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Development and Validation of an Instrument to Assess Youth Motivation to Participate in Career Development Events

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Abstract

Career development events develop career and life skills in youth, but limited work has been done to assess the motivation of students who participate in these events. The purpose of this study was to validate an instrument developed to measure youth motivation to participate in career development events. An instrument grounded in expectancy-value motivation was developed to assess student motivation of youth participants (N = 2,153) at 12 career development events in various domains at the state level. Four factors—self-efficacy, cost & utility value, intrinsic value, and attainment—explained 60% of the variance in youth motivation to participate in state career development events. Youth were most motivated to participate in career development events based on the cost & utility factor, therefore, they were willing to put forth the time and effort to participate in career development events because they felt career development events would help them achieve their goals. However, youth coaches should consider using strategies to develop youth self-efficacy to perform the tasks in career development events as it explained 39% of the variance in youth motivation. Coaches should also consider the role interest motivation plays a role as it was highly correlated with self-efficacy.

Keywords: youth motivation, career development events, instrumentation

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Introduction

Students make choices to decide how they will spend their time in youth activities. Motivation helps youth choose activities in which they participate. Youth typically select activities that incorporate existing interests or hobbies (Csikszentmihalyi & Larson, 1984; Homan, Dick, & Hedrick, 2006; Texas AgriLife Extension Service, 2005) and may influence their career choices. Combined, 4-H and FFA are two large youth development organizations in the United States that reach over 2 million youth. Both of these organizations provide opportunities for youth to develop skills and knowledge through events known as Career Development Events (CDEs). These events are designed to "motivate students and encourage leadership, personal growth, citizenship and career development" (National FFA Organization, 2006, p. 5). Youth coaches advocated CDEs

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were useful to engage students and provide opportunities to learn across multiple agricultural education contexts as learning experiences (Voigt, Talbert, McKinley, & Brady, 2013a). Other researchers found that CDEs focused on animal education develop both life and career skills (Cavinder, Byrd, Franke, & Holub, 2011; Nash & Sant, 2005; Rusk, Martin, Talbert, & Balschweid, 2002). If youth do not see experiences as beneficial, either in reaching a goal or socially connecting with peers, they may stop participating in these activities (Carnegie Council on Adolescent Development, 1992; Lundry, Ramsey, Edwards, & Robinson, 2015). Limited research has investigated youth motivation to participate in activities that build career competencies; particularly, when CDEs are out-of-school, career-building activities with strong competitive aspects (Croom, Moore, & Armbruster, 2005). Competition can provide extrinsic motivation for youth and have positive outcomes for participants, such as higher levels of academic engagement and career self-efficacy (Alfeld et al., 2007). Radhakrishna, Everhart, and Sinansky (2006) reported that youth were motivated to participate in competitive events to increase knowledge, build life skills, and receive recognition. While healthy competition can lead to development of positive life skills, such as goal formulation, team work, and learning how to identify personal capacities and constraints, unhealthy competition can create a hostile or aggressive environment, lead to embarrassment, and be emotionally fatiguing (Johnson, 1993). Fox and Cater (2015) found that "both competitive and non-competitive program delivery models have value in increasing youths' science interest and competence" (p. 99). Moreover, youth motivation was studied in group of 4-H youth regarding their county fair competition experience (Arnold, Meinhold, Skubinna, & Ashton, 2007). Youth reported that their primary motivation for participation was to have fun. They also ranked goal achievement and self-efficacy as important. Participation for the sake of competition in and of itself was ranked 11th out of 16 motivating factors.

