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More Than Winning: A Mixed Methods Grounded Theory Investigation of the Career Development Event Preparation Process

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Abstract

Preparing teams to compete in Career Development Events (CDEs) is a significant teacher concern yet is potentially a highly motivating and impactful component of a total school-based agricultural education program. This mixed methods, grounded theory study, observed seven agriculture teachers preparing CDEs teams over four months of CDE competitions from the local chapter level and progressing to the state level competition. The study aimed to examine the action of CDE preparation and determine if similar patterns existed for successful teachers when preparing CDE teams. Each teacher was observed onsite during a CDE practice, and we used an observational instrument to document the preparation strategies utilized. Following the observed practice, we interviewed all the participants. The data were analyzed, and a pattern of structured instructional activities emerged. Additionally, a theory was developed to conceptualize the process of preparing CDE teams. From the findings, it is recommended that agriculture teachers use a combination of motivational and instructional strategies while identifying and controlling for intervening issues to enhance their desired student outcomes for preparing CDE teams.

Keywords: career development events, CDE coaching behaviors, CDE instructional activities, CDE team preparation, motivation, instructional strategies

Introduction and Review of Literature

Preparing teams to compete in Career Development Events (CDEs) is a significant teacher concern, a tremendous source of teacher stress, and consumes a great deal of instructional time, yet they are potentially a highly motivating and impactful component of a total school-based agricultural education (SBAE) program (Bowling & Thieman, 2020; King et al., 2013; Phipps et al., 2008; Roberts & Dyer, 2004; Torres et al., 2008). Additionally, CDE context-specific responsibilities arise as teachers transition into more of a coaching role (Terry & Briers, 2010). SBAE teachers need to possess knowledge and skills related to the various CDE subject areas, CDE specific rules and procedures, the ability to work with individual and team competitors, and the ability to develop motivation, teamwork, and competitiveness (Terry & Briers, 2010). The action of coaching and teaching in a subject area like agricultural education and CDE preparation, which is both competitive and curricular, is complex and not well understood.

Literature in athletic coaching asserts teaching and coaching are the same, yet that assertion is both informative and arguable in the context of agricultural education. Cote and Gilbert (2009) define an effective coach as "the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, connection, and character in specific coaching contexts" (p. 316). Extending this athletic coaching definition to agricultural education could potentially inform agriculture teachers while preparing CDE teams. Further research in coaching has indicated that coaches fulfill the role of a teacher when the sport requires practical knowledge (Drewe,

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2000). Agricultural education as a discipline attests that it is almost entirely embedded in practical knowledge and, thus, Drewe's (2000) assertion could connect to agricultural education, as well.

Further, athletic coaches have been reported to use both instruction and technical training when preparing their teams (Bloom et al., 1999). For example, Coach John Wooden planned when he wanted to teach a specific basketball curriculum (Gallimore & Tharp, 2004). Anecdotally, when SBAE teachers prepare CDE teams, they use a combination of teaching and connecting the content to a specific curriculum, as well as technical preparation for the event itself. Finally, research on elite athletic coaches (Cote & Gilbert, 2009) indicates the best coaches ultimately aim to develop better people through their coaching styles (versus winning for the sake of winning). The mission of the FFA organization, which houses CDEs is to develop premier leadership, personal growth, and career success within its members. As such, coaching literature and the strategies effective coaches utilize to prepare athletics teams could serve as an important backdrop for investigating how agriculture teachers prepare CDE teams. While coaching literature is essential, it alone is incomplete, as critical differences between an intracurricular organization and extracurricular activity exist.

CDEs mirror athletics, in the sense they are both competitive events. However, CDEs are markedly different from athletics in they enjoy the benefits of a direct curricular connection because students can apply what is learned in the classroom to expand their content knowledge and develop as individuals (Phipps et al., 2008). In this regard, CDEs can give students the best of what athletics and academics have to offer. CDE participants perceive CDEs to be beneficial because they help them work towards their personal and career goals (Jones et al., 2012), and participating in CDEs develops leadership and life skills (Russell et al., 2009). SBAE teachers perceive CDEs as an integral part of a total SBAE program and have indicated a felt need for professional development related to CDEs (Torres et al., 2008). Thus, as the literature outlines, CDEs are an essential and beneficial component of the comprehensive model for SBAE. Given such importance, research is warranted to explore the strategies teachers employ for preparing CDE teams.

