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Career Development Event Preparation and Experiential Learning Strategies Employed by Pennsylvania Secondary Agricultural Education Teachers

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Abstract

Career development events are an important facet of the National FFA organization as well as the teaching and learning segment of the national research agenda for Career and Technical Education (Lambeth, Elliot & Joerger, 2008). Students are often prepared to compete in these events by their FFA advisor. Career development events provide students the opportunity to practice, in a competitive setting, the skills and knowledge gained through classroom and laboratory instruction. Thus, these events could be described as an experiential learning opportunity that allows students to practice skills, model procedures, receive feedback, and apply knowledge. The current study sought to determine the linkages between the implementation of experiential learning strategies and the approaches employed by agricultural education teachers to prepare students for state-level events. A stratified random sample of current agricultural education teachers in Pennsylvania was selected for participation. Data were collected utilizing an electronic survey technique. Results indicated that agricultural education teachers use experiential learning and a variety of techniques, time schedules, and preparation strategies in preparing for career development event competition.

Keywords: experiential learning, agricultural education, career development events

Introduction

Career and Technical Student Organizations (CTSOs) have been an integral component of Career and Technical Education (CTE) since the passage of the Smith-Hughes Act of 1917 (Alfeld et al., 2007; Threeton & Pellock, 2008). Originally called vocational student organizations (VSO), these organizations were designed to integrate leadership skills along with the technical employment skills being taught in early vocational education programs. Vocational educators whose responsibilities included advising could utilize funds (Alfeld et al., 2007; Threeton & Pellock, 2008) to incorporate the elements of the VSO, which were deemed integral to the curriculum. The mission of CTSOs is to provide the best learning environment so students can improve their leadership and technical skill abilities in their career and technical areas (Scott & Sarkees-Wircenski, 2008).

For nearly 100 years, a wide range of CTSO activities have been developed in the areas of skills contests or career development events, leadership development and community service (Alfeld et al., 2007). CTSOs were formed to serve students in a specific career and technical area and focus on: (a) developing leadership skills; (b) cultivating personal growth; (c) exploring careers; (d) improving home and family; (e) developing citizenship and patriotism; (f) improving scholarship and vocational preparation; (g) improving school and community; (h) developing respect for dignity and work; (i) developing high ethical and moral standards; (j) participating in cooperative efforts; (k) developing creativity; and (l) developing social skills (Carl D. Perkins Act, 2006).

Through these components, CTSOs have been recognized for providing students the opportunity to acquire invaluable experience in leadership, teamwork, citizenship, problem-solving, communication and self-management skills for future workplace success. CTSOs encourage student-directed learning and experimentation, thereby requiring members to absorb, process, and apply new information quickly and effectively. Employers place great value in those whom are capable of learning on their own (Vaughn, 1999). Litowitz (1995) noted that a common element of these organizations are the competitions; thus, the events provide excitement and challenge within classrooms and conferences, which encourage students to design and or plan solutions to the best of their ability. In fact, the perceived benefits of CTSOs are in alignment with the Goals for CTE in Reinventing the American High School for the 21st Century including:

> (a) preparing students for challenges in postsecondary education and in the high-skilled workplace by helping them learn basic skills, habits, and attitudes, as well as acquiring a core knowledge base, (b) providing focused learning activities that will assist students in making educated choices about future educational, training, and employment opportunities, and (c) ensuring that students who decide to enter the workforce directly out of high school are prepared with marketable skills and knowledge for a given career area (ACTE, 2006, p.17).

The U.S. Department of Education presently recognizes 11 CTSOs. While the scope of CTE has significantly changed over the last 90 years, an integral relationship between CTE and CTSOs continues to mean intra-curricular rather than extra-curricular (Talbert, Vaughn, Croom, & Lee, 2007).