Although several studies have investigated student motivation in multiple educational contexts in agricultural education and several competitive contexts (Fox & Cater, 2015), few studies have looked at why youth chose to participate in CDEs. Other studies have assessed aspects such as coach perception of motivation (Lundry et al., 2015; Russell, Robinson & Kelsey, 2009), value of participation as perceived by parents (Radhakrishna, 2006), and demographics of student participants (Thieman, Bird, Vincent, & Terry, 2010) in CDEs. Russell et al. (2009) reported that coaches motivated students through: (a) building upon the tradition and successes of the FFA chapter, (b) providing competitive opportunities, (c) promotion the potential to gain life skills, (d) providing a fun environment, (e) recruiting students with demonstrated potential success, and (f) making CDEs an integral part of the classroom. It is important to note, this study reported coaches' perceptions, and the factors reported were primarily externally motivating, or those controlled by the coach, not by the student participants. Lundry and his colleagues (2015) found that high school agriculture teachers agreed that students gained the following skills through CDEs: teamwork, competition, setting and achieving goals, self-motivation and confidence. Croom et al. (2005) found that coaches at National FFA CDEs believed that students participated because of their interest in competition. However, students at the same event indicated that they participated because of the relationship between the event in which they participated and career choice. Further, Lancaster, Knobloch, Jones and Brady (2013) found students participated in CDEs to develop career skills, learn more about an industry and content domain, as well as compete and have fun. This difference between what teachers and students believe clarifies the need to assess motivation directly from a youth participant perspective. To better understand youth participation, it is important to identify motivational factors from the youth's perspectives (Russell et al., 2009; Talbert & Balschweid, 2004) and determine relationships among youth motivation factors. Jones, Knobloch, and Orvis (2011) found that youth motivation had an important role in developing career-related competencies when participating in a Horticulture CDE. Youth motivation variables of outcome expectancy, self-efficacy, intrinsic value, and utility value were positively related to youth performance in a Horticulture CDE.

Theoretical Framework

Regarding social cognitive theory, Bandura (1986) posits there are personal and environmental factors that can inform one's decision to participate in voluntary educational activities. For the purpose of this study, environmental factors would include any coaches, parents and/or peers that influence student choices. Because 4-H and FFA are voluntary membership organizations, the researchers of this study assumed that youth were members due to their own interest in the organization and its activities. Although external motivators may influence youth participation, we assumed participation was also informed by personal motivation.

Expectancy-value motivation was used as the theoretical framework to focus on the personal factor (i.e., youth motivation) of the social cognitive theory. Expectancy-value theory (EVT) was chosen because personal expectancies and values of participants can directly influence the decision to participate in a task, the performance of that task, and task persistence, or continuing to engage in the task (Eccles & Wigfield, 2002). The four variables of expectancy-value motivation include: (1) *Attainment Value* - "the personal importance of doing well on a task" and how it speaks to their self-identity; (2) *Cost Value* - the negative aspects of engaging in a task, such as the time or effort required; (3) *Utility Value* - how a task relates to a person's future goals, such as career goals; and, (4) *Intrinsic Value* - "enjoyment of activity participation, or interest in the activity or task" (Eccles & Wigfield, 2002, p. 120).

Expectancy value theory addresses an individual's belief in his/her ability to do a task as a construct that informs the decision-making process based on expectancies and task values. More specifically, Bandura's (1997) self-efficacy theory was used to determine if youth saw themselves capable of successfully performing the challenging tasks in a CDE. Self-efficacy is a personal assessment of one's ability to successfully perform a task in a specific context. Social cognitive theory proposes that individuals with a greater perception of personal ability to succeed at an activity are more likely to be motivated to participate in that activity, therefore putting effort into doing the task well (Bandura, 1982).

Purpose & Research Questions

The purpose of this study was to validate an instrument developed to assess youth motivation to participate in out-of-school, competitive CDEs. Three research questions guided the study: (1) What were the motivation factors and construct validity of items used as measures regarding youth participation in a CDE? (2) Were the factors of youth motivation reliable? (3) Using the motivation factors, were youth participants motivated to participate in CDEs?

