

Factors Impacting Early-Career Agriculture Teachers' Choice of College

Baileigh Horstmeier
122 Gentry Hall
Columbia, MO 62511
(573) 544-7847
Bahz89@mail.missouri.edu

D. Adam Cletzer
122 Gentry Hall
Columbia, MO 62511
(573) 884-6503
cletzerd@missouri.edu

The shortage of qualified workers in nearly all agricultural, food, and natural resource (AFNR) sectors remains a major challenge for the agriculture industry (Goecker, Smith, Marcos Fernandez, Ali, & Theller, 2015). Goecker et al., (2015) projects 59,700 annual job opportunities in AFNR fields but only 35,400 annual qualified graduates of colleges of agriculture (COA) to fill those positions between 2015 and 2020. As a result of this shortfall, the development of a “sufficient scientific and professional workforce that addresses the challenges of the 21st century” was identified as a research priority of the American Association for Agricultural Education (AAAE) National Research Agenda (Stripling & Ricketts, 2016, p. 30). COAs are called upon to “examine their role in developing the future workforce critically and utilize best strategies of recruiting and retaining future agriculture professionals” in hopes that they might supply a steady pipeline of graduates (Stair et al., 2016, p.111).

Nowhere is this as necessary as in the field of agricultural education, where there exists a long-running teacher shortage (Kantrovich, 2010). Research indicates a majority of high school agriculture teachers leave within the first five years (Ingersoll, 2003) due to the heavy demands of the profession (Myers, Dyer, & Washburn, 2005). And while research is being conducted to help mitigate turnover (e.g., Sorenson & McKim, 2014; Tippens et al., 2013), COAs still struggle with the immediate problem of recruiting future agriculture teachers into COAs. Myers et al. write, “Attracting and retaining quality students in agricultural education remains one of the most difficult problems faced by the profession” (2004, p. 18). In Missouri, the rising number of vacant agriculture teacher positions has led state officials to relax the qualifications for becoming an agriculture teacher, placing a renewed sense of urgency on Missouri’s COAs to recruit students to the profession. This is a common occurrence nationwide (Kantrovich, 2010). As COAs become more competitive for a limited population of potential agriculture education students, recruitment efforts must become more strategic. This left us to question what factors are most important to potential students when choosing a COA, and how do COAs best recruit agriculture education students to the so-called pipeline of graduates for the “sufficient scientific and professional workforce that addresses the challenges of the 21st century”? (Stripling & Ricketts, 2016, p. 30).

Conceptual Framework

This study utilized Chapman’s (1981) Model of Student College Choice, which describes factors that influence a student’s decision to attend a college. Factors include student characteristics, such as academic aspirations and high school performance, but also numerous external influences that are within some control of COAs as they engage in recruitment activities. These include the following: (a) fixed college characteristics, such as quality of education, safety of campus, and costs; (b) significant persons, such as parents, friends, and agriculture teachers; and (c) college communications, such as campus visits, personal contact from a faculty member, or mailings.

Methodology

The purpose of this study was to explore factors impacting Missouri’s early-career agriculture teachers’ choice of college; the study was guided by the following questions:

1. To what extent do fixed college characteristics influence decisions to attend a university?
2. To what extent do significant persons influence decisions to attend a university?

3. To what extent do college communications influence decisions to attend a university?

This quantitative, descriptive research study surveyed a census of early-career agriculture teachers ($n = 164$) in Missouri, operationalized as being employed five years or fewer. A researcher-created, 22-item questionnaire was created based on a review of literature and featured five-point, Likert-type response set to measure the perceived impact of factors on an agriculture teacher's decision to attend a particular COA. Response sets ranged from "A great deal," to "None at all." We followed Dillman, Smyth, and Christian's (2014) Tailored Design Method for distributing the questionnaire via Qualtrics. Of the 164 early career agriculture teachers surveyed in this census, 62% ($n = 102$) responded with complete responses. Simple descriptive statistics were used to determine mean and standard deviation for each item, as well to calculate and report a construct-level score for each factor.

Results

The following table represents the construct-level descriptive statistics describing which factors were most important to early career agriculture teachers when choosing a COA.

Table 1

Means and standard deviations of early-career agriculture teachers' factors in choosing a College of Agriculture

Chapman Factor	<i>n</i>	M	SD
Fixed college characteristics	102	3.55	.616
College communications	102	2.78	.983
Significant persons	102	2.64	.841

Note. A Great Deal = 5, A lot = 4, A moderate amount = 3, A little = 2, and Not at all = 1.

The area of greatest importance for early-career agriculture teachers when choosing a COA was fixed college characteristics. The most important items in this construct were "quality of education" ($M = 4.21$, $SD = .820$) and quality of teaching ($M = 4.21$, $SD = .886$). Among the various college communication efforts, campus visits were most important ($M = 3.52$, $SD = 1.47$), and least important were mailed recruitment materials ($M = 2.27$, $SD = .1170$). Finally, the most significant persons were parents ($M = 3.23$, $SD = 1.38$), followed closely by agriculture teachers ($M = 3.13$, $SD = 1.52$).

Conclusions/Implications

When recruiting, it is critical to know where to focus your efforts. Unfortunately, this study showed that almost everything matters at least "A little" to "A moderate amount," which at least lends support to Chapman's (1981) Model of Student College Choice. However, a few actionable items can be taken away. COAs can highlight the quality of education and teaching — factors that seem obvious when attracting future educators. COAs can maintain close relationships with alumni who are current agriculture teachers, since agriculture teachers' influence mattered nearly as much as parents'. Finally, when it comes to communication efforts, the message to students should be clear: it's time for a campus visit.

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