Agricultural Education and the FFA

Agricultural education programs are currently offered across the United States at the secondary level through state approved programs and generally incorporate three major components including laboratory and classroom instruction, supervised agricultural experience, and involvement in the National FFA Organization (Talbert, Vaughn, Croom, & Lee, 2007). Currently, agricultural education programs provide emphasis on technology, science, and business related instruction that include plants, animals, natural resources systems, and economics. Additionally, the National FFA Organization provides leadership and technical agricultural opportunities for students to practice and excel in areas of agriculture that promote growth, student development, and the acquisition of advanced technical skills and knowledge. In agricultural education, classroom instruction, supervised experience and the FFA along with the linkages between these three areas are closely aligned in resource sharing, teacher expertise, and overall program depth. (Talbert, Vaughn, Croom, & Lee, 2007)

The National FFA Organization's mission is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success (National FFA Organization, 2011). This mission is manifested in the leadership programs including a prime focus on career development events. Career Development Events provide students with the opportunity to develop critical thinking skills, to communicate clearly, and perform effectively in a competitive job market. Since its beginning in 1928, the FFA has created career development events or competitions that help demonstrate meaningful connections for students between classroom instruction and practical application in agricultural endeavors. (National FFA, 2011). Vaughn, Kieth, and Lockaby (1999) emphasized that students who compete in FFA have a place for recognition and to be motivated to set goals and complete tasks. According to the Handbook for Advisors of Career and Technical Student Organizations (Vaughn, Vaughn & Vaughn, 2007), the value of CTSOs to students encompasses the elements of competitive activity that represent learning and achievement. These occupational specific activities typically involve competition or career development events formerly known as CTSO contests among students.

Experiential Learning

Experiential learning has received significant research attention (Dewey, 1938; Kolb & Fry, 1975; Kolb, 1984; Knobloch, 2003; Roberts, 2006; Bechtel, Ewing, Threeton, Mincemoyer, 2013). According to Cheek, Arrington, Carter, and Randell (1994), experiential learning consists of practicing in real situations, modeling appropriate behaviors and procedures, receiving appropriate feedback, as well as providing opportunities to apply knowledge in new situations. Other researchers (Boud, Cohen, & Walker, 1993) have proposed that learning from experience consists of five propositions: (a) experience is the foundation of and stimulus for learning; (b) learners actively construct their own experiences; (c) learning is a holistic process; (d) learning is socially and culturally constructed and (e) learning is influenced by the social-emotional context in which it occurs. Experiential learning as Smith (2001) described it is the "sort of learning undertaken by students who are given a chance to acquire and apply knowledge, skills and feelings in an immediate and relevant setting" (p. 1). This type of experiential learning as described by Smith is congruent with current day career and technical education programs and/or the activities within a nationally recognized career and technical student organization.

Career and technical education and related CTSOs are grounded in providing students with learning experiences that encourage competency, growth, and workplace literacy skills. According to Doolittle and Camp (1999), experiential learning aligns with constructivism, which posits that learners construct meaning from their experience. Experiences in leadership, technical skill application, and personal growth through National FFA competitive events allow students to construct meaning through the learning process. Regardless of the educational setting, a significant detail to remember with the concept of experiential learning is that it involves a direct encounter rather than simply a thought process associated with the learning (Borzak, 1981).

Learning and Understanding through Experience

In the late 1950s, the complexity of understanding humans and their environments became increasingly apparent and the field of cognitive science emerged. New experimental tools, methodologies and ways of analyzing theories have spurred the development of deep insights into the importance of the social and cultural contexts of learning (National Research Council,

2001). Students often have limited opportunities to understand or make sense of topics because many curricula have emphasized memorization rather than comprehension. Textbooks are filled with facts that students are expected to memorize and most tests assess students' abilities to remember these items. The new science of learning does not deny that facts are important for thinking and problem solving. Usable knowledge is not the same as a mere list of disconnected facts. Experts' knowledge is connected and organized around important concepts; it is conditionalized to specify the contexts in which it is applicable; it supports understanding and transfer (to other contexts) rather than only the ability to remember (National Research Council, 2001).

Experiential learning through CTE and CTSO involvement provides students with tangible subject matter to promote learning and skill development. The knowledge and skills required for CTSO engagement into career development events represent "usable knowledge" that is organized around important concepts. Students learn and apply the knowledge in the contexts offered by CTE and specifically CTSOs, which support understanding, retention, and transfer of knowledge into other situations. In support of the linkage between CTSOs and experiential learning, Weatherford and Weatherford (1987) believed that experiential education incorporates the essentials of problem solving, critical thinking, interpersonal skills, and offering opportunities for experience and content to be mutually supportive. An effective component of experiential learning is that it includes cognitive, affective, and psychomotor areas of learning. In support of the linkage, Rayfield (2006) found that in livestock judging competitions, teams scoring the highest have greater experiences in live animal practice prior to participating in the livestock judging career development event.