Methods & Procedures

Youth participants in the 12 state level CDE contests in Indiana were the target population for the study. Five CDEs had invitational registrations, and seven of the state level CDEs required teams to successfully compete at an area event to participate in the state contest. Qualification requirements varied by event, with regional variation based on the competitiveness of a particular area in a particular subject matter. The first version of the questionnaire was developed to assess intrinsic, extrinsic, and self-efficacy motivation of youth participants in CDEs (Lancaster et al., 2013). Items were developed through discussions with a panel of contest chairs regarding why they believed youth participated in CDEs, based on what they had heard from coaches and youth regarding why they participated in CDEs during the last five years. Questionnaire items were worded using language for instrument development based on Deci and Ryan's (1985) extrinsic and intrinsic factors of self-determination motivation and Bandura's (1997) self-efficacy motivation. The first version of the instrument was field and pilot-tested with a census of participants (n = 304) in State CDEs in three animal science domains: horses, livestock, and poultry and eggs (Lancaster

et al., 2013). The instrument consisted of 30 items on a four-point summated rating scale to measure intrinsic, extrinsic, and self-efficacy motivation. The instruments were provided to event chairpersons, who distributed them to participants during a break or at the end of each CDE. Students were aware that they could decline completing the questionnaire with no negative consequence to their contest results (as defined in the approved IRB human subject's protocol). Data were collected from participants using Scantron sheets and exported from Scantron to Microsoft Excel, coded, and then imported into IBM SPSS for analysis. Demographic information included grade, gender, and participation in other CDEs. Pilot study respondents were 55% female, 36% male, and 9% did not indicate their gender. The grade distribution was 7.5% from 3rd - 6th grade, 20.5% from 7th - 8th grade, 37.8% from 9th - 10th grade, and 34.3% from 11th - 12th grades. Over half of the respondents (54.4%), indicated that this was the first time they were involved in a CDE. Principal component analysis was conducted to test the allocation of items to motivational factors. Four factors emerged from the principal component analysis (PCA): (1) Self-efficacy; (2) interest in careers; (3) intrinsic task value; and, (4) extrinsic task value. Reliability coefficients were computed using Cronbach's alpha: self-efficacy = 0.82; interest in career activities = 0.91; intrinsic task value = 0.70; extrinsic task value = 0.78.

Following the analysis of the pilot test data from the first version, it was determined that expectancy value theory (Eccles & Wigfield, 2002) was an appropriate theoretical framework for the instrument. Therefore, items were revised or added to align with the factors of EVT. Utilizing EVT allowed researchers to explore negative aspects of task value, which had not been explored in the pilot study. Furthermore, EVT allowed researchers to look at external motivators in a more precise way, by dividing extrinsic motivation into attainment and utility value.

The second version of the instrument was the focus of this confirmatory factory analysis study. It contained 28 items developed to measure youth motivation (8 items to measure intrinsic task value, 5 items to measure attainment, 3 items to measure cost, 4 items to measure utility task value, 8 items measured self-efficacy), and demographic questions for age, gender, years of participation in the current CDE, and participation in other CDEs. Task value constructs were measured by assessing responses to various statements on the instrument that asked students to indicate their level of agreement to statements using the following scale: 1 = None, 2 = A little, 3 = Somewhat, 4 = Quite a Lot, and 5 = A Great Deal. Self-efficacy and intrinsic value motivation questions referring to a specific subject matter were revised to be context specific. For example, the item "I am confident in my ability to answer general questions about [context]," would read "I am confident in my ability to answer general questions about [plants]" for the Horticulture CDE, and would read "I am confident in my ability to answer general questions about [livestock]" for the Livestock CDE. The instrument for each CDE were reviewed for face and content validity by a panel of youth development specialists, including each CDE chairperson. The questionnaire was field and pilot-tested to establish face validity and reliability.