CDEs, by design, appear to be a blend of both teaching (application of classroom learning) and coaching (embedded within competitive events). As such, there is a need to explore and codify the nature of CDE preparation and subsequent strategies or behaviors in which teachers engage while preparing teams (Ball et al., 2016). The research provided in this study is not meant to argue whether or not teachers *should* prepare CDE teams, but rather *investigate the action or process of preparing teams* and ultimately codify this wisdom of practice. Previous research on strategies for CDE preparation appears to substantively group into categories of strategies used: instructional or teaching strategies and motivational/relational or coaching strategies. Regarding instructional strategies, agriculture teachers aim to create self-directed learners in the content area (Ball et al., 2016), use positive feedback, training, and instruction (Falk et al., 2014), build the foundational knowledge of the students (Voight et al., 2013), focus on the learning preferences of the students (Poskey et al., 2003), and use educational conditioning and skill development (Bowling & Torres, 2010). Research on motivational/relational or coaching strategies for CDE preparation indicates teachers utilized both external and internal motivation within a competitive environment (Ball et al., 2016), social support and situational consideration (Falk et al., 2014), expectations, goals, support, and a positive environment (Voight et al., 2013), and alertness, friendship, intentness, competitive greatness, cooperation, and initiative (Bowling & Torres, 2010). While a great beginning, most of the current research in CDE preparation has been entirely perceptual, self-reported, or specific to singular teachers or singular CDE content areas.

Findings from both athletic and agricultural education research seem to indicate a variety of strategies, mantras, and generalizations for preparing teams that reside in motivation and instruction. Nevertheless, the research does not seem to dial down to the action or process of preparing a team. Further, while broad findings such as "relationship building" and "positive feedback" are a helpful start, they do little to provide current and aspiring teachers with ways to enact said behaviors. According to

Creswell (2013), grounded theory aims to describe a process or action from the vantage point of the individuals who engage in it, generate a theoretical model from the data, and fulfill a specific theory-practice gap. This current study is an initial attempt to fill the theory-practice gap in CDE preparation within school-based agricultural education.

As a grounded theory, this study was guided by the substantive literature intersecting the behavioral strategies for both teaching and coaching. In athletics, where performance-related skills are developed, research indicates coaches use both coaching and teaching strategies to increase athletic performance (Cote & Gilbert, 2009). Thus, the guiding literature indicates SBAE teachers in the context of preparing CDE teams are likely to use coaching and teaching strategies to attain specific performance outcomes for their teams. Furthermore, preparing CDE teams is embedded in both a competitive and learning environment, which influences the strategies utilized. It is important to note, as a grounded theory, this study was emergent. Thus, the literature merely guided and situated the premise of investigating the teaching and coaching strategies SBAE teachers employed while preparing CDE teams and did not pre-determine specific strategies or ways to prepare teams.

Purpose

The purpose of this mixed methods grounded theory study was to identify the actions and strategies used by agriculture teachers when preparing for CDEs. The quantitative portion of the study was guided by the following research objective, identify the frequency agriculture teachers utilize various strategies when preparing CDE teams. The following research questions guided the qualitative and mixed methods portions:

Research Question:

1. What themes emerge during the action or process in which school-based agriculture teachers engaged to prepare CDE teams?

Convergent Question:

1. What is the process for preparing CDE teams?

Methods

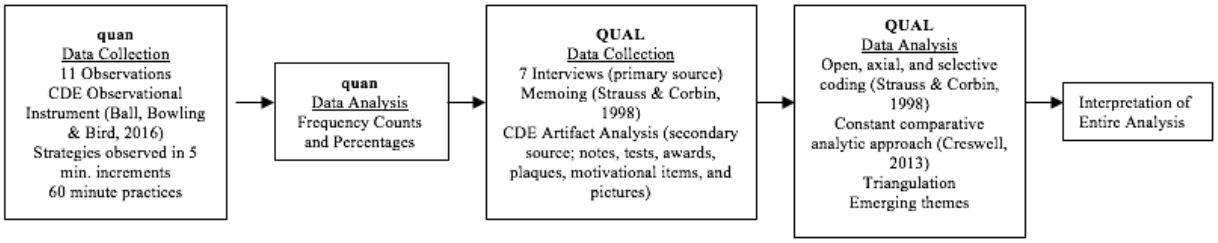
This mixed methods study utilized a quan + QUAL design (see Figure 1; Tashakkori & Teddlie, 2010), by first collecting quantitative data through the use of an observational instrument, then collecting qualitative data through interviews of the participants and artifact analysis. The qualitative interview questions were developed from the quantitative observational instrument data.