Theoretical Foundation

An analysis of David Kolb's work (i.e., Experiential Learning Theory) revealed that it appears to have strong potential to enhance the education process and learning in general. Kolb's Experiential Learning Theory (ELT) draws upon the works of Dewey, which emphasized experience in the learning process (Rudowski, 1996). Consequently, his learning model is grounded in the theoretical framework of personal experience (Ausburn & Brown, 2006). Kolb's ELT is built on six propositions (Kolb & Kolb, 2005) that include:

> (a) Learning is best conceived as a process, not in terms of outcomes.
>
> (b) All learning is relearning and draws out the students' beliefs and ideas about a topic so that they can be examined, tested, and integrated with new, more refined ideas.
>
> (c) Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world. In the process of learning one is called upon to move back and forth between opposing modes of reflection, action, feeling and thinking.
>
> (d) Learning is a holistic process of adaptation to the world.
>
> (e) Learning results from synergetic transactions between the person and the environment.
>
> (f) Learning is the process of creating knowledge. (p. 194)

In Kolb's model, students learn through experience and acquire knowledge in different modalities. Kolb's ELT identifies four modes of grasping/transforming experience within his model that include: Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation. This model is also supported by Cheek, Arrington, Carter, and Randell (1994), who note that experiential learning consists of practicing in real situations, as well as providing opportunities to apply knowledge in new situations. While educators might have a specific delivery preference for which of Kolb's modes to introduce students to first, Kolb and Fry (1975) identified that the learning process can begin at any one of the four modes and should be viewed as a continuous cycle (see Figure 1). An educator often uses their best professional judgment given the situation on how to cycle through the four modes of experiential learning. However, the transfer of learning via the four modes of experience within the cycle is of the greatest importance with experiential learning.

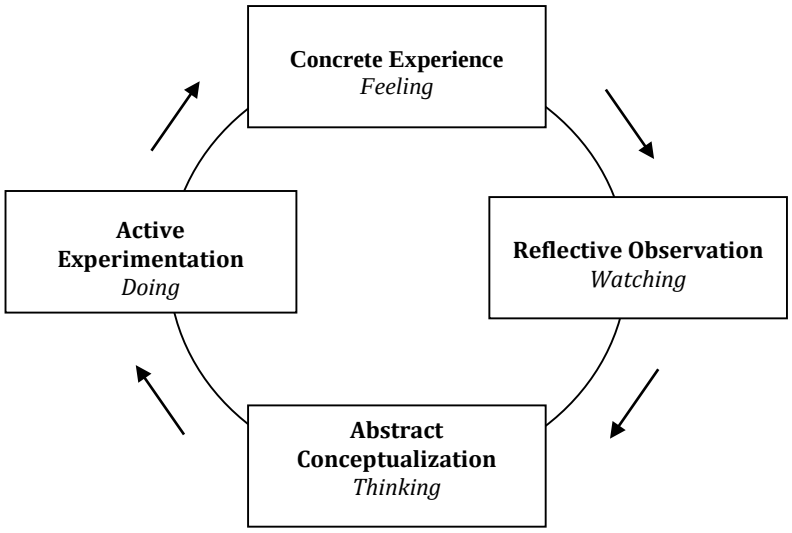

Figure 1. The four modes of Kolb's Experiential Learning Cycle

The Problem

CTE practitioners generally hold a philosophical belief in the process of learning by doing. Additionally, excellent teachers motivate students, convey concepts, and help students overcome learning difficulties (Kreber, 2002). In CTE, teachers who motivate students, convey concepts, and help students overcome learning difficulties often do so by helping students to learn while doing. In other words, the task that is to be learned is taught through modeling and repeated practice followed by reflective feedback from the instructor. While the process of learning by doing appears to have shown success over the years, further exploration into what enhances student learning context with CTE and CTSOs could offer practitioners valuable insight into how experiential learning techniques translate into student success in competitive events. This exploration could reveal best approaches to enhancing student learning experiences related to CTSOs and specifically, career development events. Research can provide findings on the teacher related factors involved in successful student learning and the demonstration of that performance in competitive events, as well as, how these factors might be aligned with the components of experiential learning models, such as Kolb's (1984) model. The possibility of successful performance on competitive events that is based on learning by doing aligned with