The CDE-specific instrument was distributed to a census of students (N = 2,153) participating in 12 state-level CDEs (Crops, Dairy, Entomology, Forestry, Hippology, Horticulture, Livestock Evaluation, Meats, Poultry and Egg, Livestock Skillathon, Soils, and Wildlife Habitat) that occurred during an academic year. In events where the Blackboard Learning Management System (LMS) was used for contest content, the instrument was incorporated into the LMS and completed at the end of online component of the CDE, instead of using the Scantron sheets. Use of LMS for recording purposes was the only deviation from data collection procedures utilized in the pilot study. The CDEs included were all state-level CDEs with a life science context that were supervised by youth specialists/researchers. Student members of FFA and 4-H youth organizations jointly participated in the CDEs in Indiana.

Study respondents were 47% male and 53% female. Grade distribution was 26% in 8th grade or below, 23% in the 9th grade, 20% in the 10th grade, 17% in the 11th grade, and 14% in the

12th grade. Participation in the CDE the youth were currently attending included the current year's participation with results showing 39% of participants in their first year at that CDE. Over one-third (44%) of respondents were in their 2nd or 3rd year, 13% in their 4th or 5th year, and 4% had participated in specific CDEs for 6 to 7 years. Half of the participants (50%) reported participating in other CDEs. Representation by CDE was: Crops (*n* = 225; 11%); Dairy (*n* = 171; 8%); Entomology (*n* = 47; 2%); Forestry (*n* = 303; 14%); Hippology (*n* = 159; 7%); Horticulture (*n* = 59; 3%); Livestock Evaluation (*n* = 143; 7%); Meat (*n* = 198; 9%); Poultry and Egg (*n* = 158; 7.%); Soils (*n* = 342; 16%); Livestock Skillathon (*n* = 268; 12%); and Wildlife Habitat (*n* = 80; 4%).

Descriptive statistics (i.e., percentages, means, standard deviations) were computed using SPSS. Incomplete responses were excluded automatically by SPSS. Post-hoc Cronbach's *alpha* coefficients were computed to determine internal consistency. Pearson's correlations were used to determine relationships of variables, which were explained using conventions by Hopkins (2000). Effect sizes concerning relationships were calculated using Cohen's (1988) r^2 and were described by Cohen's (1988) conventions. Because of the large data set, 20% of the cases were randomly selected (*n* = 419) as the sample for factor analysis. Although common factor analysis has more restrictive assumptions, it is viewed as being more theoretically based (Hair, Black, Babin, & Anderson, 2009). Maximum likelihood factor analysis with orthogonal rotation was conducted on the 28 motivation items to determine if a set of latent factors represented youth motivation regarding participation in CDEs. Factor loadings of 0.40 or greater were retained (Costello & Osborne, 2005), and four items being removed because of low coefficients. Four factors with eigenvalues equal to or greater than 1.0, including a scree plot, were considered in the analysis. Correlations and factor loading coefficients of 24 items were used to understand the nature and structure of the four factors. The four factor solution was chosen because it parsimoniously explained the most variance with the fewest factors. Appropriateness of the data was determined using the Kaiser-Meyer-Oklin measure of sampling adequacy (KMO = .93) and Bartlett's test of sphericity (Sig. = .00).

Results/Findings

For the first research question, four factors explained 60.22% of the variance (see Table 1). The order and percent variances each factor contributed to the model were: (1) Self-efficacy (39.3% variance explained); (2) cost & utility (9.21%); (3) intrinsic value (6.05%); and, (4) attainment (5.67%). *Attainment* consisted of three items, which represented if youth valued the outcome expectations of being with friends, seeing new places, and responding to expectations of parents and their coach. *Cost & utility* consisted of seven items, which represented if youth were willing to spend time preparing for the CDE and spending a Saturday at the CDE and four items which represented youth's value of tasks that would help them reach future goals such as gaining confidence, enjoying competition, learning career skills, and being more competitive for scholarships and awards. *Intrinsic value* consisted of six items, which represented youth's interest in learning, working, and pursuing a career in the context related to the CDE. *Self-efficacy* consisted of eight items, which represented confident in a youth's ability to perform tasks related to the context of the CDE. Students identified most with cost and utility motivation, which reflects they felt the CDEs were useful to helping them achieve their goals and they were willing to put forth the effort to participate.

