

The Potential Return on Investment of the Recruitment Strategies for an Academic Unit Focused on Agricultural Sciences

J. Tanner Robertson

Taylor Hurst

Kevin Williams

Lance Kieth

Follow this and additional works at: <http://newprairiepress.org/jac>

Recommended Citation

Robertson, J. Tanner; Hurst, Taylor; Williams, Kevin; and Kieth, Lance (2017) "The Potential Return on Investment of the Recruitment Strategies for an Academic Unit Focused on Agricultural Sciences," *Journal of Applied Communications*: Vol. 101: Iss. 2. <https://doi.org/10.4148/1051-0834.1005>

This Research is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Journal of Applied Communications by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.

The Potential Return on Investment of the Recruitment Strategies for an Academic Unit Focused on Agricultural Sciences

Abstract

University recruitment strategies could be an important factor in attracting students and keeping enrollment numbers growing to a desired level. Research has shown that colleges of agriculture should investigate their traditional recruiting techniques and develop new plans to target desirable students. Students are viewed as revenue generators for the university, and with money and time being two important considerations, it is essential and helpful to know where both are best utilized in the recruitment process. The purpose of this study was to determine which recruiting methods and strategies are the most cost effective and work best for agriculturally focused departments. The researchers used a descriptive survey to collect data on participants' preferred and influential recruitment methods and strategies. First-year students in this study chose campus tours and visiting with a faculty member on campus to be the most influential over all other recruiting strategies/methods in their decision to enroll at the university. Additionally, these specific recruitment strategies are also least expensive to employ, therefore, giving the department/university over 15 times the return of its investment. Promotional materials such as caps, key chains, and pens can produce a very high return because of the low input cost per unit. Overall, the strategies the department employs to recruit prospective students show to be effective, however, there is always room for improvement. However, other factors such as scholarship availability, cost of tuition, admission requirements and proximity to home could also be what attract students to the university.

Keywords

College Choice, Marketing, Recruitment Strategies, Return on Investment

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

RESEARCH

The Potential Return on Investment of the Recruitment Strategies for an Academic Unit Focused on Agricultural Sciences

J. Tanner Robertson, Taylor Hurst, Kevin Williams, and Lance Kieth

ABSTRACT

University recruitment strategies could be an important factor in attracting students and keeping enrollment numbers growing to a desired level. Research has shown that colleges of agriculture should investigate their traditional recruiting techniques and develop new plans to target desirable students. Students are viewed as revenue generators for the university, and with money and time being two important considerations, it is essential and helpful to know where both are best utilized in the recruitment process. The purpose of this study was to determine which recruiting methods and strategies are the most cost effective and work best for agriculturally focused departments. The researchers used a descriptive survey to collect data on participants' preferred and influential recruitment methods and strategies. First-year students in this study chose campus tours and visiting with a faculty member on campus to be the most influential over all other recruiting strategies/methods in their decision to enroll at the university. Additionally, these specific recruitment strategies are also least expensive to employ, therefore, giving the department/university over 15 times the return of its investment. Promotional materials such as caps, key chains, and pens can produce a very high return because of the low input cost per unit. Overall, the strategies the department employs to recruit prospective students show to be effective, however, there is always room for improvement. However, other factors such as scholarship availability, cost of tuition, admission requirements and proximity to home could also be what attract students to the university.

KEY WORDS

College Choice, Marketing, Recruitment Strategies, Return on Investment

INTRODUCTION

Competition for quality students among universities has intensified as the need to generate additional tuition revenue has increased. Nationally, state budget cuts for higher education have led universities to focus on generating its own revenues to decrease the financial requirements to provide quality education (Berman & Paradeise, 2016). According to the Grapevine Summary of State Higher Education Tax Appropriations (2016), state appropriations for higher education have trended downward in recent years and only seen marginal gains in budget reallocations during the last budget cycles. Universities' recruitment strategies could be an important factor in attracting students and keeping enrollment numbers growing to a desired level. In addition, faculty are often asked to assist in recruitment and retention strategies, thus adding to workload or refocusing faculty efforts from teaching and research to service.

According to Redlinger and Valcik (2008), students are viewed as revenue generators for the university, and with money and time being two important considerations, it is essential and helpful to know where both are best utilized in the recruitment process. Heldman (n.d.) found the average per student recruiting expenditure for a four-year university to be just under \$714, making the cost to recruit 3,000 students each year over \$2 million. However, as colleges and universities face shrinking budgets and fewer state appropriations, recruitment budgets could experience decreases, thus limiting or changing the strategies and techniques universities implement in the recruitment of quality students.