Sampling

Eight SBAE teachers were purposively sampled based on their previous CDE success, and each participant received a pseudonym. In order to best identify SBAE teachers with previous CDE success, we identified a bounded system, and that included teachers who prepared a top three placing team at the state competition from the previous year. According to Yin (1995), a bounded case study can be utilized as a method to sample and inquire into the knowledge of participants.

Figure 1

Analytical Model of Mixed Methods Design



Observational Instrument

We developed the Career Development Event Preparation Instrument to collect quantitative teacher discourse behaviors. The instrument was developed through a previous qualitative case study, which investigated an exemplarily CDE teacher through a 16-week intensive set of interviews and field observations (Ball et al., 2016). The Career Development Event Preparation Instrument was then field-tested through a collective case study (consisting of two observations and one interview each) of three teachers, and the previous researchers made adjustments from the findings of those typical cases (Ball et al., 2016).

Following the collective case study, we had three SBAE teachers review the instrument and provide general feedback on the items to determine if they were a valid representation of how they conducted CDE preparation sessions. After the teacher review, the Career Development Event Preparation Instrument was developed and comprised of three sections: coaching, instructional, and negative behaviors. Following a final review of the instrument's statistical analysis format, the sections were collapsed into coaching/motivating behaviors, and instructional behaviors and constructs were developed within the two sections (see Figure 2).

Figure 2

Career Development Event Preparation Instrument Sections, Constructs, and Items

Section Coaching Behaviors			**Section** Instructional Behaviors		
Constructs and Individual Items			**Constructs and Individual Items**		
CDE Specific Strategies	Relationship Building Strategies	Negative/Operant Conditioning	Structured Instructional Activities	Constructivist Cognitive Strategies	General Cognitive Strategies
• Discusses Team Goals • Discusses Individual Goals • Discusses Daily Goals • Models Good Sportsmanship/Behaviors • Analyzes Statistics (Team/Individual Scores) • Watches Film/analyzes performance • Explains CDE Logistics (Rules, Day Of, Prior Contests)	• Relational interactions and/or personal discussions • Enthusiastic Physical Movement/Verbal Interaction • Makes Positive Jokes (Joking, Sarcasm, etc.) • High fives, fists, gives thumbs up, etc. • Gives positive verbal feedback • Praises team or individuals	• Removes Positive Reinforcement • Use of Punishment • Provides Negative Feedback • Reprimands Students • Constructive Criticism (Says No) • Use of Negative Non-Verbals (Eye Rolling, Staring)	• Stays on-task (I)/Goes off Task (X) • Provides Structured Activities/Practicals • Provides Visuals • Provides Directions/Gives a Direction • Provides Examples	• Encourages Student Inquiry/Investigation • Engages students in discussions/Answers Questions • Uses Peer Teaching • Acknowledges Metacognition • Provides Transfer/Diff. Context/Future Applications	• Uses Questioning Strategies • Explains concepts • Provides Mnemonics/Memory Tools • Uses Repetition/Drill

To establish validity of the Career Development Event Preparation Instrument, we utilized a panel of experts (n = 5). Previously successful CDE coaches not sampled for the study were selected to determine if the instrument would capture what it intended. We normed the constructs, individual

item definitions, and the frequency count process for new behaviors and regularly occurring behaviors. Inter-rater reliability was established by observing and discussing a videotaped recording of a CDE practice and conducting simultaneous observations to cross-check each individuals' interpretation of the observed behaviors. After all on-site observations were conducted, we re-checked our observations to ensure they remained consistent over time. The inter-rater reliability scores for the instrument were coaching behaviors: 71% and instructional behaviors 84%. Finally, intra-rater reliability was established by each researcher conducting multiple observations and then cross-checking each observation for internal consistency.