Table 1

Frequencies and Factor Loadings from Confirmatory Factor Analysis of the Youth CDE Motivation Participation Scale (n = 419)

Items	*Factor Loading*	*Frequency*
Attainment (3 items)		
AT_1: My friends were participating	.64	42%
AT_2: My parents/guardians wanted me to participate	.49	40%
AT_3: My coach encouraged me to be on the team	.66	51%
Cost & Utility Value (7 items)		
C_1: I was willing to take time to study alone	.59	56%
C_2: I was willing to take time to study with team	.55	75%
C_3: I was willing to come on a Saturday	.46	65%
UT_2: Want to learn something new	.72	75%
UT_3: Enjoy competition	.58	73%
UT_4: Want to be more competitive for scholarships/awards	.61	70%
UT_5: Want to develop career skills	.61	73%
Intrinsic Value (6 items)		
IN_1: Interested in learning about [context]	.68	62%
IN_3: I like [context]	.52	67%
IN_4: Interested in a career in [context]	.73	35%
IN_7: I am interested in working in [context]2	.44	26%
IN_8: I am interested in working in [context]3	.64	38%
IN_9: I am interested in [context] as a lifelong hobby	.69	57%
Self-Efficacy (8 items)		
SE_1: I am confident in my ability to answer general questions about [context]	.66	54%
SE_2: I am confident in my ability to answer questions about [context] anatomy/characteristics	.70	43%
SE_3: I am confident in my ability to answer questions about [context] 1	.67	42%
SE_4: I am confident in my ability to answer questions about [context] 2	.63	37%
SE_5: I am confident in my ability to identify [context] 1	.59	58%
SE_6: I am confident in my ability to identify [context] 2	.71	57%
SE_7: I am confident in my ability to choose the most [context]1	.74	45%
SE_8: I am confident in my ability to choose the most [context]2	.68	46%

Note: Frequencies represent: 4 = "Quite a Lot" & 5 = "A Great Deal."

Table 2

Descriptive Statistics and Correlations between Items and Factors of the Youth CDE Motivation Participation Scale (n = 419)

	Attainment	Cost & Utility Value	Intrinsic Value	Self-Efficacy
AT_1	.75	.21	.20	.18
AT_2	.77	.40	.25	.25
AT_3	.81	.30	.21	.21
Attainment	**1.00**	**.39**	**.28**	**.28**
C_1	.23	.73	.47	.40
C_2	.27	.70	.35	.36
C_3	.26	.64	.31	.29
UT_2	.31	.76	.37	.34
UT_3	.24	.67	.28	.39
UT_4	.32	.71	.31	.37
UT_5	.31	.72	.43	.43
Cost & Utility	**--**	**1.00**	**.51**	**.50**
IN_1	.18	.47	.79	.56
IN_3	.25	.51	.71	.57
IN_4	.25	.37	.85	.60
IN_7	.25	.35	.70	.46
IN_8	.20	.38	.80	.49
IN_9	.18	.33	.81	.58
Intrinsic Value	**--**	**--**	**1.00**	**.69**
SE_1	.21	.40	.57	.78
SE_2	.22	.42	.59	.81
SE_3	.20	.37	.57	.80
SE_4	.25	.37	.55	.78
SE_5	.19	.42	.44	.73
SE_6	.23	.43	.49	.80
SE_7	.21	.39	.59	.82
SE_8	.23	.37	.54	.78
Self-Efficacy	**--**	**--**	**--**	**1.00**
Mean	3.20	3.93	3.30	3.38
(SD)	(1.07)	(.79)	(1.02)	(.95)

Note. Pearson's correlation coefficients were reported; Scale: 1 = None, 2 = A little, 3 = Somewhat, 4 = Quite a Lot, and 5 = A Great Deal.

