
State	57	50.4
National	8	7.1

Objective Three

Pearson product-moment correlation coefficients were calculated between each CDSE construct and student's reported CDEs participation and years of participation in FFA and reported in Table 3.

Table 3

Relationships between Involvement in an Agricultural Education Program and Career Decision Self-Efficacy (n = 114)

	CDEs Participation	Years of FFA Membership
CDSE Construct	*r*	*r*
Occupational Information	0.28	0.11
Goal Selection	0.27	0.13
Planning	0.24	0.12
Self-Appraisal	0.23	0.06
Problem Solving	0.08	0.08

Involvement in the agricultural education program was assessed through the reported level of students' CDE participation in addition to their years of FFA membership. The largest correlation between CDE participation and the constructs of career decision self-efficacy was revealed with Occupational Information (r = 0.28), followed by Goal Selection (r = 0.27), Planning (r = 0.24), and Self-Appraisal (r = 0.23). All correlations were described as low relationships according to Davis (1971). A negligible relationship was calculated between CDEs and Problem Solving. Practically, participation in CDEs explained eight percent of the variance with each of the highest correlative constructs in the career decision self-efficacy scale.

Low to negligible relationships (Davis, 1971) were calculated for CDSE constructs and Years of FFA Membership. The largest correlations within Years of FFA Membership were between Goal Selection (r = 0.13), Planning (r = 0.12), and Occupational Information (r = 0.11), which were consistent with CDE Participation relationships. Years of FFA Membership resulted in negligible explained variance for CDSE.

Objective Four

Means and standard deviations for each of the 20 items are reported in Table 4 along with the responding sample. Reporting and interpretation of item means were held consistent with Betz and Taylor's (2006) reporting of CDSE means. The items assessed aspects of each agricultural education component (Classroom, FFA, and SAE). Fifteen items were found to have much influence (M = 3.50 - 4.49) while five items had moderate influence (M = 2.50 – 3.49) on agricultural education student's career decisions. Students indicated that "Being in agricultural education classes" (M = 4.11, SD = 1.09) had the most influence on their career decisions followed by membership in the FFA (M = 3.88, SD = 1.20). Maintaining record books directed the least influence (M = 3.08, SD = 1.28).

Some items were not representative of each participant's experiences in secondary agricultural education. Thus, respondents were given the choice of not applicable (N/A) for each item. The percentage of students who responded not applicable to questionnaire items addressing objective four is listed in Table 4.

Table 4

Influence of Agricultural Education Program Items on Career Decisions among High School Juniors and Seniors (n=114)

Item	Mean	SD	N/A% (*n*)
Being in agricultural education classes	4.11	1.09	3.50 (4)
Being a member of your school's FFA chapter	3.88	1.20	3.50 (4)
Successfully completing projects in shop, classroom, etc.	3.78	1.20	5.30 (6)
Participating in Career Development Events	3.77	1.23	19.00 (22)
Learning about diverse opportunities in agriculture	3.76	1.10	4.40 (5)
Helping develop local FFA activities for the school or community	3.72	1.09	18.50 (21)
Developing your SAE project throughout your FFA membership	3.70	1.25	24.60 (28)
Participating in leadership contests	3.68	1.28	30.70 (35)
Attending State and National FFA conferences and conventions	3.67	1.30	23.70 (27)
Gaining new skills through your shop/ag. mechanics lab	3.63	1.36	21.00 (24)
Participating in leadership workshops	3.61	1.23	23.70 (27)
Learning in other laboratory settings such as a greenhouse	3.56	1.10	7.90 (9)
Participating in your own SAE project (everything involved)	3.56	1.28	25.00 (29)
Developing your SAE project as a first year member	3.53	1.29	26.40 (30)
Learning about the industry of agriculture in your agriculture classroom	3.53	1.27	2.00 (2)
Completing FFA degree requirements	3.43	1.27	32.50 (37)
Receiving proficiency awards for your SAE	3.41	1.41	57.00 (64)
Serving as an FFA officer	3.39	1.66	51.00 (58)
Researching careers related to agriculture through agricultural education class	3.37	1.22	4.40 (5)
Maintaining your record books for your SAE	3.08	1.28	17.50 (20)

Note. Measured on a scale from 1 (no influence), 2 (very little influence), 3 (moderate influence), 4 (much influence), 5 (a great deal of influence).

Objective Five

Means and standard deviations are reported for each of the 12 items and are reported in Table 5. Parents, the agriculture teacher, and professionals in student's career interest area were identified as the most influential. The Agricultural Education teacher provided 'Much' to 'A Great Deal' of influence for nearly 65% (n = 72) of respondent's career decisions.

