Examining the Effect of COVID-19 on Preservice Agriculture Teachers' Self-Efficacy, Teaching Intentions, and Career Expectations

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Introduction/Theoretical Framework

Agriculture teachers entering the profession have historically encountered a variety of challenges that tax their energy and motivation (Smith & Smalley, 2018). The COVID-19 lockdown is one such challenge that had a rippling effect on preservice teachers' career outcome expectations, intentions to teach, and teacher self-efficacy (Choate et al., 2021; Pressley & Croyle, 2021), which ultimately could affect their decision to enter the profession (Bandura, 1977; McKim & Velez, 2016). Agriculture preservice teachers with higher positive career outcome expectations have indicated longer expected teaching tenures (Rocca, 2005). Additionally, lower teacher self-efficacy levels have a negative impact on agricultural teachers' professional commitment and increased teacher attrition (Blackburn & Robinson, 2008). With the agricultural teaching profession facing an ongoing shortage of new teacher candidates (Cross, 2017), the impact of COVID-19 could further amplify this issue, thus providing the motivation for this study.

The Social Cognitive Career Theory (SCCT) posited by Lent et al. (1994) served as the theoretical foundation for this research which seeks to describe the impact the COVID-19 pandemic had on preservice agriculture teachers self-efficacy, intentions (goals), and expectations. The following research objective guided this study: describe the impact of COVID-19 on planned years of teaching, intentions to teach, career expectations, and self-efficacy. Results of this study will assist teacher educators, early-career teacher mentors, professional development coordinators, and administrators in managing expectations of incoming teachers.

Methodology

This descriptive study examined the entire population of 185 agricultural education upper-division students and student teachers enrolled in the post-baccalaureate credential program at California State University, Fresno the fall of 2020. Beginning in October, participants were asked to respond to an online survey. The initial email invitation was followed by three reminders sent at week-and-a-half intervals. The researcher developed instrument consisted of modified versions of the Career Aspiration Scale (O'Brien et al., 1996), Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001), and Vocational Outcomes Expectations Scale (McWhirter et al., 2000). The Teaching Intentions and Aspirations scale (18 items) and the Teaching Career Expectations scale (14 items) used 5-point Likert-type items, while the Agriculture Teacher Efficacy Scale consists of 43 Likert-type items, utilizing a 9-point scale to measure self-efficacy levels related to classroom/laboratory instruction, FFA leadership/supervision, SAE supervision, and program management. A panel of university agricultural education faculty established face and content validity. The instrument was pilot tested on 396 California agriculture teachers in 2007. Reliability was determined for the three construct scales through post-hoc analysis resulting in Chronbach's Alpha coefficients ranging from .88 to .96. To measure the perceived impact of COVID-19 on participant's decision to teach agriculture, a single item asked respondents to indicate if they perceived "No Impact," "Minor Impact," "Moderate Impact," or "Severe Impact." Data were analyzed using SPSS® version 26, which provided the descriptive statistics reported in this study.

Results

Completed questionnaires were received from 85 of the 185 preservice teachers for a response rate of 45.9%. No notable differences were found when researchers compared non-respondents with respondents on student information obtained a priori (Miller & Smith, 1983) to control for non-response error. Respondents' average age was 22.6, 72.2% (*n* = 60) were female, 58.9% (*n* = 53) were Caucasian, 31.1% (*n* = 28) were Hispanic/Latino, and 48.9% (*n* = 44) reported their childhood home as a rural area. Only 25.8% of respondents indicated COVID-19 had "No Impact" while 16.4% reported it had a "Severe Impact" on their decision to teach. Table 1 depicts the respondents' levels of agriculture teacher efficacy, teaching intentions, and career outcome expectations in relation to their self-perceived impact level of COVID-19.

