Exploring Noncognitive Skills in Regional Leadership Development Event (LDE) Participants

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Introduction/Need for Research

Academic achievement is shaped by cognitive and noncognitive factors, with self-efficacy emerging as a critical determinant of student success (Bazelais & Lemay, 2016). Bandura (1997) defined self-efficacy as an individual's belief in their ability to succeed in specific tasks, which has been shown to influence motivation, resilience, and academic performance (Schunk & DiBenedetto, 2021). Recent research highlights the growing recognition of noncognitive skills, such as self-efficacy, in shaping educational outcomes (Anderson, et al. 2016). Previous studies reveal a difference at the state level in noncognitive skills in gold-ranked students and those who did not receive a gold ranking in their individual events (Smith & Thapa 2022).

Experiences beyond traditional classroom instruction, such as participation in career and technical education (CTE) programs, can play a pivotal role in fostering self-efficacy (Bazelais & Lemay, 2016). Agricultural education, particularly through its integration with FFA Career and Leadership Development Events (CDES/LDEs), provides students with opportunities to develop noncognitive skills. However, limited research has examined noncognitive levels among secondary agricultural education students. This study sought to address this gap by assessing noncognitive skills, including self-efficacy, among students participating in district-level FFA LDEs. The findings contribute to a broader understanding of how agricultural education programs influence student noncognitive skills.

Conceptual Framework

This study was rooted in the concept of growth mindset where Dweck et al. (2015) suggested individuals achieve greater success when they can confront and overcome obstacles in pursuit of their goals, emphasizing personal growth as a key factor in improvement. Noncognitive skills are associated with a growth mindset (Duckworth et al., 2007; Usher & Pajares, 2008). The objective of this study was to examine the noncognitive skills of students participating in district-level FFA LDEs.

Methods

This descriptive study was a portion of a larger examination of noncognitive skills in secondary agricultural education students. The study population was a census of students (N = 131) attending the North Idaho District Leadership Development Events on the University of Idaho campus in November 2024. As this study involved a selected population, caution should be taken when generalizing results to populations outside of the respondents. The instrument included two sections. Section one included the following demographic questions: name, age, gender, and chapter. Section two was a form that included 53 Likert-type items, with rating options from 1-5, where 5 was the highest level of agreement. Constructs within the survey included questions relating to resilience, optimism, passion/drive, confidence, adaptation, motivation, communication, teamwork, interpersonal, and systems thinking. Previous estimates of reliability for this instrument were $\alpha = 0.78$. Post-hoc reliability was calculated at $\alpha = 0.87$.

IRB approval was attained, and consent/assent forms were included in the event participation form. A paper copy of the instrument was provided to participants during event orientation and collected prior to students disbursing for their individual competitive activities. Response rate was 100%. Data were entered SPSS v. 24 for analysis.

Results/Findings

Top-ranked participants (those receiving awards in their LDEs) self-scored highest (Table 1) in the area of Self-Efficacy ($M = 3.72$, $SD = 0.58$) and lowest in Optimism ($M = 3.32$, $SD = 0.58$). The remaining participants in the reported their highest and lowest scores in the same respective areas ($M = 3.64$, $SD = 0.53$) and ($M = 3.18$, $SD = 0.57$). The greatest spread between means was in the area of Communication.

Table 1

*Means Across Constructs Between Top Ranked LDE Competitors (*n*= 19) and Means of Remaining Participants (*n *= 112)*

	Top Ranked		Remaining Participants		
Construct	*M*	*SD*	*M*	*SD*	Δ *M*
Communication	3.62	0.69	3.26	0.89	0.36
Optimism	3.32	0.63	3.18	0.57	0.14
Motivation	3.58	0.43	3.45	0.39	0.13
Interpersonal	3.40	0.66	3.31	0.62	0.09
Self-Efficacy	3.72	0.58	3.64	0.53	0.08

Note: Scales 1=Not at All Like Me and 5=Very Much Like Me

Conclusions, Implications, Recommendations

Students who were top-ranked participants in the North Idaho District LDE events scored above the remaining participants in components of noncognitive skills with the largest gap in the construct of communication. These findings are similar to those found at the state level (Smith & Thapa 2022). We are curious if these noncognitive skill levels could be a factor in how well students do in LDEs, if students who have higher reported levels of these skills are attracted to agricultural education and LDE events, or if there is a component in the events themselves and preparation that increases perceptions of these traits in students. Are there possible ways that agricultural educators can develop these noncognitive skills in students?

The findings of this research present numerous opportunities for further study. Future research should expand on this inquiry by examining LDE and CDEs at the state and national levels. Additionally, investigating factors within agricultural education programs – such as LDE preparation – could provide further insight into student development. Further studies should also explore how demographic characteristics and involvement in agricultural education programs relate to noncognitive skills. A deeper understanding of noncognitive skills may be crucial for assessing its role in social skill development among agricultural education students, ultimately informing strategies to enhance student success.

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