

An Analysis of the Time Allocation of Student Teachers in Each Circle of the Three-Circle Model of Agricultural Education

Krysti Kelley, M.S.

Graduate Student

Department of Agricultural Education and Communications

Texas Tech University

krystkel@ttu.edu

(806)742-2816

John Rayfield, Ph.D.

Professor

Department of Agricultural Education and Communications

Texas Tech University

John.Rayfield@ttu.edu

(806)834-1956

Texas Tech University

Box 42123

Lubbock, TX 79409-2131

An Analysis of the Time Allocation of Student Teachers in Each Circle of the Three-Circle Model of Agricultural Education

Introduction

Many studies have explored the factors that lead to the recruitment and retention of agricultural science teachers and have found that both external and internal motivations draw and keep these educators in the classroom (Borman & Dowling, 2008; Cano & Miller, 1992; Crutchfield, et al., 2013). These motivations include job satisfaction and efficacy. A strong link between time spent perfecting the craft of teaching and coaching and these factors have been identified (Rocca & Washburn, 2006). This is achieved through a capstone experience also known as their student teaching practicum and is crucial to their growth as a teacher (Edwards & Briers, 2001). Within agricultural education, teachers must be able to facilitate student experiences in the three circles of the agricultural education model: classroom, FFA, and SAE. Studies have explored the use of time within the student teaching experience but have not evaluated the balance of time spent in each of the three circles (Coleman, et al., 2021).

Theoretical Framework

This study is guided by Bandura's (1997) Model Sources of Efficacy Information. Bandura asserted that people succeed if they are confident in their abilities. Confidence is created through experience and leads to improved performance (Bandura, 1994). Bandura (1977) identified four sources of efficacy: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. This study concentrates on the performance accomplishments and vicarious experiences sources. Performance accomplishments are formed during experiences and can lead to the raising or lowering of self-confidence in performing a task. Vicarious experiences which are inducted through live modeling and symbolic modeling allow for expectations to be gained through a person's previous experiences and the experiences of others.

Methodology

The purpose of this study was to determine the amount of time student teachers from Texas Tech University spent during their 17-week student teaching experience in each of the three circles of the agricultural education model. The following research objectives guided this study: determine the activities student teachers engage in during their student teaching experience and examine the balance of time spent in each of the three circles. This longitudinal census study involved the agricultural education preservice teachers (N=29) enrolled in their student teaching placement at Texas Tech University during 2021 and 2022. Eighty-three percent of participants were Caucasian, and seventeen percent were Hispanic. Most of the student teachers were female (79%). As student teachers completed their 17-week placement, they were asked to log their time daily by activity. Data was self-reported using a Microsoft Excel sheet to track their time spent. The time spent on each activity was totaled. Activities were categorized by the area of the three-circle model they fall into and each circle was summed. Total hours spent in all three circles was computed and percentages per circle were calculated.

Results/Findings

Preservice teachers spent the most time in classroom instruction ($\Sigma=7047$, 28.29%), SAE supervision ($\Sigma=4239$, 17.02%), and instruction preparation ($\Sigma= 3110$, 12.49%). They spent the least amount of time completing administrative duties ($\Sigma= 87$, 0.35%), laboratory preparation/maintenance ($\Sigma= 382$, 1.53%), and adult education ($\Sigma= 486$, 1.95%). Table 1 outlines the time spent by preservice teachers from the perspective of the three-circle model.

Table 1

Time Spent by Preservice Teachers in the Three Circles of the Agricultural Education Model

Category	Time Spent	%
Classroom	15639	62.79
FFA	5030	20.19
SAE	4239	17.02
<i>Total (N=29)</i>	24908	100.00%

When evaluating the data from the perspective of the three-circle model of agricultural education, the most time was spent immersing in classroom activities ($\Sigma= 15639$, 62.79%). Student teachers spent similar amounts of time in activities pertaining to the FFA ($\Sigma=5030$, 20.19%) and SAE ($\Sigma=4239$, 17.02%) circles of the model.

Conclusions/ Discussion/ Implications

The results of this study have three major implications. First, the amount of time student teachers are engaging in the classroom circle is important to their preparation. Often, student teachers come with a plethora of experiences in SAE and FFA but lack efficacy and competence in the classroom (Miller & Wilson, 2010). Student teachers in this study spent more time instructing courses than any other activity. Bandura's theory (1977) found that efficacy can be attained through performance accomplishments. The extended time student teachers are spending on instruction allows them more opportunities for success and hopefully increases their efficacy. The second implication is that more time should be spent in conferences with their cooperating teachers. This study found that only 3.32% of their student teaching experience consisted of this feedback time. Miller and Wilson (2010) expressed the importance of the cooperating teacher guidance and evaluation to student-teacher development. The third implication is the need to intentionally create opportunities for uncommon activities. Many student teachers had little to no time to engage in administrative duties or adult education which could lead to a lack of self-confidence in these career-related activities (Bandura, 1977).

Based on the results of this study, universities need to be intentional in ensuring that student teachers can participate in activities that reflect all three circles of the agricultural education model. Cooperating teachers need to be made aware of specific expectations so that student teachers receive a holistic experience. Universities should also monitor time to find deficits and contact sites to ensure opportunities for engagement in the future. Further research should explore if the time spent in each of the three circles is reflective of the schedule of an agricultural educator. If student teaching is to prepare preservice teachers to run their program and classroom, the more accurate this experience is, the more influential it can be.

References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295x84.2.191>
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71–81). Academic Press.
- Borman, G. D., & Dowling, N. M. (2008). Teacher Attrition and Retention: A Meta-Analytic and Narrative Review of the Research. *Review of Educational Research*, 78(3), 367-409. doi:310.3102/0034654308321455
- Cano, J., & Miller, G. (1992). A gender analysis of job satisfaction, job satisfier factors, and job dissatisfier factors of agriculture education teachers. *Journal of Agricultural Education*, 33(3), 40-46. doi:10.5032/jae.1992.03040
- Coleman, B., Ferand, N., Bunch, J. C., & Israel, G. (2021). Examining preservice teachers' performance during a 14-week student teaching experience: A longitudinal study. *Journal of Agricultural Education*, 62(3), 258-274. <https://doi.org/10.5032/jae.2021.03258>
- Crutchfield, N., Ritz, R., & Burris, S. (2013). Why agricultural educators remain in the classroom. *Journal of Agricultural Education*, 54(2), 1-14. doi: 10.5032/jae.2013.02001
- Edwards, M. C., & Briers, G. E. (2001). Cooperating teachers' perceptions of important elements of the student teaching experience: A focus group approach with quantitative follow-up. *Journal of Agricultural Education*, 42(3), 30–41. doi:10.5032/jae.2001.03030
- Miller, G., & Wilson, E. B. (2010). Designing field-based and experiential education for preservice teachers in agriculture. In R. M. Torres, T. Kitchell, & A. L. Ball (Eds.), *Preparing and advancing teachers in agricultural education* (pp. 131–141). Curriculum Material Service, The Ohio State University
- Rocca, S. J., & Washburn, S. G. (2006). Comparison of teacher efficacy among traditionally and alternatively certified agriculture teachers. *Journal of Agricultural Education*, 47(3), 58-69. doi:10.5032/jae.2006.03058