experiential learning strategies offers teachers a theoretical approach to enhance student growth and achievement. In a similar approach, the role of the CTSO creates opportunities for teachers of agriculture to create deeper meaning and understanding of the student learning experiences through career related events and activities.

Students who participate in CTSOs derive many benefits from that experience including the opportunities to develop positive self-concepts, social skills, problem-solving skills, communication skills, leadership skills, and occupational skills, all of which are valued universally by employers (Scott & Sarkees-Wircenski, 2008). While these benefits are commonly associated with CTSO participation, it is important to consider the relationship between learning theory and CTSO programming within the perspective of enhancing learning opportunities available in career development events. It's important to understand the successful approaches undertaken by agricultural education teachers, which result in advanced levels of student learning and performance as evidenced by highly successful competitive event teams. These approaches, when combined with experiential learning strategies, may offer all students the maximum opportunity to learn and experience success in competitive events. Consequently, knowledge of how experiential learning might enhance and amplify student learning would be extremely helpful to teachers and to teacher educators in preparing new teachers who are capable of providing rich educational experiences for students in the classroom and in CDE preparation and participation.

A student who participates in a CTSO competitive events in which he/she must "reflect", "think", "feel" and "do", (in an experiential learning context) could transition those attributes into an employment situation when encountering new experiences in on the job performance. Pedagogy aligned with Kolb's experiential learning theory and CTSO competitive event preparation could prepare students for the "performance elements" of understand employment and learning on the job which are inclusive of reflecting and conceptualizing as described by Kolb (1984). As a result, the value of integrating Kolb's Experiential Learning Theory into career development event preparation strategies might create enhanced learning opportunities that extend into the student's post-secondary educational experience and/or career.

Methodology

The purpose of this study was to describe the implementation of research-based experiential learning strategies and the approaches employed by agricultural education teachers to prepare individual students and teams of students for FFA state-level career development events in Pennsylvania. The objectives of the study included the following:

1. Describe the degree to which experiential learning is utilized in secondary agricultural education programs.
2. Describe teacher preferences in implementing overall preparation strategies for local, state, and national level Career Development Events.
3. Describe teacher perceptions of career development experiential learning and engagement strategies for students in Career Development Event preparation.

Instrumentation

A quantitative research methodology was used to conduct the study. The specific method chosen to investigate the research objectives was an investigator-developed online survey, which measured current experiential learning practices as well as career development event preparation

strategies of agricultural education teachers. The instrumentation was developed based on scholarly literature related to career development events and experiential learning practices (Kolb, 1984; Kolb & Kolb, 2005). The instrumentation was thoroughly reviewed for face and content validity by a panel of practicing agricultural education teachers, teacher education faculty members, and experts in survey development and research. Furthermore, a pilot study was conducted to determine reliability of the instrumentation. Teachers from the same state, which were not part of the research sample, were asked to complete the survey instrument to determine reliability of the instrumentation. The Cronbach's alpha coefficient was determined to be .91.

Data Collection and Analysis

Data collection commenced in spring 2011, following human subject protocol approval from the university's Institutional Review Board. The study was conducted using the web-based survey system "Qualtrics", which served as a platform for instrument development, dissemination via email, and basic statistics generation as responses were collected. Dillman's (2000) procedures and timelines for conducting internet surveys were used when administering the survey data collection component. An emailed pre-announcement, an initial invitation to participate, and three follow-up email contacts were sent to non-respondents.