There is a push by some university administrators to increase headcount enrollment. With time and money under strain, recruiting strategies should focus on efficiency. Thus, recruitment techniques that do not provide universities an adequate return on investment (ROI) considering both time and financial expenditures should hold less value to those creating recruiting strategies and methods. Time and availability of faculty members during the recruiting process can play an important role in the success of a recruitment program (Cartmell, Herren, & Robertson, 2011). However, faculty members often have full teaching loads, research requirements, and service that limit time or availability in the recruitment process.

With consideration of faculty schedules as well as constant threats to university/ departmental budgets, it is important to analyze recruitment strategies not only for their success in recruiting quality students to the university but also to gain a better understanding of the potential return universities and/or departments are obtaining based on money and time allocated to the recruitment process.

Basic to any marketing strategy is the activity of informing potential students as to the strengths and/or “marketable” features of a particular university or college. Many universities work toward more sophisticated marketing strategies as well as methods that are more appealing to prospective students in order to maintain a competitive edge. As competition for quality students intensifies, college administrators are sticking to the belief they can influence a student’s college choice by targeting its recruiting toward their institutional descriptors (Chapman, 1981). In a seminal study on the University of Idaho recruitment efforts (Riesenberg, 1987), it was recommended to pay special attention to certain factors that potential students rated as important in their decision to attend a university or college including specific majors available, employment opportunities after graduation, financial aid, faculty reputation, the variety of courses available, and housing opportunities.

Universities need to consider the overall costs of recruitment strategies, not only the cost of materials to recruit. As budgets dwindle and faculty workloads increase, it is imperative that entities consider the ROI of its efforts to ensure efficiency in marketing efforts exist both financially and with its human capital.

CONCEPTUAL FRAMEWORK

Recruitment Strategies

To recruit first-year students, a major promotional tactic for higher education marketers is the use of promotional materials to showcase a university’s brand (Armstrong & Lumsden, 1999; Baker, Settle, Chiarelli, & Irani, 2013). The publication and distribution of these materials is one of the most prevalent marketing tactics used by colleges and have proven influential in deciding to enroll at a university (Armstrong & Lumsden; Cartmell et al., 2011).

Promotional materials can be used as marketing tools by informing prospective students of the university’s brand. Brand awareness refers to how aware customers and potential customers are of your business and its products (Chabot & Gustafson, 2007). Although promotional materials may not be the most influential strategy in a students’ decision to attend a university, many promotional items do contribute to the overall branding of the university and could provide additional support when making a college choice (Cartmell et al., 2011; Rayfield, Murphrey, Skaggs, & Shafer, 2013). Baker et al. (2013) recommended recruitment materials should be targeted and designed strategically toward a diverse group of students and their specific interest area, suggesting recruitment strategies should be focused by discipline or college.

Recruitment materials could potentially improve by providing prospective students with better information about the diversity of career opportunities within agriculture (Baker et al., 2013; Boys & Espey, 2012). Recruitment efforts should focus on reaching an increasingly diverse and non-agricultural group of potential students while also continuing to improve recruitment materials and media that will resonate with parents/guardians (Baker et al., 2013; Rayfield et al., 2013). Promotional materials also need to be updated in order to keep up with changing trends in marketing and media use and to appeal to all groups involved in the decision-making process (Armstrong & Lumsden, 1999, Baker et al.). Studies on the decision-making process have found the most used and most influential individual in university selection was a parent or guardian (Chapman, 1981; Cartmell et al., 2011). However, more recent evidence suggests faculty advisors have considerable influence on choice of college or major (Baker et al.).

Rayfield et al. (2013) found successful recruitment and retention of students enrolling in agriculture related majors have varied over time and location. Their research determined the influence of five different factors on a student's selection of an agricultural major: 1) exposure to agriculture, 2) family and friends, 3) college of agriculture recruitment activities, 4) professionals and 5) job considerations. Results revealed that prior experience in agriculture was the most influential factor. Other influential factors included the atmosphere of specific departments within the college, however, recruitment materials such as informational brochures were reported less frequently to be influential in a student's decision in college choice (Rayfield et al.).

Washburn (2002) found campus visits to be the most useful source of information prospective students used to choose a college. More than half of graduates in a similar study used information gathered during a campus visit to make the decision to enroll at the university (Cartmell et al., 2011). Research also identified personal contacts with someone employed at the university or with current students to be an important recruiting strategy. Campus visits and personal conversation with a professor provided the most useful information of all recruitment materials used by students to make their decision to enroll (Cartmell et al.).