For the second research question, reliability coefficients were computed using Cronbach's *alpha* to determine if the four factors were reliable among the sample (n = 416). The three of the four factors had reliability coefficients greater than 0.70, which were considered acceptable (George & Mallery, 2003). Reliabilities for individual factors were: Attainment = 0.68 (3 items); Cost & Utility = 0.83 (7 items); Intrinsic = 0.87 (5 items); Self-efficacy = 0.91 (8 items). Moreover, correlations of all factors and items meeting reliability and factor analysis criteria were further analyzed to determine convergence and divergence of factors (see Table 2). The three attainment items had very large relationships with the attainment factor. The seven cost & utility items had high and very large relationships with the cost & utility value factor. The six intrinsic items had very large relationships with the intrinsic value factor. The eight self-efficacy items had very large relationships with the self-efficacy factor. The relationships among factors were also computed. There were four relationships that had a medium or large effect size. The factor cost & utility had a medium relationship with the attainment factor, and high relationships with the intrinsic factor and the self-efficacy factor. Finally, the intrinsic factor had a high relationship with the self-efficacy factor.

For the third research question, means and standard deviations were computed for the four factors to determine if youth were motivated to participate in CDEs (see Table 2). Overall, the youth participants were *somewhat* motivated to *quite a lot* regarding the four motivation factors to participate in CDEs. First, youth were motivated *quite a lot* regarding cost & utility (M = 3.93; SD = .79), which meant they believed the time and energy required to participate would be assist them in reaching their personal and career goals. Over two-thirds of the participants agreed "quite-a-lot" and "a great deal" with four of the seven items representing this factor (Table 1). Second, youth were *somewhat self-efficacious* (M = 3.34; SD = .95) to perform the tasks in the CDEs. Third, youth were *somewhat* intrinsically motivated (M = 3.29; SD = 1.02) to participate in the CDEs, which meant they were somewhat interested in learning about the tasks and contexts regarding the CDEs. Finally, youth were *somewhat* motivated to participate in CDEs because of *attainment* (M = 3.20; SD = 1.07), which meant they participated because of their friends, parents, or coaches.

Conclusions & Implications

There were three conclusions from the results of this study. First, four factors explained a majority of youth motivation to participate in CDEs. The four motivation factors, in order of importance were self-efficacy, cost & utility, intrinsic value, and attainment. These four factors supported Eccles and Wigfield's (2002) expectancy-value motivation theory. Eccles and Wigfield (2002) purported expectancies and values are informed by task-specific beliefs including one's goals and perceptions of competence and difficulty of various tasks. For example, CDEs provide students opportunities to apply knowledge and skills in specific career areas such as animal sciences, horticulture, and wildlife and natural resources (Beekley & Moody, 2002; Lundry et al., 2015; National FFA Organization, 2006). Students perceived the relevance of the career-specific tasks (Croom et al., 2005) and the extent they are confident in their abilities to successfully perform the tasks (Arnold et al., 2007). Factors of cost & utility value and self-efficacy from this study were aligned with the educational purpose and student motivation to participate in CDEs. Specifically, over 70% of the youth strongly agreed (aka, "quite a lot and a great deal") that they wanted to learn something new, be more competitive for scholarships and awards, develop career skills, and enjoy the competition. This supported Arnold and her colleagues' (2007) finding that youth participated in local competitions because of enjoyment and goal achievement.