The state's secondary agricultural education teachers were the designated target population for the study. A random sample of the state population of agricultural education teachers was selected to provide the researchers with a 95% confidence level on statistical analysis. The total number of state agricultural education teachers was 253 as of this date. The list was procured from the state agricultural education teachers association and was deemed to be reliable and factual by that organization's secretary. Consequently, frame error was minimized by utilized the most recent list of teachers as opposed to a list of the association's members. Thirteen email addresses were returned as invalid. Attempts to correct invalid email addresses resulted in eight additional valid addresses.

Utilizing a 95% confidence level, the random sample size for the given population was 131. Ninety-two participants responded to the survey instrument, which created an overall response rate of 70%. The statistical technique of comparing early to late respondents (Miller & Smith, 1983) was used to control for non-response error. Those individuals who responded prior to the third contact were considered to be early respondents and those individuals who responded after the third contact were considered to be late respondents. A comparison of the responses of the "early" respondents revealed that there were no statistical differences between the early and late respondents in this study. This process allowed the researchers to generalize to the non-respondents and provided a methodological basis for assuming that had they responded, they would not have responded statistically different from those who elected to respond. Therefore, the researchers were able to generalize to the entire population based on the sample responses.

Results

Utilizing an electronic survey via Qualtrics, data were collected to answer the objectives of the study. Results of the study are reported by objective.

Objective 1

Data related to the use of experiential learning in the teachers' programming is displayed in Table 1. The overall mean response for each statement/questions was near three; thus, a statement of frequency near "frequently". The reflection component of the experiential learning model was rated lowest out of the four components at a mean of 2.58. With the majority of the responses falling between sometimes and frequently, the findings suggest that a limited amount of experiential learning appears to be taking place. The findings also suggest that teachers may not have high literacy levels of experiential learning and lack the expertise to properly implement the experiential learning strategies of abstract conceptualization, active experimentation, concrete experience, and reflective observation.

Table 1
Experiential learning within agricultural education programs (n = 70).

Question/Statement	Mean	Standard Deviation
How often do you use experiential learning in your program?	2.91	.68
Experiential learning in my classes includes students using the new skill or knowledge in future situations.	2.89	.62
Experiential learning opportunities in my classes include an actual experience.	2.87	.70
Experiential learning in my classes includes students drawing conclusions.	2.87	.72
Experiential learning opportunities in my classes include a reflection component.	2.58	.77

Note. Always = 4; Frequently = 3; Sometimes = 2; Rarely = 1.

Objective 2

The following data (Table 2 through Table 7) describes the overall implementation of career development event preparation strategies by the responding agricultural education teachers. Table 2 outlines the time when teachers indicate they prepare individuals or teams for CDE competition.

Table 2
Timing of preparation for Career Development Events (n = 69).

Career Development Preparation Time	Frequency	Percent
After school.	33	44
During the regular school hours in agricultural education classes.	29	39
During school hours at a time other than in agricultural education classes.	8	11
During weekday evenings.	5	6
Weekends.	0	0
Total	75	100

Note. Participants were only able to choose one category for this question.

Forty-four percent of the teachers indicated preparing FFA members for competition mainly after school; 39% indicated that members are mainly prepared during agricultural education class sessions, 11% of the teachers indicated that FFA members are mainly prepared for CDE competition during school hours other than in agricultural education classes, and 6% indicated that preparation mainly takes place on weekday evenings. None of the respondents indicated that preparation for CDE competition mainly took place on weekends.

In Table 3, data related to the timeframe for beginning to prepare FFA members for CDE competition is presented. Seventy-four percent of the respondents reported that they begin preparing FFA members at least 6 weeks prior to the first competition, with 38 percent beginning two months prior to the competition and 36 percent beginning six weeks prior to the first event. Twenty six percent of the teachers indicated that they began preparing teams at one month, or less, prior to the first level of CDE competition.

Table 3
Prior preparation for Career Development Events (n = 76)

Approximate Preparation Time Prior to the Career Development Event	Frequency	Percent
Two months prior to the first level of the CDE.	29	38
Six weeks prior to the first level of the CDE.	27	36
One month prior to the first level of the CDE.	10	13
At a time less than one month prior to the first level CDE.	10	13
Total	76	100

Note. Participants were only able to choose one category for this question.