Quantitative Data Collection and Analysis

We used the Career Development Event Preparation Instrument to log frequency counts of the observed behaviors (individual items in the instrument) during 5-minute increments within the 60-minute CDE practice sessions. We utilized the observational instrument to conduct one on-site 60-minute observation per participant, for a total of 8 observations during the spring in which teams were preparing for district CDE competitions. Additionally, two teachers provided either an additional one or two-videotaped practice sessions as their teams prepared for the state CDE competition. A total of 11 observations were analyzed. We calculated frequency counts to analyze the observational data. The results of the frequency counts were triangulated with the interview and artifact data to develop the emerging theory.

Qualitative Data Collection and Analysis

For the qualitative grounded theory portion, we conducted interviews and utilized the interview data as the primary data source. The interviews were conducted on-site following CDE team practices and utilized semi-structured questions focusing on practice structure, student and team motivation, goal setting, practice strategies, learning strategies, and teacher roles. All interviews were audio-recorded and transcribed verbatim. We conducted memoing following each interview (Strauss & Corbin, 1998). Artifacts from CDEs such as tests, guidebooks, student notes, teacher notes, pictures of former successful teams, awards, plaques, and motivational items were an ancillary data source to supplement the interview data. We achieved data saturation and data from all qualitative sources were triangulated. We then completed open, axial, and selective coding (Strauss & Corbin, 1998). We utilized a constant comparative analytic approach (Creswell, 2013). From the codes, categories were synthesized into emerging themes. The quantitative data was integrated with the emerging themes and we developed a visual diagram of the emerging theory.

We used multiple approaches to ensure the trustworthiness of the qualitative portion of the study (Lincoln & Guba, 1985). Credibility was upheld by triangulating the data, prolonged engagement in the field, member checking, and saturation of the data. To establish prolonged engagement in the field, data collection occurred over a 4-month period, which encompassed the entire CDE preparation process from initial practices to the state competition. We also spent 2 to 4 field hours with each participant to conduct the observations and interviews. Member checks were performed prior to and at the conclusion of data collection. A single member check was performed prior to the conclusion of data collection to review the emerging themes. Three member checks were performed at the conclusion of data collection with three separate participants to review the emerging theory. We upheld dependability and confirmability through triangulation of data sources, comparison of emerging themes and sub-themes, peer reviews, and maintaining a continuous coding audit trail. We conducted peer reviews following each data collection point, when data saturation was achieved, and as the themes and theory emerged. Transferability was upheld through the use of thick, rich descriptions.

Findings

Quantitative Findings

The research objective sought to describe the strategies used by SBAE teachers when preparing CDE teams. Frequency counts and percentage of total preparation time dedicated to each strategy category were reported to describe strategy usage (see Table 1). Within objective one, the most utilized strategies fell under the instructional behaviors construct with a range of 65 to 390 observed uses and total use percentages for the observations ranging from 73.38 to 97.01. Further, the instructional behaviors quintupled the coaching/motivating behaviors construct in total usage and were utilized over two-thirds of the designed practice time.

Table 1

Frequency and Percent of Time Used When Preparing Career Development Event Teams

	Coaching/Motivating Behaviors		Instructional Behaviors	
Observation	*f*	%	*f*	%
1	37	15.29	205	84.71
2	23	7.64	278	92.36
3	37	12.98	248	87.02
4	22	20.00	88	80.00
5	42	11.11	336	88.89
6	127	26.62	350	73.38
7	51	14.09	311	85.91
8	57	12.75	390	87.25
9	2	2.99	65	97.01
10	58	15.06	327	84.94
11	36	15.19	201	84.81
Total	492	14.95	2799	85.05

Qualitative Findings

The qualitative research question sought to identify what, if any, themes emerged during the action or process in which SBAE teachers engaged to prepare CDE teams. Through the interview, observational, and artifact data, three themes emerged: teacher strategies, intervening issues, and desired student outcomes. Within the teacher strategies theme, two sub-themes emerged: motivation and instruction.

Theme 1: Teacher Strategies

Within the data, the theme of teacher strategies emerged. It was discovered that teachers utilized a combination of both motivational and instructional strategies when preparing CDE teams. Teachers purposefully utilized these strategies based on their preferences and the students' specific needs. In addition, the motivational and instructional strategies were utilized both independently and simultaneously, depending on the specific context.