Second, youth were motivated to participate in CDEs, and they were most motivated by cost & utility value. Although youth reported they were motivated to participate in CDEs based on self-efficacy, intrinsic value, and attainment, their highest level of motivation was cost & utility value. Although cost and utility value items loaded on the same factor, Eccles and Wigfield (2002)

differentiate cost from utility value. Cost focuses on the negative aspects of doing a task such as the effort one would need to expend rather than doing another task. These items included asking youth about their willingness to study and prepare for an event, both with team members and alone, as well as their willingness to come on a Saturday to participate in a state-level CDE. As youth have more opportunities to participate in extra-curricular activities, cost becomes an increasingly important motivator. It is not surprising that in this population, cost is relatively high. Youth self-selected to in a Saturday event also knowing that this could result in additional Saturday event if the team advanced to the state-level. In comparison, utility value aligns with how well a task is perceived to help one achieve a current or future goal. Eccles and Wigfield (2002) suggested that utility value reflects a more extrinsic motivation for engaging in a task. As we consider why cost and utility value items loaded on the same factor, perhaps youth evaluated the opportunity to participate in a CDE as a cost-benefit decision. The students likely weighed giving up time to do an alternative activity and what the benefits might be if they participated in a CDE. The benefits reflected how the CDE might help them achieve their current and future goals (Carnegie Council on Adolescent Development, 1992) regarding learning more about a specific topic and advancing their career interests (Lancaster et al., 2013; Lundry et al., 2015). As such, we consider the cost and utility value factor as a combined motivation that reflect a cost-benefit extrinsic motivation. Moreover, gaining more knowledge and development of career skills were the two highest scoring items in this factor. In Indiana, these events are clearly defined as Career Development Events (not judging contests), with a purpose to "motivate students and encourage leadership, personal growth, citizenship and career development" (National FFA Organization, 2006, p. 5). It is likely that the purpose and potential benefits of CDEs are clearly understood by students when they make a decision to participate. Furthermore, studies examining participants of CDEs (Cavinder, et al., 2011; Lancaster et al., 2013; Nash & Sant, 2005; Rusk et al., 2002) reported that participants believed these activities assisted them in developing life skills and career opportunities. This study supported previous studies, and participants in this study were informed of the purpose and benefits of CDEs, either through communication with coaches, adult alumni, or peers. Many coaches of CDEs are former CDE participants themselves, and they communicate the importance of the CDE experience for growth and development (Voigt, Talbert, McKinley, & Brady, 2013b). In addition to coaches, alumni at educational camps and events interact with youth and share the benefits of participating in CDEs, which would inform youth to believe that participation in a CDE would help them in attaining their goals.

Finally, self-efficacy was the most contributing factor to youth motivation and it was highly related to intrinsic value and cost & utility value motivation. This conclusion supported Bandura's (1997) theory that individuals participate in a task in which they feel they can be successful, and previous studies (Alfeld et al., 2007; Arnold et al., 2009) that competition can develop youth self-efficacy. It is important to note that for this measure youth were asked about their confidence prior to knowing how they performed in the event. Youth in a particular event may also have had relatively high self-efficacy because for many of the events, they had to qualify at a district contest to be able to participate in the state contest. Therefore, youth had already experienced some level of success. Coaches also spend a lot of time with their youth discussing and teaching the content of the CDE, which may relate to high youth self-efficacy.

Eccles and Wigfield (2002) mentioned more research is needed to better understand the links between expectancies and values. This study demonstrated relationships between expectancies (attainment and self-efficacy) and values (intrinsic and cost & utility). Attainment and cost & utility value were related. Both factors reflect extrinsic reasons why they might participate in CDEs. For example, youth may participate in a CDE because their coach expected them to participate (attainment) and youth likely assessed the opportunity and considered the cost-benefit decision to participate (cost & utility value). Furthermore, self-efficacy was highly related to cost & utility value and intrinsic value. This suggests that youth self-efficacy to participate in CDEs is

informed by both external and internal motivations. Bandura (1997) stated that there are four sources of self-efficacy—mastery experiences and physical and psychological affect are internal sources of control, whereas vicarious experiences and verbal persuasion are more external sources of control. Regarding youth motivation to participate in CDEs, self-efficacy was highly related to intrinsic value, which reflects youth were driven by interests and enjoyment in performing the tasks. Additionally, self-efficacy was highly related to costs & utility value, which reflects the youth were driven by seeing relevance in participating in the CDEs because it was worth their time in learning more about a specific-domain and possibly helping them achieve their career goals. Lancaster and her colleagues (2013) found that students' motivation varied among different animal science-related CDEs (i.e., horse and pony; livestock; poultry).