According to Hesel (2004), a campus visit is the single most influential source of information for students when choosing a college. Nearly all students of every academic ability and income level are visiting college campuses (Hesel). The findings from this research reveal the hospitable nature and friendliness of the people prospective students encountered during these visits had a significant positive impact on their interest in a university.

Return on Investment

Return on investment matrices are used to evaluate program success in all forms of organizations including the public sector and non-profit organizations (Phillips & Phillips, 2009). The resurgence in ROI methodology could be due to administrators' need for data that assists in measuring human performance. Lingane and Olsen (2004) contend more focus on social returns on investment may help create more financial value but also develop better social value of certain tasks and the time these tasks consume. A ROI measures the overall effectiveness in generating profits with available assets (Beierlein, Schneeberger, & Osburn, 2003; Van Horne & Wachowicz, 2008).

Research on ROI in education began in the late 1950s (Patrinos & Psacharopoulos, 2010). In the 40-plus year history of estimating ROI in education, empirical results often link the investment in education to the level of economic development (Patrinos et al., 2010).

Administrators at Eastern Michigan University sought to consider factors beyond yield when evaluating the effectiveness of recruitment strategies after ROI metrics were used to evaluate its recruitment methods. One instance included a reception for students that continued to be held because of enrollment data indicating it produced a high yield of students who ultimately enrolled (Hoover, 2010). Focusing on ROI discovered 90 percent of students who attended the receptions had already signed up to visit the university and register for classes (Hoover).

Redlinger and Valcik (2008) discussed using ROI models of programs and faculty in strategic planning. Their ROI model for different areas of the university created a more robust means for continued and future allocation of campus resources

and established the basis for performance evaluation (Redlinger & Valick). The overall model viewed students as revenue generators for the university, and the data generated by the ROI model allowed clarity in many questionable areas. These models proved that ROI could be used to guide colleges and universities as they seek to control costs, streamline operations, and improve the quality and effectiveness of the educational experiences of their students.

Purpose and Objectives

The purpose of this study was to determine which recruiting methods and strategies are the most cost effective and work best for agriculturally focused departments at a university. The objectives for this study were:

1. Determine which recruiting methods and strategies are most influential in determining first-year enrollment in an agriculturally focused department,
2. Determine the investment (i.e. time, financial, methods) of recruitment methods in an agriculturally focused department, and
3. Determine the potential return on investment of recruitment methods and strategies of an agriculturally focused department.

METHODS

The researchers used a researcher-designed, descriptive survey to collect data on participants' preferred and influential recruitment methods and strategies used by an agriculturally focused department for this study. This method was used to describe the influence of recruitment efforts on participants' decision to enroll. Participants' ranked the importance of specific recruitment methods and strategies and the influence each method or strategy had on their decision to enroll at the university. In turn, the data collected from the instrument was used to develop a better understanding of what strategies are most effective in influencing potential first-year students to enroll at the university.

Investment for each recruitment method and strategy was calculated in order to determine an approximate ROI. Investment for recruitment materials such as bags, pens, notepads, etc. was determined by calculating the cost per unit based on the overall cost of the vendor charge for already made orders. Recruitment events such as a departmental representative visiting a high school or attending an event was calculated by including the entire cost of the trip including: mileage, hotel costs, food, etc. Salaries were not calculated in the cost of trips because faculty that participated use these trips to satisfy their service requirement of their employment agreements, thus the researchers considered these trips to be normal duties and not to be considered additional to their workload.

In order to determine the investment of a student visit with a faculty member and campus tours, faculty visit records were analyzed to determine which individual faculty visited with potential students over a one-year period. Faculty are asked to meet with prospective students as part of an official campus tour but also if a prospective student visits the campus without scheduling an official visit. Faculty that met with prospective student visitors were then asked to use a time log for one semester to determine, on average, how much time they allocate to visiting with a potential student and/or the family per visit. Salaries from participating faculty were averaged, then divided by 2,080 (work hours per year based on a 40-hour work week), then by 60 minutes (per one hour) to determine pay per minute. Cost per minute was multiplied by 37 (in minutes), which is the average time faculty members spend meeting with one prospective student as indicated by faculty. The formula is as follows: $(\$87,520.87/2,080/60 = \text{salary per minute}) \times 37 = \text{cost per student visit with faculty member} (= \$25.95 \text{ per visit})$. The average salary is skewed toward the high end of salary ranges (\$55,000 – \$120,000) because full professors and/or the department head performed many of the visits. In addition, the variation in salaries includes animal science, plant science, agricultural education, agribusiness and agricultural communication faculty thus contributing to a vast salary range. This formula was developed by determining the average salary in the department and assuming pay is based on a 40-hour work week (D. Garcia, personal communication, February 4, 2015). Calculations were made using the formula function of Microsoft Excel spreadsheet.