School Administration (M = 2.43, SD = 1.30), Guidance Counselors (M = 2.23, SD = 1.16), and Student's Employers (M = 2.85, SD = 1.43) yielded mean scores falling within the real limits of 'very little' and low 'moderate' influence to career decisions of respondents. Siblings (M = 3.02, SD = 1.40), College Staff (M = 3.27, SD = 1.17), Other Teachers (M = 3.19, SD = 1.32), and Other Family Members (M = 3.49, SD = 1.16) were calculated to have more influence on career decisions than the SAE Supervisor (M = 3.00, SD = 1.43). Respondents could indicate an individual was not applicable to them in the same manner as objective four.

Table 5

Influence of Individuals on Career Decisions among High School Juniors and Seniors (n = 114)

Item	Mean	SD	N/A% (*n*)
Your mother	3.93	1.18	2.00 (*2*)
Professionals in your career interest area	3.86	1.12	5.30 (*6*)
Your father	3.80	1.31	2.70 (*3*)
Your Agricultural Education teacher	3.65	1.26	2.70 (*3*)
Other family members	3.49	1.16	1.00 (*1*)
Staff from colleges/tech schools you have looked into	3.27	1.17	7.90 (*9*)
Other teachers in your school	3.19	1.32	0.00 (*0*)
Your siblings	3.02	1.40	5.30 (*6*)
The Supervisor of your SAE (other than your ag teacher)	3.00	1.43	23.70 (*27*)
Your employers	2.85	1.43	18.20 (*15*)
Your school administrators (principals, superintendent)	2.43	1.30	1.00 (*1*)
Your guidance counselors	2.23	1.16	2.70 (*3*)

Note. Measured on a scale from 1 (no influence), 2 (very little influence), 3 (moderate influence), 4 (much influence), 5 (a great deal of influence).

Discussion, Recommendations and Implications

In this study, the researchers described the influence the agricultural education program and individuals had on high school students' career decisions in addition to the confidence students held toward making career-related decisions. Junior and senior students were chosen because we believed they would have received the most exposure to potential career-directed experiences through all components of an agricultural education program. Therefore, the interpretation of this study is limited to that age range of students in the schools in which those students studied. This also limited our ability to utilize inferential statistics.

For objective one, we concluded that overall, students had moderately high confidence (efficacy) in their abilities to make decisions in career-related activities. Respondents' highest mean scores in Occupational Information and Self-Appraisal signified that students are most confident in and comfortable with securing and searching for information related to careers in which they are interested. Furthermore, students indicated they are confident in their abilities to self-reflect and evaluate personal values relative to career choice. Perceived problem-solving confidence was found to have the lowest mean, which is similar to Priest et al. (2009). Consistent with Betz's and Taylor's (2006) discussion, these results signify the students in this study may not be confident in their abilities to successfully work through adversity related to career decision difficulties, or they lack the knowledge to act decisively. Problem solving skills and abilities are two of the most highly favored qualities for new employees according the 2010 Job Outlook reported by National Association of Colleges and Employers (Koc & Koncz, 2009). Incorporating more problem-based learning activities related to tangible decision making across the curriculum could translate to increased student efficacy in problematizing career decisions.

In objective two, the majority of students were members of their programs for three or four years, and most participated in CDEs above the local level. While the years of FFA membership is consistent with typical juniors and seniors in secondary agriculture programs, the high level of participation in CDEs is seemingly out of place. It may be interesting to compare the level of CDEs participation in this sample to the larger population of FFA members to see if differences exist. Those findings could, in part, account for the results of objective three.

In objective three, students' participation in CDEs has a stronger relationship with the individual student's career decision self-efficacy than the length of membership in the FFA. By definition, participation in Career Development Events (CDEs) should have an influence on students' career decisions (National FFA Organization, 2012). Nearly two-thirds of the respondents reported participating in CDEs above the chapter level. Ideally, the act of preparing for CDEs at the district, state, or national level gives students a deeper knowledge in segments of specific career areas around which the events are designed. This translates into the constructs of Occupational Information and Goal Selection having the highest relationship with CDEs participation. Students appear to obtain career-related confidence in addition to the ability to identify and work toward their goals. A lower level of explained variance in CDSE was calculated in FFA membership years compared to CDEs participation. Therefore, the findings imply it is not necessarily the actual amount of time students are members of FFA, but the experiences they gain from that membership which associate with career decision self-efficacy. Results from this objective support the principles of SCCT which assert the outcome of self-efficacy related to career decisions as a result of learning experiences.