Responding teachers indicated that they used a variety of strategies to prepare students for the events (See Table 4). Most of the preparation included implementing a local replica of the competition and allowing students to learn from one another. Interestingly, the local replica of the competition provides students with as close of an approximation as possible to the real event and the data suggests that nearly three fourths of the respondents utilized this approach.

Table 4
Preparation techniques for Career Development Events (n = 74).

In preparing teams for Career Development Event participation, I focus on…	Frequency	Percent
Having students participate in a replication of the CDE.	53	72
Helping the students learn the CDE content from one another.	44	59
CDE strategies that have proven to be successful.	39	53
Problem solving.	29	39
Intensive classroom sessions for preparation.	24	32

Note. Participants were able to choose multiple categories for this question.

Table 5 displays the data related to the factors that influenced the respondents' techniques for preparing FFA members for CDE competition. The two most commonly selected options were "success in previous years" equal to 79% and "the knowledge and ability of CDE participants" equal to 62%. Approximately 40% of the respondents indicated that their preparation strategies were influenced by "attending professional development on preparing CDE participants", "another agricultural teacher", and "my former agriculture teacher". A quarter, or less, of the respondents indicated that they were influenced by "a representative from an agricultural business or industry", "another teacher", "an administrator", or "current mentors", when preparing FFA members for CDE competition.

Table 5
Influences on preparation for Career Development Events (n = 76).

My CDE preparation techniques have been influenced by…	Frequency	Percent
Success in previous years.	60	79
The knowledge and ability levels of CDE participants.	47	62
Attending professional development on preparing CDE participants.	33	43
Another agriculture teacher.	30	39
My former agriculture teacher.	28	37
A representative from an agricultural business or industry.	18	24
Another teacher.	8	11
An administrator.	2	3
Current mentors.	2	3

Note. Participants were able to choose multiple categories for this question.

Data related to changes in teacher preparation strategies for state level competition (i.e., after winning the district level competition) is displayed in Table 6. Teachers indicated that they included "additional time after school" (68%); "provided additional study guides or materials" (61%); conducted "more intense instruction and practice" (61%); "working with more complex issues" (43%); and held "additional time during school" for practice (38%).

Table 6
Changes in preparation strategy for state level competition (n = 69).

Changes in Preparation Strategies	Frequency	Percent
Additional time after school.	47	68
Providing additional study guides or materials.	42	61
More intense instruction and practice.	42	61
Working with more complex issues related to the CDE.	30	43
Additional time during school.	26	38

Seventeen percent of the teachers reported spending 6 – 10 hours per week preparing FFA members for CDE competition. None of the respondents reported spending 10 hours per week or

more in preparing for CDE competitions. Eighty three percent of the teachers indicated that they spent 1 – 3 hours per week (47%) or 4 – 5 hours per week (36%) in preparing FFA members for CDE competition (see Table 7).

Table 7

Hours of preparation per week for Career Development Events (n = 72)

Please indicate the typical number of hours per week you invest in training teams or individuals for state level Career Development Events.	Frequency	Percent
1-3 hours per week	34	47
4-5 hours per week	26	36
6-8 hours per week	8	11
9-10 hours per week	4	6
Greater than 10 hours per week	0	0
Total	72	100

Note. Participants were only able to choose one category for this question.

Objective 3

The following data (Table 8) describe the overall perception of career development event student learning and engagement strategies by the responding agricultural education teachers. Teachers "agreed" with most of the statements related to career development event preparation; however, teachers "neither agreed nor disagreed" with the statement that indicated that career development event preparation should be done in class. The highest rated statements, on the five-point scale, included the use of multiple instructional strategies, the use of problem solving, the use of study and hands-on preparation, and that the preparation is developmental for students. Other statements rated as "agree" (meaning that they were important) related to the preparation of student for career development event participation included; use of concrete experiences, experience is central, consideration of student learning styles, active experimentation, and being able to grasp concepts in an abstract manner.