In order to calculate the return on the departments' investment, a formula was used to determine the gross revenue a first-year student to the university generates. The estimated gross revenue of an agriculture student, who is a Texas resident, taking 15 hours per semester for one year is equal to \$10,245.75 (D. Garcia, personal communication, February 4, 2015). This number is based on the state's 2014 – 2015 average tuition and fees and 2011 state formula funding tables. To calculate the return on each recruitment strategy, the cost of the recruitment strategy was subtracted from the student-generated revenue (Beierlein et al., 2003). Next, the total was multiplied by the frequency of how often the recruitment strategy was ranked as most influential by participants. An example of the formula is as follows: $(\$10,245.75 - \text{cost of strategy}) \times \text{frequency}$.

The target population of this study consisted of first-year students enrolled at a university and majoring in an agriculturally focused discipline. Participants were self-selected based on choice of major and enrollment into one of the four agriculture majors-only sections of a requirement freshman seminar course. As per university policy, all first-year students must be enrolled in a freshman seminar course, thus all students enrolled in an agriculturally focused discipline at the university after the 12th class day were asked to participate in the study. The instrument was distributed to students attending the seminar course sections the third week of the fall 2014 semester.

The survey instrument was created by the researchers as a tool to determine first-year students enrolled at a university and majoring in an agriculturally focused disciplines awareness and exposure of the university before choosing to attend. The instrument was also used to determine recruiting techniques participants were exposed to and how influential or important these methods or strategies were in choosing to enroll at the university. The first section of the instrument consisted of questions to determine participants' first exposure and experience with the agriculturally focused department. These experiences included campus tours, various livestock shows attended by a departmental representative, FFA events, and visits with faculty members from the department.

The second section comprised of questions regarding how influential recruiting methods and strategies were in the participants' decision to pursue an agricultural degree at the university. Section Three used the same questions from Section Two; however, in this section, students were asked to rank (1-11) and (1-17) how influential recruiting methods and strategies were in the participants' decision to enroll in the university.

Validity and Reliability

The instrument was designed for this study, thus it was reviewed and edited by three panel of experts for face and content validity. A pilot test was given to one section of a university freshman seminar class separate from the agricultural major sections to test face and content validity. Two sections of the survey were edited to improve instructional understanding to the questions and to increase response rate.

Reliability is important when variables developed from summated scales are used as predictor components in objective models (Reynaldo & Santos, 1999). Cronbach's alpha is a numerical coefficient of reliability that determines if the variables derived from the test instrument provided stable and reliable responses over a repeated administration of the test (Reynaldo & Santos). A Cronbach's Alpha was calculated (.912) on participants' responses post hoc and determined reliable for use in this study (Reynaldo & Santos).

Data Collection

The instrument was administered in class to four agriculture-major designated, sections of a freshman seminar course week 12 of a 16-week course after Institutional Review Board approval. Students enrolled in these sections were provided with instructions, the purpose of the study and statements stating the questionnaire was optional as well as confidential. It also stated that no compensation would be given for participation.

Once the questionnaires were collected, each one was reviewed for completion. Questionnaires left blank were not analyzed. A total of 83 questionnaires were completed and analyzed out of 170 for a response rate of 48%. As the questionnaire was administered later in the semester, it is possible some students were not available to take the questionnaire

as they had already determined to leave the university or were not in attendance during the day of administration. This should be considered as a limitation to the study.

Data Analysis

Data from the instrument was analyzed using the SPSS version 18 statistical package on a Macintosh platform. Descriptive statistics, frequencies, and percentages were used to summarize the data. The means and frequencies were used to rank the data in order of importance and influence according to student response. Along with the data summary, the costs of all recruitment materials were used to determine the ROI for the department. A ROI measures the overall effectiveness in generating profits with available assets (Van Horne & Wachowicz, 2008). Return on investment was calculated with the following formula: $ROI = \text{Net Profit} / \text{Total Assets}$.

RESULTS

Influential Recruitment Strategies

The first objective was to determine which recruiting methods and strategies are most influential in determining first-year enrollment. Campus tours were the most common first exposure or connection to the department (56.6%, $n = 47$), followed by "participation in a student activity held on campus" (25.3%, $n = 21$). Recruitment materials also serve as marketing to promote the department. These materials include caps, bags, pens, pencils, key chains, and notepads. Approximately 33% ($n = 28$) of the participants had received some form of paraphernalia from the department prior to applying to the university.

