

Teacher Identity of First Year Agriculture Educators in Utah

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Introduction/Need for Research

Every school year, SBAE programs or positions are lost due to the lack of qualified SBAE educators (Foster et al., 2020). One reason for the shortage of qualified agriculture teachers in the U.S. is a lack of retention, particularly among early career teachers (Foster et al., 2020; Warnick et al., 2010). Research shows that a strong sense of teacher identity is related to teacher retention (Arroyo, 2020; Cunningham, 2020; Freedman & Appleman, 2008). Teacher induction programs can help new teachers develop a strong sense of teacher identity (Findley, 2006; McNalley et al., 2008). Yet, little is known about changes in beginning agriculture teacher identity over the course of the first year of teacher and its relationship to career longevity intentions.

Conceptual Framework

Multiple theories help to explain teacher identity. For this study, we rely on the sociocultural theories of Vygotsky (1986) and Wenger (1998) to explain how teacher identity changes among beginning agriculture teachers. Vygotsky's sociocultural lens explains teacher development as a process occurring through interactions with others while Wenger describes how identity is constructed through communities of practice. In essence, new agriculture teachers develop a sense of identity as they participate in teaching practices and make sense of those experiences. Teacher identity development is essential for professional growth and longevity (Freedman & Appleman, 2008). Through this sociocultural lens, we can understand changes in first-year agriculture teacher identity and its relationship to longevity intentions.

Methodology

The purpose of this study is to examine changes in teacher identity of first year agriculture teachers in [STATE] and its relationship to career longevity intentions. Research objectives were: (1) Describe changes in teacher identity among first year agriculture teachers in Utah, and (2) Explain the relationship between first year teacher identity and longevity intentions. The population for this study consisted of all first-year agriculture teachers in Utah during the 2019-2020 school year ($n = 9$). The teachers all participated in a mentoring and professional development new-teacher induction program throughout their first year, from June 2019 to June 2020. Data were collected face to face in November at a new teacher professional development meeting (pre-test) and then again in May through Qualtrics (post-test). As part of a larger study, the survey instrument for this specific analysis consisted of measures for teacher identity and longevity intentions. Teacher identity was measured using the teacher identity scale developed by Starr et al., (2006) with the constructs of Global Identity (three items, Cronbach's $\alpha = .750$ [pre], $.815$ [post]), Intrinsic Satisfaction (four items, Cronbach's $\alpha = .743$ [pre], $.709$ [post]), and Knowledge & Skill (three items, Cronbach's $\alpha = .772$ [pre], $.896$ [post]) being measured. Constructs were measured on a six-point scale (1 = *strongly disagree* to 6 = *strongly agree*). To measure longevity intentions, participants were asked to respond to the open-ended prompt, "how many years do you anticipate being an agriculture teacher?" Due to a small sample size, pre- and post- means were compared using the non-parametric one-sample Wilcoxon signed exact rank t -test (Harris & Hardin, 2013). Effect sizes for the signed-rank test were calculated using the rank-biserial correlation by dividing the test statistic by the square root of the number

of pairs (Tomczak & Tomczak, 2014). Finally, to analyze objective 2, a Spearman's Rank-Order correlation was conducted to determine the relationships between longevity intentions and teacher identity constructs (Myers & Well, 2003).

Results/Findings

Descriptive statistics for objective 1 are found in Table 1. Overall, the high means for the constructs of teacher identity indicates the participants had a strong sense of teacher identity. Intrinsic satisfaction was the highest rated construct of teacher identity. Over the course of the year, all constructs of teacher identity dropped with global teacher identity and intrinsic satisfaction being statistically significant with medium and large effect sizes (Cohen, 1988).

Table 1.

Changes in First-Year Agriculture Teacher Identity (n = 9)

Construct	M (Pre)	SD	M (Post)	SD	W	p	Effect
Intrinsic satisfaction	5.45	0.42	4.75	0.31	-2.53	.012	.842
Global teacher identity	5.40	0.58	4.73	0.44	-2.20	.028	.734
Knowledge & Skill	4.82	0.76	4.40	0.41	-1.87	.062	.622

Note. Construct items scaled from 1 “Strongly Disagree” to 6 “Strongly Agree.”

For objective 2, teachers reported a non-significant drop ($p = .34$) in longevity intentions from 25.38 years ($SD = 9.61$) at the beginning of the school year to 21.75 ($SD = 11.54$) at the end of the school year. All dimensions of teacher identity showed positive relationships with longevity intentions. Intrinsic satisfaction ($r_s(9) = .82, p > .01$) and knowledge & skill ($r_s(9) = .71, p = .03$) were statistically significant large relationships (Cohen, 1988) to longevity intentions, while global identity ($r_s(9) = .37, p = .32$) was a statistically non-significant relationship.

Conclusions/ Recommendations/ Impacts

While findings for this study are not generalizable beyond the study population, we believe this research is a critical first step in understanding the sociocultural importance (Wenger, 1998; Vygotsky, 1986) of developing a teacher identity during the first year of teaching, particularly as it relates to teacher longevity. Our findings show the factors of teacher identity correlate with intentions to remain in the profession longer, with intrinsic satisfaction being the most influential factor. Thus, helping agriculture teachers find satisfaction in their jobs during the first year is of utmost importance. An important finding from this research was that each factor of teacher identity as well as longevity intentions dropped over the course of the first year. We suspect this was a result of the COVID-19 pandemic where teachers were forced to drastically change their teaching practices. The drastic changes in education likely disrupted agriculture teachers' practices to a point that was incongruent with their own perceived identity. We recommend more research be conducted with a larger sample size and without a pandemic to better understand the changes in teacher identity. We also suggest qualitative research through a sociocultural lens to examine the nuances that influence the development of teacher identity. Finally, we recommend state staff provide professional development and support to first year teachers that focusses on knowledge and skill development and helping teachers to find satisfaction in their jobs.

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