Sub-theme 1: Motivation. Within the sub-theme of motivation, the specific strategies used by participants were self-monitoring progress, feedback, goal setting, relationship building, and strategic team structure. Teachers developed and encouraged students to monitor their progress through the use of statistical analysis and other strategies. All teachers were observed instructing students to analyze their results from practice competitions and would encourage them to conduct their analysis away from practice. Kara stated, "If they are competitive, I don't have to encourage them to do that [monitor progress]." Kara continued to state, "They have figured that out, and then they stalk on [CDE analysis software] worse than they stalk on Facebook." All teachers employed

both positive and negative feedback during the CDE preparation process. Frequently, the teachers praised the students for either providing the correct answers or for completing the proper process but not the correct answer.

Further, at a much lower rate, the teachers would utilize negative feedback through the use of reprimands, redirects, and stern responses to incorrect answers. Regarding setting goals for the CDE teams, the teachers all discussed how their teams set individual or team goals at the beginning of and throughout the CDE preparation. The method and use of the goals varied considerably among the teachers. Some teachers had the students write the goals down (Kara, Jared, Jessica, Chad), while others held team discussions to set the goals (Laura, Steve, Mark). Kara stated, "... at the very, very beginning, at the first team practice they have, they set their goals that they want to accomplish at the end of the spring."

Through the analysis, it emerged that relationship building was a significant component of the motivational strategies, and the teachers developed relationships by creating a fun, caring environment. It was consistently observed that teachers frequently asked students about their day, inquired about their studies, athletics, family, and friends. Additionally, all teachers revealed they wanted the students to feel the teacher cares about them. Laura said, "…but they know that you care, and that translates to them wanting to work hard for you, but also you're able to build the relationship, and you're able to convince them that they need to work hard for themselves." Finally, strategic team structures were employed to increase the competitive nature of the teams. Many of the teachers sought out, recruited, or encouraged more than four students to try out for their team(s) to increase internal competition. Additionally, the teachers would create fun competitions within the practices among the students for small prizes or rewards, and Steve stated, "...so we try to build off of the competitiveness as we go through the practice." The teachers utilized specific motivational strategies to develop and motivate students.

Sub-theme 2: Instruction. Within the sub-theme of instruction, it emerged that participants utilized a variety of instructional strategies and intentionally utilized a pattern of structured activities through their practices. The emerging instructional behaviors were a progression of knowledge development, structuring content, chunking, developing metacognition, structured/planned practices, and task-oriented behavior. Throughout the preparation process, the teachers developed and monitored the students' knowledge level. When the students first joined the CDE teams, most of them had little to no knowledge in the CDE area however, by the time they progressed to the state competition, their knowledge level had advanced significantly. The teachers identified the process of advancing these students as a combination of scaffolding the learning process and increasing student autonomy as their knowledge increased. To begin, they would start to build the students' knowledge through low-level memorization type activities. They would progress to more complex thinking type questions as the students' knowledge levels advanced. Jared stated, "...you are just really at depth of knowledge level 1 really, and so when you lay them [plants] out, then they are having to advance that knowledge and having to remember." While the information was being scaffolded, they were simultaneously increasing the students' level of autonomy by allowing them to direct their learning. Kara stated, " Right now, they don't know what they don't know yet. So, I'm still at the point that I tell them what we are doing at practice, hopefully by the time we hit districts; they are going to know what their strengths and weaknesses are."

Along with scaffolding information, the teachers structured how information was presented to the students. Specifically, all teachers would chunk like information together and have students develop mnemonic tools to memorize the content. Additionally, the teachers revealed a primary instructional strategy to develop metacognitive thinking. The primary way metacognitive thinking was developed was through questioning strategies. Beyond just presenting questions to the students the teachers also employed repetitive "why" questions following an answer presented by a student. The students were

asked to continually explain and defend their answers through detailed explanations which identified the specific information the students learned or the specific mnemonic tools they used.

