

Sense of Belonging in First Year Agriculture Teachers During a Pandemic

Kjersti Clawson
Utah State University
2300 Old Main Hill
Logan, UT 84322-2300
(435) 797-5741
A02366513@usu.edu

Tyson J. Sorensen
Utah State University
2300 Old Main Hill
Logan, UT 84322-2300
(435) 797-5741
tyson.sorensen@usu.edu

Sense of Belonging in First Year Agriculture Teachers During a Pandemic

Introduction/Need for Research

The COVID-19 pandemic required teachers to make sudden and drastic changes to their teaching practices. Many sociocultural aspects of traditional teaching were lost while social isolation increased (Peters, 2020). As a result, agriculture teachers across the country experienced a drop in job satisfaction (McKim & Sorensen, 2020), a significant predictor of teacher retention (Sorensen & McKim, 2014). With a shortage of qualified agriculture teachers across the country (Foster et al., 2020), teacher retention is critical, particularly among early career teachers where turnover is highest (Warnick et al., 2010). One important variable related to a first-year teacher's decision to remain in the profession is a sense of belonging. New agriculture teachers who sense a lack of belonging in a school district will be less satisfied and more likely to leave the profession early (Hasselquist et al., 2017). A sense of belonging creates meaning and purpose in the teacher's career (Lambert et al., 2013). This study seeks to understand the changes in sense of belonging among new agriculture teachers in Utah during the pandemic.

Conceptual Framework

A new teacher's sense of belonging within the school community can be conceptualized as the degree to which one feels they share common interests, experiences, expertise, and desires with others in the school community (Lave & Wenger, 1991). A sense of belonging is an important aspect of engagement in a community of practice (e.g., teaching profession), which can strengthen one's desire to remain in the profession (Lave & Wenger, 1991). Through this sociocultural lens, we can understand how social isolation and other consequences of the pandemic might influence a teacher's sense of belonging within their school, community and ultimately their longevity in the profession.

Methodology

The purpose of this study was to determine changes in first year agriculture teachers' sense of belonging during the COVID-19 pandemic (RO1) and its relationship to teacher longevity (RO2). The population for this study consisted of all first-year agriculture teachers in Utah during the 2019-2020 school year ($n = 9$). Data were collected face to face in November 2019 at a new teacher professional development meeting (pre-test) and then again in May 2020 (post-test) through an online survey. As part of a larger study, the survey instrument for this specific analysis consisted of a 17-item revised Sense of Belonging Scale (Hoffman et al., 2003) which consisted of four constructs: (1) Perceived Peer Support (six items, Cronbach's $\alpha = .754$ [pre], $.751$ [post]); (2) Perceived Comfort (three items, Cronbach's $\alpha = .727$ [pre], $.827$ [post]); (3) Perceived Isolation (four items, Cronbach's $\alpha = .902$ [pre], $.759$ [post]); and (4) Perceived Faculty/Professional Support (four items, Cronbach's $\alpha = .866$ [pre], $.938$ [post]). Constructs were measured on a six-point scale (1 = *strongly disagree* to 6 = *strongly agree*). Apart from Perceived Isolation, larger means for each construct indicates a greater sense of belonging. To analyze the second research objective, a Spearman's Rank-Order correlation was conducted to determine the relationships between longevity intentions and sense of belonging constructs (Myers & Well, 2003). 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).

Results/Findings

Descriptive statistics for this study are found in Table 1. Overall, participants indicated having a sense of belonging within their professional community by agreeing they have perceived support from peers and faculty and feel comfortable within the profession. Participants also indicated low levels of isolation. All constructs of teachers' sense of belonging dropped over the course of the first year. The Perceived Peer Support and Perceived Faculty Support constructs showed a statistically significant drop with medium effect sizes (Cohen, 1988).

Table 1.

Changes in First-Year Agriculture Teachers' Sense of Belonging (n = 9)

Construct	M (Pre)	SD	M (Post)	SD	W	p	Effect
Perceived Peer Support	5.26	0.49	4.56	0.41	-2.37	.018	.790
Perceived Faculty Support	5.25	0.87	4.31	0.63	-1.97	.049	.657
Perceived Comfort	4.67	0.78	4.33	0.55	-0.95	.344	.315
Perceived Isolation	2.26	0.91	1.75	0.78	-0.98	.326	.328

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

Teachers reported a non-significant drop in longevity intentions (pre $M = 25.38$ years, $SD = 9.61$; post $M = 21.75$ years, $SD = 11.54$). All constructs showed positive relationships (r_s range = .56 - .74) to longevity intentions except perceived isolation, which was a negative relationship ($r_s(9) = -.31$, $p = .42$). Thus, a greater sense of belonging was shown to be related to intentions to remain in teaching longer. While effect sizes were mostly large (Cohen, 1988), only Perceived Comfort showed a statistically significant relationship ($r_s(9) = .74$, $p = .02$) to longevity intentions.