Table 8
Teacher Perceptions of CDE Student Learning and Engagement Strategies (n = 76)

Preparation Approach	Mean	Standard Deviation
CDE preparation requires the use of multiple instructional strategies.	4.38	0.61
CDE preparation involves problem solving and encountering new situations for students.	4.26	0.53
CDE preparation is a developmental process for students.	4.28	0.53
CDE preparation includes equal amounts of study and hands-on preparation.	4.26	0.66
In CDE preparation, it is important for students to grasp the new information through experiencing the concrete and tangible aspects of CDE materials.	4.16	0.65
An understanding of student learning styles is important in CDE preparation.	4.16	0.63
In CDE preparation, experience plays a central role in the process of student learning.	4.09	0.73
In CDE preparation, students must actively experiment with the materials in order to grasp the concepts of the materials.	4.09	0.70
In CDE preparation, it is important for students to grasp things abstractly which includes analyzing and planning for solutions.	4.07	0.57
Reflective observation of practice work completed is important in CDE preparation.	3.96	0.66
Teacher led structured reflection on CDE preparation efforts better prepares students for the competitive event.	3.88	0.65
A formal team tryout process gives students equal access in becoming team members.	3.78	0.78
A formal team tryout process motivates students to better prepare for participation.	3.63	0.92
CDE preparation should be teacher structured.	3.41	1.02
CDE preparation should be done in class.	2.96	0.92

Note: Strongly disagree = 1; Disagree = 2; Neither agree nor disagree = 3; Agree = 4; Strongly agree = 5.

Conclusions/Recommendations/Implications

Objective 1 (Experiential Learning in Agricultural Education Program)

Teachers who responded use experiential learning in their program. However, when asked as to the level of use of experiential learning components teachers' use of reflection was not rated as highly as the other three components, as described by Kolb (1984). Reflection received a mean score of 2.58, while concrete experience, abstract conceptualization, and active

experimentation received mean scores of 2.89, 2.87, and 2.87; respectively. Each of these mean scores, on the four-point scale, were between sometimes and frequently; however, reflection was noticeably lower in its overall mean score. Thus, teachers should be informed of ways that the reflection component of the experiential learning model can be incorporated into career development event preparation, as this may enhance student retention and transfer of information for future application of the content, such as future competitions. Without reflection, a key component of experiential learning is missing and a solid opportunity to interact with students on their learning is lost. Teachers should create space during the CDE preparation phase (and in related classroom activities) for students to engage in dialogue with one another and the instructor about the learning that has taken place. This approach can be thought of in a manner similar to a baseball coach reviewing game situation with players following the completion of a game or practice. Time allocated to talk, think, reflect, share ideas, debrief, and consider new approaches can be used very productively to make a meaning contribution to the learning experience.

A sound approach to experiential learning has much to offer the teacher and student of agriculture. The data analysis from this study suggests that many of the opportunities to learn through experiential learning may not be utilized and optimized to the highest degree possible. While many researchers have espoused the benefits of experiential learning (Doolittle & Camp, 1999; Boud, Cohen, & Walker, 1993; Knobloch, 2003, Roberts, 2006), little has been done to connect the preparatory elements of CDEs and true experiential learning. While the findings from this study suggest that teachers may, in fact, indicate that they use experiential learning strategies in their classrooms, it's prudent to consider how they might be better utilized to prepare students for competitive events. For example, a structured debriefing session following the learning experience may be helpful to students in their efforts to master the material. Additionally, the findings from this study indicate that teachers do not use experiential learning frequently in the CDE preparation planning so a debriefing experience could contribute to higher levels of student retention.

Perhaps Kolb's Experiential Learning Theory has the greatest potential to impact student learning in CDE preparatory training due to the four modes of acquiring knowledge including concrete experience, reflective observation, abstract conceptualization, and active experimentation. To completely derive the benefits of this model, agricultural education teachers can structure their CDE preparatory approaches by providing the experiences as suggested by Kolb (1984). For example, an experiential learning approach to preparing students for a parliamentary procedure competition might involve a structured and intentional approach focused on discussing and learning about the purpose of having a meeting for an organization to transact business (abstract conceptualization), participating in a meeting as a member of the organization (concrete experience), learning how to apply all the rules of parliamentary procedure in a meeting facsimile (active experimentation), and investing time to discuss and reflect on performances and the handling of business using appropriate parliamentary procedure methods (reflective observation). A sequence of structured self-reflection and shared reflection could include the following steps:

1. Time for students to independently reflect on their experiences and to take notes of those experiences
2. Individual sharing of perspective or experience in a group setting.
3. Feedback from group members to each individual about their perspective or experience
4. Teacher input to the group based on perspective or experience sharing

5. Group discussion of additional learning strategies or approaches that may be appropriate
6. Wrap up/summary of reflection lead by students or instructor by incorporating all four components of Kolb's experiential learning model (1984) to CDE team preparation, students have the opportunity to experience and interact with the content in ways that enhance retention and establish a contextual learning opportunity that is permanent.