Finally, the teachers revealed their practices were structured and planned, and during practice they maintained a very task-oriented demeanor. Kara stated, "...but staying on task is the only way to learn the material and learn it well enough to be good." Throughout the CDE preparation season and each observed practice, the teachers planned and developed specific activities to enhance student learning, Chad said, "… trying to get them out there to do something similar that they are going to see at contest is going to hopefully help them at the first contest, so we kind of set up mini contests you could say." Additionally, although teachers indicated the overall practice environment was fun, they took on a no-nonsense stance when working with students during practice. Teachers developed and used specific instructional strategies to enhance learning during their CDE practices.

Theme 2: Desired Student Outcomes

The second theme reflected how teachers conceptualized student success. While the teachers in this study were purposefully selected due to their own success with attaining top state and sometimes nationally ranked teams, interestingly, "success" or the reason why teachers prepared students for CDEs in the first place, transcended traditional notions of winning. Regarding the outcomes, teachers desired for students, Steve said, "I never will tell a team that they have to win 'cause if it gets to that, then I'm quitting. I'll find something else to do because that's not what it's about." The outcomes the teachers were focused on developing included: knowledge and skill development, achieving competitive greatness, participating in new experiences, experiencing success, and developing connections with others. Teachers overwhelmingly stated that the purpose of CDEs was knowledge, skill, and personal development.

Additionally, one of their overall goals of the competitions was to develop the student competence related to the CDE content area to an almost expert level. Jared stated, "...if you look at agronomy and you walk the stage at state with agronomy you are really coming about with a knowledge base of a bachelors in agronomy from college." Teachers also wanted students to know they could achieve goals and experience competitive greatness, and to experience the joy and confidence that comes from being good at something. Further, the teachers minimized the association between greatness and winning. Their idea of success and competitive greatness aligned more with personal development and creating a feeling of accomplishment and achievement for the students. Mark stated, "... I think it [success] gives them an idea of what they can do."

The teachers also indicated traveling, exploring, and getting to expand the students beyond their often limited backgrounds was a broader reason why they prepared students for CDEs. All teachers identified many instances where students experienced new ventures such as staying in hotel rooms, eating at nice restaurants, and visiting large cities because of their CDE participation. Jared stated, "That might be the highlight of their year; the ability to leave and go see something new and get out of the town and go see something and go do something." Teachers revealed that students developed strong friendships among the members of their team, as well as friendships with the students from other schools. Steve stated, "… [it's about] the people they meet, the contacts that they make…" Although these teachers have been very successful with their previous CDE teams, the outcomes they envisioned for their students go far beyond winning.

Theme 3: Intervening Issues

Regarding the final theme for CDE preparation, philosophical and context-specific issues intervened between the way teachers prepared teams and their desired outcomes for students. The intervening issues for CDE preparation were instructional time conflicts, perception of coaching as antithetical to teaching, lack of recognition of competitions, and success as a tradition. First, teachers noted that students often have time conflicts with sports, other extracurricular activities, and work,

which limits practice time. Instructional time must be negotiated, and the teachers indicated they developed various ways they can intersect instructional and CDE practice time. Additionally, some teachers (Jared, Mark, Jessica) noted the need to overcome the negative connotation of CDE preparation with coaching, agriculture teachers "training" teams, or the idea that training detracting from "real classroom teaching." The teachers identified they struggled with this negative connotation within their school system and also within the profession. Within their school, some teachers discussed how their administration was not supportive of CDE preparation in class because they did not understand the level of instruction and learning which was occurring. Within the profession, the teachers stated if teachers and schools had continued CDE success they were labeled "CDE coaches." Thus, others in the profession assumed that due to their success, they were not upholding a comprehensive SBAE program and were entirely one-sided toward CDEs.

Further, teachers noted another limitation was that CDE competitions, unlike athletics, are not public. Thus, parents and stakeholders, i.e. school administrators, often do not understand what students do and how they develop in CDEs. Regarding the lack of visibility or recognition of CDE competitions Jared said:

> ….sports teams got the edge to bring people to see it. Unless you have been a part of FFA, you don't know what these kids do. And that is a sad deal because even the parents don't fully understand what they do. And I don't know how you fix that…but I think that is going to be one of the hardest things FFA and ag has to do…is to bring that connection back into the school and show that.