Participants indicated the level of influence their initial exposure/connection to the university or department was in their decision to enroll. Campus tours had the highest mean value ($M = 4.12$), followed by visiting with faculty on campus ($M = 3.86$). These two factors had the highest mean of scaled rankings (Table 1).

Table 1

Level of Influence of Recruiting Strategies and Methods of First-Year Students

Recruiting Strategy/Method	Influence (f)					M
	1	2	3	4	5	
Campus Tour	1	0	10	20	19	4.12
Visit with faculty member on campus	4	2	11	21	19	3.86
Visit with a dept. representative at FFA State Convention	3	0	3	8	5	3.63
Visit by dept. representative at your high school	2	3	7	10	6	3.54
Visit with a rep. from the dept. at the Fort Worth Stock Show	3	1	0	2	5	3.45
Visit with a rep. from the dept. at Area FFA Convention	3	0	1	3	4	3.45
Visit with a rep. from the dept. at the Houston Livestock Show	3	1	1	5	4	3.43
Receiving departmental information by mail	7	13	14	19	14	3.30
Visit with a rep. from the dept. at 4-H Roundup	2	0	1	4	1	3.25
Visit with a rep. from the dept. at a district FFA banquet/meeting	3	0	1	4	2	3.20
Visit with a dept. rep. at the San Antonio Livestock Show	3	0	0	1	3	3.14

Receiving a department key chain	8	6	9	2	4	2.59
Receiving a department bag	7	8	13	3	2	2.55
Receiving a department cap	7	7	6	4	1	2.40
Receiving a department pen/pencil	12	11	12	2	1	2.18
Visit with a WT rep. at the Star of Texas Livestock Show in Austin	3	1	1	0	1	2.17
Receiving a department notepad	10	8	8	1	1	2.11

Note. Scale: 5 = most influential; 4 = influential; 3 = neutral; 2 = not as influential; 1 = least influential

Dept. = agriculturally focused department

Participants ranked recruiting strategies and methods from most influential to least influential. Visiting with a faculty member on campus ($n = 19$) was also ranked as most influential in deciding to enroll by participants. Although it was never ranked as most influential (1), visiting with a department representative at the San Antonio Livestock Show shows to be influential as well (mode = 2). The least influential recruiting strategy shows to be visiting with a department representative at the Fort Worth Stock Show (mode = 16). The mode represents the most repeated ranking each strategy received (Table 2).

Table 2

Ranking of Recruiting Strategies Based on Influence

	Rank	Mode	<i>f</i>
Campus Tour	1	1	34
Visit with faculty member on campus	2	2	19
Receiving departmental information by mail	3	2	13
Visit by dept. representative at your high school	4	3	4
Visit with a dept. rep. at FFA State Convention	5	4	4
Visit with a rep. from the dept. at a district FFA banquet/meeting	6	5	1
Visit with a rep. from the dept. at Area FFA Convention	7	7	1
Receiving a department pen/pencil	8	7	1
Visit with a rep. from the dept. at 4-H Roundup	9	13	1
Visit with a rep. from the dept. at the Houston Livestock Show	10	15	1
Visit with a dept. rep. at the San Antonio Livestock Show	11	2	0
Receiving a department cap	12	3	0
Receiving a department key chain	13	4	0
Receiving a department notepad	14	5	0
Receiving a department bag	15	5	0
Visit with a dept. rep. at the Star of Texas Livestock Show in Austin	16	7	0
Visit with a rep. from the dept. at the Fort Worth Stock Show	17	16	0

Note. Rank; 1 = most influential; 17 = least influential

Dept. = agriculturally focused department

Investment of Recruitment Strategies

All recruiting methods and strategies that make up the recruiting budget for the department as well as faculty salaries, and time spent recruiting were collected. The cost of lodging, gas and meals were included in calculating recruiting trips. Materials used to recruit such as caps, notepads, key chains, bags, pens, and printed materials are included and are calculated on a per unit basis. The time faculty spent meeting with students and campus tours are calculated the same as faculty indicated they did not treat formal campus tours differently than impromptu visits by students (Table 3).