It is concluded from objective four collectively that items pertaining to the activities in and outcomes of SAE participation seemed to bear the least influence related to students' career decisions. This is the opposite of what is expected considering the experiential learning purpose and career oriented approach central to SAE (Phipps et al., 2008). However, this conclusion has its limitations because the authors did not specifically measure the proportion of students who had active SAEs. Consequently, some students who do not have established SAEs may not be familiar with the activities or requirements of an involved SAE program and, therefore, did not benefit from the anticipated results of a SAE. If not done so already, the outcomes of a successful SAE needs to be described and accomplished as more than complete record books and FFA awards. SAE is an opportunity for career-interest exploration in addition to skill development toward students' potential careers (McCormick & Cox, 1988).

The authors recommend that secondary teachers may need to make a better connection between career outcomes and SAE or similar occupational experience programs found in many career programs. Teacher preparation programs should attempt to instill the value of SAE integration within a secondary program. If new teachers in the profession understand the underlying purpose of the SAE program they will hopefully facilitate career awareness in their high school students. Within this sample of secondary students, the transfer between practice and purpose of SAE is possibly not being communicated. Therefore, it begs the questions: Why do students not perceive SAEs to be influential? Furthermore, do current agricultural education teachers communicate the value of SAE projects beyond progression toward FFA incentives such as degrees and award recognition?

Students did highly associate "being in agricultural education classes", as influential to their career decisions. This questionnaire item did not differentiate any one aspect of the agricultural education program, but combined everything in an effort to have the student report on his or her entire experience in agricultural education. This outcome is consistent with Talbert and Balschweid's (2006) conclusions of agricultural education and FFA providing the appropriate setting for students' career exploration. Students in this study are finding the appropriate linkages between their involvement and enrollment in a program of agricultural education and the acquisition of vocational knowledge and experiences. Referring back to the SCCT, these identified learning experiences in the secondary agriculture program are in part aiding the development of students' career outcome expectations. Whereby, they will be better able to create career choice goals in the future.

The results of objective five reflected previous research (Conroy, Scanlon, & Kelsey, 1998; Faulkner et al, 2009; Lapan, Hinkelman, Adams, & Turner, 1999; Rocca & Washburn, 2005) addressing the influence of key individuals on career decisions. Parents (mother and/or father) provided the greatest influence on students' career decisions. With relation to the

agricultural education program, it is imperative that parents are involved in the activities of the program. If parents do not know about opportunities in agriculture, we cannot expect them to direct their children towards those careers. Agriculture instructors and related adult groups need to educate parents on the industry of agriculture and opportunities within. This could be accomplished most directly during SAE home visits, school open houses, and community projects. Other effective means of communication to students' families could include a monthly newsletter with specific agricultural careers highlighted. Professionals from within the community could be introduced for parents to identify with and further inform about options with agriculture careers.

Model professionals within career interest areas of the student also highly influence career decisions an occurrence noted in Kotrlik and Harrison's (1987) study. Emphasis on job shadowing activities within the exploratory SAE area would increase student exposure to agricultural professionals. As a result, students would have more influential individuals to call upon, which could possibly enhance students' perception of SAE or other occupational activities. In contrast, guidance counselors were reported to have lower influence on career decisions. In the school system, agriculture teachers need to ensure guidance counselors are knowledgeable about career opportunities in agriculture. Students have direct contact with guidance counselors through many academic and career planning activities; therefore, it is vital for counselors to provide accurate information on agriculture. While the amount of individual student exposure from a high school guidance staff certainly varies, agriculture teachers play an integral role in ensuring that interaction is positive by aiding those staff members.

School-based agricultural education programs have been developed off the principles of providing agricultural literacy in addition to career preparation to students. The authors believe it is necessary to continue to assess the influence agricultural education programs have on students' career decisions. The established reliability of the Career Decision Self-Efficacy Scale (Betz & Taylor, 2006) in addition to the applicability of the scale to the profession of agricultural education merits the instruments' continued use. Further exploration into the relatedness of learning activities in the agricultural education program to career decision self-efficacy could positively impact the landscape of career technical programs by providing research support behind educational practices.

Additional research should compare school-based agricultural education students against a group of their peers not enrolled in the local program to determine differences or similarities. Future studies related to career decision making could unearth barriers students perceive in their career decision process. Understanding the barriers students have toward career decisions could help educators more precisely integrate career-directed activities throughout the secondary curriculum, thereby increasing secondary students' career decision self-efficacy and improving their ability to confidently make educated career decisions--hopefully career decisions favoring agriculture.

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