Finally, teachers discussed the issue of success as a tradition as a double-edged sword to CDE preparation. Overwhelmingly, all teachers revealed a tradition of success was an excellent recruitment tool but was also an issue when preparing teams. All of the teachers stated that for some students, "success breeds success," however a tradition of success could also intimidate some students. All of the teachers in this study mentioned they had to start from the beginning as new teachers and in new programs, and teachers in SBAE programs with limited success often battle building morale or success from an absence of tradition. Although the participants all experienced success with previous CDE teams, they all identified intervening issues that hindered their preparation process.

Convergent Findings

The convergent question was, what is the process for preparing CDE teams? To address the convergent question of this study, the qualitative themes formed the central components of the emerging grounded theory model and the quantitative results were triangulated with the emerging theory (see Figure 3). Through the triangulation of data, it was apparent the use of instructional strategies was pivotal to the CDE preparation process. Teachers were very task-oriented in their approach and focused on providing structured practices. The teachers also used structured or scaffolded content and chunked similar concepts to advance student learning. Ultimately, the instructional strategies were selected to advance the students' content knowledge and develop the students' metacognitive thinking. Additionally, the qualitative and quantitative findings indicate the instructional and motivational strategies were simultaneously and cyclically utilized based on the teachers' particular context and their students' needs.

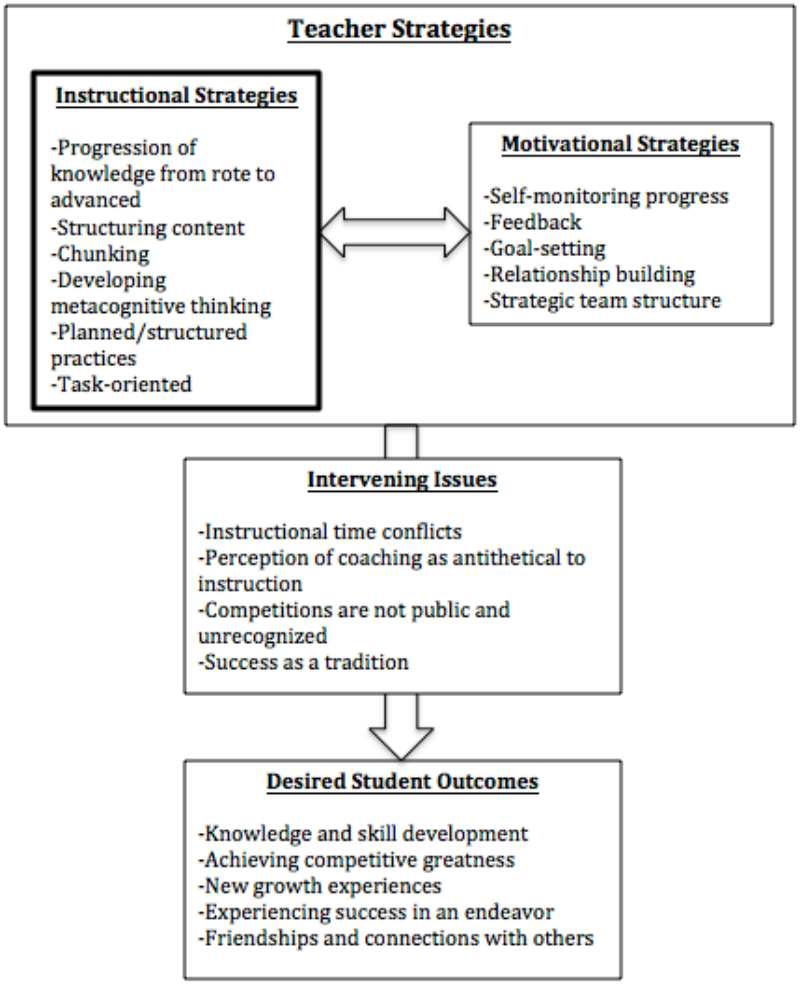
The convergent analysis found the motivational strategies varied in the frequency of use and time dedicated. However, their usage indicates they are also crucial to preparing CDE teams. Relationship building was a pivotal component of the motivational process and was used to enhance the learning environment and team cohesion. The teachers encouraged self-regulation through student developed goals and self-monitoring of goal and content knowledge progress. Additionally, teams were strategically structured to enhance competition, and both positive and negative feedback were used throughout the preparation process.