Table 3

Recruiting Investment by Method/Strategy

Recruitment Strategy/Method	Cost per unit
Bag (donated)	\$-
Pen	\$0.22
Notepad	\$0.35
Key Chain	\$1.50
Information by Mail/Letter from Department	\$1.88
Cap	\$5.00
Visit with Faculty Member on Campus	\$25.95
Campus Tour	\$25.95
FFA Banquets/Meetings	\$330.11
High School Visit	\$718.90
Area FFA Convention	\$760.53
Fort Worth Stock Show	\$865.40
4-H Roundup	\$1,109.16
Houston Stock Show	\$1,309.14
San Antonio Stock Show	\$1,928.56
Austin Trip	\$2,566.02
FFA State Convention	\$5,320.16

Return on Investment of Recruiting Methods and Strategies

Objective Four was to determine the potential ROI of the recruitment strategies used by an agriculturally focused department. The frequency represents the number of participants that ranked a particular strategy as most influential. Bags, notepads, and key chains generated the least return. Campus tours generated the most return (ROI = \$347,399.76) followed by visiting with a faculty member on campus (ROI = \$194,135.16). Complete results are displayed in Table 4 below.

Table 4
Return on Investment of Strategies Ranked 1st Influential to Decision to Enroll by Frequency

Recruiting Strategy	Cost	Freq. Rank 1	ROI
Campus Tour	\$25.95	34	\$347,473.20
Visit with Faculty Member on Campus	\$25.95	19	\$194,176.20
Information by Mail/Letter from dept.	\$1.88	13	\$133,170.31
High School Visit	\$718.90	4	\$38,107.40
FFA State Convention	\$5,320.16	4	\$19,702.36
Pen	\$0.22	1	\$10,245.53
FFA Banquets/Meetings	\$330.11	1	\$9,915.64
Area FFA Convention	\$760.53	1	\$9,485.22
4-H Roundup	\$1,109.16	1	\$9,136.59
Houston Stock Show	\$1,309.14	1	\$8,936.61
Bag	\$-	0	\$-
Notepad	\$0.35	0	\$-
Key Chain	\$1.50	0	\$-
Cap	\$5.00	0	\$-
Fort Worth Stock Show	\$865.40	0	\$-
San Antonio Stock Show	\$1,928.56	0	\$-
Austin	\$2,566.02	0	\$-

Results for ROI totals are also displayed in Table 5 for which the frequencies in this table represent the number of participants who ranked that particular strategy as the second most influential strategy. Participants chose campus tours ($n = 34$), visiting with a faculty member ($n = 19$), and printed materials ($n = 13$) as influential (Table 5).

Table 5
Return on Investment of Strategies Ranked 2nd Influential to Decision to Enroll by Frequency

Recruiting Strategy	Cost	Freq. Rank 2	ROI
Visit with Faculty Member on Campus	\$28.11	22	\$224,788.08
Information by Mail/Letter from dept.	\$1.88	15	\$153,658.05
Campus Tour	\$28.11	14	\$143,046.96
High School Visit	\$718.90	6	\$57,161.10
San Antonio Stock Show	\$1,928.56	6	\$49,903.14
Area I FFA Convention	\$760.53	2	\$18,970.44
4-H Roundup	\$1,109.16	2	\$17,873.22
Houston Stock Show	\$1,309.14	2	\$10,245.75

Bag	\$-	1	\$9,380.35
Fort Worth Stock Show	\$865.40	1	\$4,925.59
FFA State Convention	\$5,320.16	1	\$-
Pen	\$0.22	0	\$-
Notepad	\$0.35	0	\$-
Key Chain	\$1.50	0	\$-
Cap	\$5.00	0	\$-
FFA Banquets/Meetings	\$330.11	0	\$-
Austin	\$2,566.02	0	\$-

Participants ranked the same three recruitment strategies (campus tours, meeting with a faculty member on campus and information by mail) as third most influential to their decision to enroll at the university as they did first and second. Visit to a prospective students' high school increased in frequency when participants were asked to list their third most influential strategy used to influence their decision to enroll (Table 6).

Table 6

Return on Investment of Strategies Ranked 3rd Influential to Decision to Enroll by Frequency

Recruiting Strategy	Cost	Freq. Rank 3	ROI
Information by Mail/Letter from dept.	\$1.88	14	\$143,414.18
Visit with Faculty Member on Campus	\$28.11	10	\$102,176.40
High School Visit	\$718.90	8	\$76,214.80
Cap	\$5.00	6	\$61,444.50
Campus Tour	\$28.11	3	\$30,652.92
FFA State Convention	\$5,320.16	5	\$24,627.95
Bag	\$-	2	\$20,491.50
Pen	\$0.22	2	\$20,491.06
FFA Banquets/Meetings	\$330.11	2	\$19,831.28
Area I FFA Convention	\$760.53	2	\$18,970.44
Houston Stock Show	\$1,309.14	2	\$17,873.22
Key Chain	\$1.50	1	\$10,244.25
Fort Worth Stock Show	\$865.40	1	\$9,380.35
San Antonio Stock Show	\$1,928.56	1	\$8,317.19
Notepad	\$0.35	0	\$-
4-H Roundup	\$1,109.16	0	\$-
Austin	\$2,566.02	0	\$-