Conclusions/Implications/Recommandations/Impact on Profession

Findings are not generalizable beyond this study's sample. Yet, we believe this research is a critical step in understanding the impact of the COVID-19 pandemic on first year teachers and the important role sense of belonging plays in teacher longevity. One limitation is the lack of data midway through the first year. It is possible sense of belonging increased the first few months of teaching, but then dropped when the pandemic began.

Three main conclusions can be drawn from this study. **Conclusion 1:** The pandemic seemed to impact first year teachers' sense of belonging. The drop in means for perceived peer support, faculty support, and comfort could be a result of the pandemic. Teachers likely felt less comfortable teaching remotely and felt like they had less of a support system during the pandemic. (2) **Conclusion 2:** First year agriculture teachers in Utah did not feel isolated, despite the pandemic. **Conclusion 3:** Sense of belonging is related to teacher longevity intentions. As a result, helping teachers develop a strong sense of belonging within their community of practice (Lave & Wenger, 1991) is critical to keeping teachers in the profession.

We recommend qualitative research be conducted to better understand community factors and practices influencing changes in sense of belonging among early career agriculture teachers. We also recommend duplicating this study with a larger sample. Finally, we recommend state staff provide mentoring support to first year teachers to avoid isolation and to help them feel supported by peers and colleagues.

References

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203771587>
- Foster, D. D., Lawver, R. G., & Smith, A. R., (2020). *National Agricultural Education Supply and Demand Study, 2019 Executive Summary*. http://aaaeonline.org/Resources/Documents/NS_D2019Summary.pdf
- Hasselquist, L., Herndon, K., & Kitchel, T. (2017). School culture's influence on beginning agriculture teachers' job satisfaction and teacher self-efficacy. *Journal of Agricultural Education*, 58(1), 267-279. <https://doi.org/10.5032/jae.2017.01267>
- Harris, T. & Hardin, J. W. (2013). Exact Wilcoxon signed-rank and Wilcoxon Mann–Whitney rank sum tests. *The Stata Journal*, 13(2), 337–343. <https://doi.org/10.1177/1536867X1301300208>
- Hoffman, M., Richmond, J., Morrow, J., & Salomone, K. (2002). Investigating “sense of belonging” in first-year college students. *Journal of College Student Retention: Research, Theory & Practice*, 4(3), 227-256. <https://doi.org/10.2190/DRYC-CXQ9-JQ8V-HT4V>
- Lambert, N. M., Stillman, T. F., Hicks, J. A., Kamble, S., Baumeister, R. F., & Fincham, F. D. (2013). To belong is to matter: sense of belonging enhances meaning in life. *Personality and Social Psychology Bulletin*, 39(11), 1418 – 1472. <https://doi.org/10.1177/0146167213499186>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge university press.
- McKim, A. J., & Sorensen, T. J. (2020). Agricultural educators and the pandemic: An evaluation of work and life variables. *Journal of Agricultural Education*, 61(4), 214-228. <http://doi.org/10.5032/jae.2020.04214>
- Peters, M. A. (2020b). Love and social distancing in the time of Covid-19: The philosophy and literature of pandemics. *Educational Philosophy and Theory*, 53(8), 755-759. <https://doi.org/10.1080/00131857.2020.1750091>
- Sorensen, T. J., & McKim, A. J. (2014). Perceived work-life balance ability, job satisfaction, and professional commitment among agriculture teachers. *Journal of Agricultural Education*, 55(4), 116-132. <https://doi.org/10.5032/jae.2014.04116>
- Tomczak, M., & Tomczak, E. (2014). The need to report effect size estimates revisited. An overview of some recommended measures of effect size. *Trends in Sport Sciences*, 21(1).
- Warnick, B. K., Thompson, G. W., & Tarpley, R. S. (2010). Characteristics of beginning agriculture teachers and their commitment to teaching. *Journal of Agricultural Education*, 51(2), 59-69. <https://doi.org/10.5032/jae.2010.02059>