Objective 2 (Preferred Teacher Implementation Strategies)

Agricultural education teachers use a variety of techniques, time schedules, and implement changes to their preparation strategies when preparing for state-level career development event competition. Teachers' preparation strategies are influenced by past success and students' knowledge and ability. While professional development, other agricultural education teachers, and the respondents' former agricultural education teacher were also influential in preparing students for career development events, a majority of the respondents indicated being influenced by past success and their students' knowledge and ability. Teacher educators need to keep this in mind when preparing future teachers as the student knowledge and ability influences may not be as evident in early career teachers, whereas the former agricultural education teacher influence may be more evident. Teacher educators can offer instruction to pre-service teachers through experiential learning approaches which would allow them to experience the benefits of the process.

Teachers believed that career development event preparation should include; multiple instructional strategies, problem solving and new situations, both study and hands-on preparation and that preparation for career development events should be a developmental process for students. However, many of the teachers indicated that career development event preparation should take place outside of the normal class session time. Constraints, such as time, location, teaching resources required, and overall classroom or laboratory environment, that are associated with a "typical" class session may be part of this finding. Teachers may need the extra time, and resources, to work with a career development event team or individual that may not be feasible with a class of 20 or more students. Travel away from school grounds may be required in providing career development event participants with an authentic experience that will best prepare them for the event. Again, this may not be possible within the context of a normal class session. The teacher is better able to set the length of preparation by controlling the structure of the preparation outside of the class session time; including the length of the preparation, off campus travel, and the availability of resource people. While 44% of the respondents indicated that a majority of their preparation took place after school, possibly due to the constraints of a "typical" class session, 39% of the respondents did indicate that they utilized agricultural education class session time to prepare for career development event competition. Thus, teachers may be incorporating the career development event portion of the FFA into their complete program, but realize that for competitive event preparation the constraints of the classroom may not allow for optimum preparation of the student participants. It is recommended that teachers incorporate the elements of experiential learning and create practice opportunities after school that build on the experiences in school. The after school practice sessions can include guided practice with the CDE material, cooperative learning with the guided practice, teacher feedback, and a structured reflection component that builds on the experience of that session.

Objective 3 (Teacher Perception of Student Learning and Engagement Strategies)

Many teachers reported using cooperative approaches to teaching and practicing CDEs along with creating a replica of the CDE. The replica allows for unanticipated contextual situations, which in many cases requires student to work together to support one another and to solve problems. This approach is supported by Litowitz (1995) who stated that the competitive events provide excitement and challenge within the program, which encourages students to design and plan solutions to the best of their abilities and to perform well in the competitive events. This has implications for teacher preparation in that students who learn to teach through a competitive event replica with multiple learning approaches may have students with a higher degree of understanding of the event and the level of performance needed to be successful. This could be viewed similarly to an athletic coach requiring his/her teams to go through "game-like situations" in practice rather than simply working on skills. It is recommended that teachers develop a strong skill set in the implementation of cooperative learning and develop strategies to blend cooperative learning and experiential learning through Kolb's Model (1984) and student collaboration. For example, the contextual situation of the competitive event replica or the "game-like situation" can teach students the appropriate thinking strategies and approaches when they encounter the actual game or CDE. The data suggest that teachers believe it is important to understand different student learning styles so those learning styles may be accomplished during the preparation phase for the CDE. Additionally, CDE preparation requires students to actively experiment with the materials of the event to grasp their importance; thus, experimentation should be included in CDE preparation. It could be invaluable to conduct follow-up studies to determine the levels of experiential learning literacy among agricultural education teachers and to discover possible barriers to implementing these learning strategies during CDE preparation.

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