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Although a campus tour was the most common first experience, only 58% ($n = 48$) of participants actually visited campus prior to applying, and only 35% ($n = 29$) of participants participated in an official campus tour. When students sign up for an official campus tour, time is set aside for a meeting with a faculty member from the department. Faculty also try to meet with any students who might visit the university through informal means, but the possibility of someone being available to meet with someone is not always guaranteed. Of the participants that came to campus, 49% ($n = 41$) say they met with a representative from the department.

Traveling to recruit prospective students is also a method of the departments' recruitment strategy. Some of the places representatives traveled to include FFA events, livestock shows, and high school visits. Only 29% ($n = 24$) of participants indicated they had actually met with a representative from the department at an event or location off campus. Whether a potential recruit meets with a representative from the department on or off campus, it is always a goal to get information or promotional materials in prospective students' hands. Some of these items include caps, bags, key chains, notepads, pens, and other paraphernalia. Of the completed surveys, 33.7% ($n = 28$) of participants said they had received some sort of paraphernalia from the department.

Traveling of any kind is the most expensive part of the departments' recruitment strategies. The recruitment trip to Dallas for the 2013 State FFA Convention cost \$5,320.16. This was the highest expense due in part to the amount of students and faculty that attend the event. Recruitment materials have the least investment per unit than other methods used in the recruiting process.

The majority of promotional materials did not generate a return. This could be a factor of how this study used influence to calculate ROI. None of the promotional materials were ranked as most influential by the participants. However, some of these materials were ranked high, meaning they might not have been most influential, but they had influence on the decision to enroll. In addition, some strategies and materials saw influence frequency increase as other strategies were already selected suggesting materials and strategies are used in concert to influence some prospective students' decision to enroll.

First-year students in this study chose campus tours and visiting with a faculty member on campus to be the most influential over all other recruiting strategies/methods in their decision to enroll at the university. Additionally, these specific recruitment strategies are also least expensive to employ, therefore, giving the department/university over 15 times the return of its investment. The results of this study are similar to those found by Cartmell et al. (2011).

More than half of participants indicated their initial exposure to the university was by being on campus for a campus tour or participating in an event held on campus (FFA event, feed yard camp, etc.). Getting prospective students on campus and then having them meet with faculty is what appears to be the best way to influence prospective students to enroll. Other recruitment strategies that participants valued as influential included receiving information about the department by mail. According to Baker et al. (2013), promotional materials are influential on a student's college choice and play an important role in the decision making process. This strategy is financially feasible and shows to produce a high return.

Promotional materials such as caps, key chains, and pens can produce a very high return because of the low input cost per unit. Some of these items could be removed from the recruiting budget, such as key chains and notepads, and that money could be invested into another strategy that is producing a higher return. Although these materials were not extremely influential in the participants' decisions to attend the university, they do serve as inexpensive marketing tools that could benefit the department or university branding strategies (Rayfield et al., 2013). Promotional items help make students as well as their parents more aware of the university's brand. According to Chabot and Gustafson (2007), the more aware consumers are of your product and brand, the more likely they are to invest in that product.

Other factors such as scholarship availability, cost of tuition, admission requirements and proximity could also be influencing the decision to enroll to the university (Chapman, 1981). Continued research should be done to determine what external factors outside the department's and/or university's control have on the decision to enroll. The majority of the department's recruiting strategies consist of faculty involvement and travelling off campus to recruit at major stock shows and conventions. Although the majority of these trips are producing a profitable return, they are each expensive and time consuming. A future study should address the value and returns generated by faculty's use of time. Although faculty are influential in the recruitment process and generate the largest ROI, perhaps their time is better used to generate grant dollars or student credit generated through courses they instruct rather than recruitment efforts.

Some faculty are allowed to use recruitment visits as part of their service requirement of their duties. However, more consideration of faculty costs should be studied. Opportunity costs should be studied to determine the best use of faculty time, not only as a resource, but as a financial entity.

