Student Teachers Efficacy to Teach Value-Added Agricultural Commodities

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Introduction

The American Association for Agricultural Education's (AAAE) National Research Agenda (NRA) Priority Area 3: Sufficient Scientific and Professional Workforce That Addresses the Challenges of the 21st Century (Roberts, Harder, & Brashears, 2016) described the priority to identify what competencies are needed to effectively educate, communicate, and lead agricultural education. This study focused on the competency area of teacher self-efficacy related to teaching agricultural-based value-added agricultural commodities. Teacher self-efficacy describes the belief of ones capabilities to teach and to meet desired educational goals for their students. Further, teacher self-efficacy explains a teacher's desire to complete tasks associated with teaching in their classroom (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Do some content areas lack in instruction because of the lack of teacher self-efficacy in that content area? Are value-added agricultural commodities an area that teachers lack high levels of self-efficacy?

Theoretical Framework

The theoretical framework guiding this study is Bandura's (1977) Theory of Self-Efficacy. Self-efficacy is the measurement of belief in completing a task. The theory suggests that a person's self-efficacy reflects one's ability to complete a given task (Bandura, 1977). Self-efficacy is based on four principle sources of influence: accomplishments, prior experience, verbal persuasion, and physiological states (Bandura, 1977). The influential principles determine how people feel, think, motivate themselves, and behave (Bandura, 1994). When a teacher feels a high sense of self-efficacy, they may feel more confident in teaching the content to students. If a teacher does not feel as though they understand content related to value-added agricultural commodities, is there is a chance that they will not teach content related to value-added agricultural commodities? If a teacher chooses not to teach about value-added agricultural commodities, will curriculum resources for value-added agricultural commodities not be utilized?

Methodology

This study was conducted through a professional development workshop that presented the Agricultural Marketing Research Center's (AgMRC) Value-Added Agricultural Commodity curriculum. Researchers utilized a researcher-modified instrument in order to summarize the self-efficacy of current agricultural education student teachers. The electronic pre/post-survey specifically analyzed participants' self-efficacy in teaching value-added agricultural commodities in a secondary education classroom. Due to the small sample size, data from this study should be interpreted with care so as not to extrapolate beyond the target population. Data was analyzed using SPSS Statistics 24, a software program for statistical analysis.

Results

Table 1. Pre- and Post-Attitudinal Perceptions of Value-Added Agricultural Curriculum (n=12)

	Pre-Test		Post-Test		
Objective	*M*	*SD*	*M*	*SD*	*MD*
I have made an effort to incorporate value-added commodities into my curriculum.	3.67	1.72	6.17	0.72	2.50
I am continually seeking out better ways to teach about value-added commodities.	4.00	1.59	6.17	0.58	2.17
I understand value-added commodities.	4.92	1.44	6.00	0.74	1.08
I am effective when teaching students about value added commodities.	4.08	1.51	6.00	0.74	1.92
I find it hard to teach students about careers related to value-added commodities.	4.00	1.41	4.00	1.81	0.00
I could improve how I teach about value-added commodities.	5.92	1.24	6.08	0.67	0.16
I am typically able to answer students' questions about value-added commodities.	4.50	1.09	5.92	0.67	1.42
I find value in out-of-the-classroom experiences related to value-added commodities.	5.83	1.27	6.50	0.67	0.67
When teaching about value-added commodities, I usually welcome student questions.	5.42	1.16	6.33	0.49	0.91
I find it easy to motivate students about value-added commodities.	4.75	1.14	5.50	0.90	0.75
It is difficult to find experts in value-added commodities in my area.	4.33	1.15	4.17	2.08	-0.16
I feel more knowledgeable in teaching other subjects in my curriculum compared to teaching value-added commodities.	5.33	0.98	5.33	1.15	0.00
I choose not to teach about value-added commodities.	4.00	1.54	2.92	1.73	-1.08

Note: 7 = Strongly Agree, 6 = Agree, 5 = Somewhat Agree, 4 = Neither Agree nor Disagree, 3 = Somewhat Disagree, 2 = Disagree, and 1 = Strongly Disagree. MD = mean difference (posttest minus pretest).

Conclusions and Recommendations

Researchers found that current agricultural education student teachers are more apt to incorporate content related to value-added agricultural commodities into their curriculum after attending the workshop (*MD*= 2.5). Further, the student teachers showed increased levels of interest to seek out better ways to teach about value-added commodities (*MD*= 2.17). Increased teacher self-efficacy may lead to effective methods of teaching value-added agricultural commodities in secondary agricultural education classrooms. Researchers found that current student teachers were undecided in their efficacy in teaching about careers related to value-added agricultural commodities both before and after the workshop (*MD*= 0.00). This may be a result of being novice teachers. Current student teachers in this study identified feeling more knowledgeable about other subjects in their curriculum than value-added commodities. Researchers recommend developing online training modules to reach a larger population.

References

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