Recommendations

This research adds to the body of knowledge by confirming a valid and reliable instrument that can be used to assess youth motivation in career development events in the context of agricultural CDEs. Moreover, expectancy value and social cognitive theories were found to be relevant theoretical frameworks for examining youth motivation to participate in CDEs. Although the results of this study provided evidence that the Youth CDE Motivation Participation Scale was a valid and reliable measure of youth motivation to participate in CDEs, limitations should be addressed in future studies. Particularly, attainment and cost variables should be explored. Future studies may identify additional items for attainment, which was represented by three items in this study. For example, relevant statements that reflect "the personal importance of doing well on the task" (Eccles & Wigfield, 2002, p. 119) should be identified for attainment. Exploring FFA and 4-H youth schemas, especially through semi-structured interviews, could help researchers identify additional items for attainment as youth may consider performing well in a specific career-related competition as part of their ideal self-identity (Eccles & Wigfield, 2002).

The target audience for this research was the population of students participating in a state CDE in each domain. By their presence, the youth indicated a willingness to bear the time and effort costs of participation. Cost items did not address monetary cost for participation, or costs in regards to other activities which were prioritized below the CDE. Also, youth who were not willing to bear the time cost for participation chose not to participate, and therefore were not participants in the study. Moreover, the convenience sample may be biased toward youth being more motivated they advanced to a state level competition. This is an opportunity for future research studies to focus on motivation of youth who do not participate in CDEs. Future studies should investigate if cost varies by level of competition and if it is a predictor of success in CDEs. Finally, cost and utility value loaded as a single factor in this study. Future studies should investigate the relationship between cost and utility value, and their influence on youth motivation to participate in CDEs.

A unique aspect of this research is that it assessed CDEs as a holistic learning experience, regardless of the CDE-related domain. Most research conducted on CDEs has been domain-specific (Cavinder et al., 2011; Jones et al, 2011; Nash & Sant, 2005; Rusk, et al., 2002; Thieman et al., 2010; Voigt et al., 2013a; Voigt et al., 2013b). The instrument had items that were populated with specific names of CDEs so it could be used across a variety of CDEs. Future studies should focus on the analysis of similarities and differences in youth motivation across different domains to help educators better understand why youth participate, and if motivation is different because of the nature of specific CDEs (e.g., Lancaster et al., 2013).

Further, researchers may consider exploring differences in youth motivation at local, district, state and national levels. Although this study focused on the state level, motivation may vary across different levels and the extent youth may have developed mastery of a CDE. For example, one might expect that self-efficacy would be higher as youth advance to higher levels of competition because of mastery experiences and assuming they learn coping strategies to self-

regulate negative emotions such as nervousness. Future studies should compare motivational factors to performance in CDEs to determine which factors are predictors of performance. Based on Bandura's (1997) social cognitive theory, one would expect high levels of self-efficacy to be related to high levels of task competency.

Finally, future research should explore what components of the learning experience (e.g., coaching strategies, self-regulation, learning resources) influence motivation. CDEs are activities that have a high level of student involvement, but limited research has been conducted to understand why students participate. Other studies have reported that youth have increased life skills upon completion of a CDE (Cavinder, et al., 2011; Nash & Sant, 2005; Rusk et al., 2002). However, little research has addressed how to increase youth engagement in these activities. State supervisors, youth development specialists, and CDE coaches can be more effective if they can purposefully motivate youth to participate in out-of-school competitive career development events to develop life skills that are aligned with the goals and purposes of FFA and 4-H programs. A better understanding of why youth participate in CDEs would assist coaches in recruitment and retention of youth into a CDE and possibly active engagement in the Agricultural Education/FFA or 4-H Youth Development program.

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