It is recommended agriculturally focused departments continue to research and evaluate recruitment strategies. In particular, administrators should consider cost effective strategies that reduce faculty time spent off campus. In addition, strategies that many consider to reduce cost and time should be considered and assessed such as social media's role in the recruiting process (Baker et al., 2013; Rayfield et al., 2013). Lastly, as quality students become more sought after by multiple universities, strategies that employ relationship building techniques such as personal correspondence through peer-to-peer messaging, email or phone conversations should be assessed.

REFERENCES

- Armstrong, J. J., & Lumsden, D. B. (2000). Impact of universities' promotional materials on college choice. *Journal of Marketing for Higher Education*, 9(2), 83-91.
- Baker, L. M., Settle, Q., Chiarelli, C., & Irani, T. (2013). Recruiting strategically: Increasing enrollment in academic programs of agriculture. *Journal of Applied Communications*, 54(3), 54-66.
- Beierlein, J. G., Scheeberger, K. C., & Osburn, D. D. (2003). *Principles of agribusiness management: Third edition*. Illinois: Waveland Press. ISBN: 1-57766-267-9.
- Berman, E. P., & Paradeise, C. (2016). Introduction: The universal pressure, in E. Berman & C. Paradeise (eds.), *The university under pressure: Research in the Sociology of Organizations*, 46. Emerald Group Publishing Limited., pp.1-22.
- Boys, K. A., & Espey, M. (2012). Filling the gap: Exploring internal challenges and opportunities to successful student recruitment in applied economics departments. *Selected Paper prepared for presentation at the Southern Agricultural Economics Association Annual Meeting*, Birmingham, AL, February, 4-7, 2012.
- Cartmell II, D. D., Herren, C., & Robertson, J. T. (2011). Perceptions of influence on college choice by students enrolled in a college of agricultural sciences and natural resources. *NACTA Journal*, 55(3), 54-60.
- Chabot, B., & Gustafson, T. (2007). Brand awareness. *Cornell Maple Bulletin*, 105.
- Chapman, D. W. (1981). A model of student college choice. *Journal of Higher Education*, 52(5), 490-505.
- Center for the Study of Education Policy. (2016). *Grapevine survey of state higher education tax appropriations for fiscal year 2015*. Normal, Ill.
- Heldman, C. (n.d). Building a student retention program-a challenge worth the effort. *University Business*. Retrieved from http://www.hobsons.com/uploads/documents/hobsons_whitepaper_buildingastudent%20retentionprgrm.pdf
- Hesel, R. A. (2004). Campus visit drives college choice. *Art & Science Group, LLC*, 5(5). Retrieved from http://www.artsci.com/StudentPOLL/v5n5/publishers_note.htm
- Hoover, E. (2010). The ROI of student recruitment. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/blogs/headcount/the-roi-of-student-recruitment/2360>
- Lingane, A., & Olsen, S. (2004). Guidelines for social return on investment. *California Management Review*, 46(3), p. 116-135.

- Patrinos, H. A., & Psacharopoulos, G. (2004). Returns to investment in education: A further update. *Education Economics*, 12(2), 111-134.
- Phillips, P. P., & Phillips, J. J. (2009). *Return on investment, in Handbook of improving performance in the workplace*; Vol. 1-3. John Wiley & Sons, Inc.: Hoboken, New Jersey. doi: 10.1002/9780470592663.ch53
- Rayfield, J., Murphrey, T. P., Skaggs, C., & Shafer, J. (2013). Factors that influence student decisions to enroll in a college of agriculture and life sciences. *NACTA Journal*, 57(1), 88-93.
- Reynaldo, J., & Santos, A. (1999). Cronbach's alpha: a tool for assessing the reliability of scales. *Journal of Extension*, 37(2).
- Redlinger, L. J., & Valcik, N. A. (2008). Using return on investment models of programs and faculty for strategic planning. *New Directions for Institutional Research*, 2008(140), 93-108.
- Riesenberg, L. E. (1987). Factors students consider in selecting a university or college. *NACTA Journal*, 31(2), 37-40.
- Van Horne, J. C., & Wachowicz, J. M. (2008). *Fundamentals of financial management*. Harlow, England: Prentice Hall.
- Washburn, S. G. (2002). Factors influencing college choice for matriculates and non-matriculates into a college of agriculture. Unpublished Dissertation, University of Missouri-Columbia.

ABOUT THE AUTHORS

Tanner Robertson is an assistant professor in agricultural media and communication and a member of ACE for 10 years.

Taylor Hurst is currently the Marketing Specialist for Plains Cotton Cooperative.

Kevin Williams is the coordinator for agricultural education at WTAMU and a member of the department's recruitment and retention committee.

Lance Kieth is the chair of the recruitment and retention committee and the head of the department.