The instructional and motivational strategies utilized by the SBAE teachers were driven by the desired outcomes they anticipated for their students, which focused on personal growth rather than winning or accolades. Teachers sought to not only advance the students' knowledge and skills but enhance the students' competitive greatness. Teachers also hoped CDE participation would provide students with new experiences, friends, and successes.

However, the intersection of the preparation strategies and the desired outcomes was often interposed by the identified intervening issues. A barrier to achieving the desired student outcomes included the need for negotiating CDE preparation time with other student commitments and the negative perception associated with coaching. The lack of public attendance at CDEs creates a lack of awareness regarding the competitions from administrators, parents, and other stakeholders. Additionally, success creates a double edge sword were previous success helps to recruit and motivate students, but it also enhances the pressure to succeed.

Figure 3

Process of Preparing CDE Teams



Conclusions, Implications, Recommendations

For the research objective it was concluded the frequency of use and time dedicated to each type of strategies varied among all teachers. It was also concluded when preparing CDEs, the teachers spent the majority of the preparation time on structured instructional activities. From the findings, it can be implied teachers in this study felt instructional strategies provided the most significant opportunity for their students to be successful by the amount of time dedicated to these during practice, which is consistent with coaching literature (Bloom et al., 1999; Cote & Gilbert, 2009; Drewe, 2000; Gallimore & Tharp, 2004). Although, to a much lesser degree, all teachers were observed using coaching strategies related to relationship building. It can be implied that teachers use coaching behaviors in more varying contexts, potentially due to individual teacher's preferences, students' needs, students' interest level, or previous student CDE experience/success. This finding varies from athletic coaching strategies, which tightly link motivation and team development (Cote & Gilbert, 2009). Perhaps teachers preparing CDE teams have built relationships, motivated students, and developed teams more consistently and in ways that transcend CDE practices, and thus utilize more instructional kinds of strategies during practice time.

For the research question and the convergent question, it was concluded teacher strategies for preparing CDE teams are a simultaneous and cyclical balance of both instructional and motivational strategies depending upon individual students' and teams' progression through the learning experience. Teachers strived to develop students from unconfident or unmotivated toward highly confident and intrinsically driven to succeed at the event. This finding is consistent with prior literature on CDE preparation strategies (Ball et al., 2016). Instructionally, CDE preparation consists of a process of progressing novices in a CDE content area to self-directed learners who know the metacognitive strategies in order to be successful in the event. While this finding is similar to athletics coaching literature, which identified instructional strategies in coaching (Bloom et al., 1999), the findings from this study uncovered developing metacognition, and self-directed learning strategies, which prior research did not address. Also not addressed in prior research on CDE preparation but revealed in this study, were the contextual issues, which seemingly intervene between *the how (strategies) and the why (desired outcomes)* for CDE preparation. Teachers noted the intervening issues should be taken into consideration, and they must develop philosophies and strategies to combat those issues, based upon individual teaching and school situations. In particular, the fact that athletics events are watched by an audience, while CDEs are performance events which go unnoticed and often unrecognized has significant implications for SBAE.

Teachers should utilize the results from this study to reflect on the strategies and discourse they utilize when preparing teams to denote a structured pattern or set of strategies for their practices. Teacher educators and professional development staff should begin conversations with teachers regarding how they structure practices, how practice time is utilized, and if what they say or believe is useful for CDE preparation. The results from this study should help form conversations and teacher development around effective practice in CDE preparation for beginning as well as experienced teachers. Teacher professional development should be conducted around articulating and measuring specific behaviors within the strategies outlined in this model to develop research-supported principles for effective practice. Finally, teachers and teacher educators should explore the underlying issues that intervene with CDE practice strategies and the desired outcomes teachers have for students in order to tailor professional development to individual teaching contexts.

Further research on CDE preparation needs to be conducted to more clearly codify effective CDE preparation strategies and to determine the specific strategies, which have the most significant implications for student performance. Further research in CDE preparation should be conducted to determine if the conceptual model for CDE preparation is consistent with teachers who have not placed within the top three at state and within states where the competition structure differs. Research should also be conducted through the student lens, investigating motivation to participate and specific outcomes of participation.

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