Table 1. *Results of Instrument Constructs by COVID-19 Impact Level*

	No Impact	Minor Impact	Moderate Impact	Severe Impact
	n = 22 (25.8%)	*n = 34* (40.0%)	*n = 15* (17.6%)	*n = 14* (16.4%)
Constructs	*M*	*M*	*M*	*M*
Planned Years to Teach	28.50	31.36	23.20	13.86
Teaching Intentions/Aspirations	61.86	64.35	63.20	61.43
Teaching Career Expectations	57.23	58.38	57.00	52.50
Classroom Efficacy	121.14	119.50	123.20	109.93
SAE Efficacy	66.09	66.35	63.93	60.21
FFA Efficacy	107.59	106.65	106.73	97.14
Program Management Efficacy	48.14	46.38	47.07	40.36
Overall Ag Teacher Efficacy	342.95	338.88	340.93	307.64

Conclusions

This study sought to describe the impact of COVID-19 on preservice agricultural teachers who are near the completion of their teacher preparation program and deciding to enter the profession. Results showed that participants who felt that COVID-19 had a "Severe Impact" on their decision to teach also indicated notably fewer years they intend to teach, lower Teaching Intentions/Aspirations scores, Teaching Career Expectation scores, and lower scores in all areas of the Agricultural Teacher Efficacy Scale. These finding are consistent with current literature on COVID-19 and the effect that unusual environments have on preservice teachers perceived self-efficacy, outcome expectations, and intentions (Choate et al., 2021). University preparation programs and schools hiring these new teachers need to be cognizant of the additional challenges these teachers will face as they transition into the profession. To address the potential increase in attrition, teacher induction training will be even more essential to support new teachers who may have lower self-efficacy levels and weaker intentions to teach. Professional development should be tailored for these new teachers so that they can cope with the challenges they will face in an in-person learning environment. A longitudinal study is recommended to monitor and evaluate these participants as they progress into their teaching careers and determine how to best support them for long-term career success.

References

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191. https://doi.org/10.1037/0033-295X.84.2.191

Blackburn, J., & Robinson, S. (2008). Assessing Teacher Self-Efficacy and Job Satisfaction of Early Career Agriculture Teachers in Kentucky. *Journal of Agricultural Education, 49*(3), 1–11. https://doi.org/10.5032/jae.2008.03001

Choate, K., Goldhaber, D., & Theobald, R. (2021). The effects of COVID-19 on teacher preparation. *Phi Delta Kappan*, *102*(7), 52–57. https://doi.org/10.1177/00317217211007340

Cross, F. (2017). Teacher shortage areas nationwide listing 1990-1991 through 2017-2018. Washington, DC: U.S. Department of Education. https://www2.ed.gov/about/offices/list/ope/pol/ateachershortageareasreport2017-18.pdf

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*(1), 79–122. https://doi.org/10.1006/jvbe.1994.1027

McKim, A., & Velez, J. (2016). An Evaluation of the Self-Efficacy Theory in Agricultural Education. *Journal of Agricultural Education, 57*(1), 73–90. https://doi.org/10.5032/jae.2016.01073

McWhirter, E. H., Crothers, M., & Rasheed, S. (2000). The effects of high school career education on social–cognitive variables. *Journal of Counseling Psychology, 47*(3), 330. https://doi.org/10.1037/0022-0167.47.3.330

Miller, L. E., & Smith, K. L. (1983). Handling nonresponse issues. *Journal of Extension*, 21(5), 45-50.

O'Brien, K. M., Gray, M. P., Tourajdi, P. P., & Eigenbrode, S. P. (1996, August). *The operationalization of women's career choices: The career aspiration scale.* Paper presented at the meeting of the American Psychological Association, Chicago, IL.

Pressley, T., & Croyle, H. (2021). A Comparison of Virginia Preservice Teachers' Efficacy and the Effect of COVID-19. *Teacher Educators' Journal*, *14*, 149–169.

Rocca, S. (2005). *Predicting Preservice Agriculture Teachers' Intentions to Teach Utilizing Person Inputs, Contextual Influences, Teacher Efficacy, and Outcome Expectations*. https://ufdc.ufl.edu/UFE0010003/00001

Smith, A. R., & Smalley, S. (2018). Job Stress, Burnout, and Professional Development Needs of Mid-Career Agricultural Education Teachers. *Journal of Agricultural Education, 59*(2), 16. https://doi.org/10.5032/jae.2018.02305

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783–805. doi: 10.5032/jae.2016.01073