

Factors that Influence New Students' Decision to Attend Two Midwestern Land-Grant Universities¹

*Elizabeth A. Foreman, Scott W. Smalley²
and Michael S. Retallick
Iowa State University
Ames, IA*



Abstract

The purpose of this quantitative study was to describe the people and factors that influenced new students' decisions to attend the colleges of agriculture at two Midwestern land grant universities. Athletics was identified as the most common pre-collegiate activity. Students identified their parent as the most influential person in selecting their college. The top factor which influenced students' college decision was pursuing a career that interested them. The findings from this study can guide recruitment efforts at land-grant universities by allowing institutions to be more intentional with their recruitment efforts. Future research needs to be conducted to determine the timing of students' decisions and if students persist at a university based on the factors that influenced them to attend.

Keywords: college decision, student factors of influence

Introduction

Colleges across the country have experienced difficulty providing enough qualified graduates to meet the employment needs in the agriculture, food, and natural resources sectors. To meet these increasing employment demands, Colleges of Agriculture must increase the quantity of graduates from their programs, which is dependent on effective recruitment strategies. DesJardins et al. (1999) indicated many institutions are not certain about the effectiveness of the outreach and recruitment processes used in recruiting potential students to their colleges.

Hossler and Gallagher (1987), identified three stages that students go through when deciding which college to attend. The first stage is predisposition, where students decide if they wish to further their education (Hossler and Gallagher, 1987). Factors that may influence the decision to attend postsecondary schooling are: socioeconomic status, parents' expectations, career opportunities, and financial factors (Klein and Wash-

burn, 2012). Searching is the second stage where the students deciding to continue their education by going to college, gather information about different institutions (Hossler and Gallagher, 1987). The searching stage can be completed by reading online or printed informational materials and visiting the institutions (Klein and Washburn, 2012). Shrestha et al. (2011) found that with the increase of internet access, institution's websites have become one of the most important sources of information for students. The third stage is the choice stage, where students decide which institution they wish to attend (Hossler and Gallagher, 1987). In this stage influences can include: financial aid, size of the institution (e.g., student population and physical size), and location of the institution (Klein and Washburn, 2012). Throughout the various stages that students experience, there are many influential factors, which researchers have identified.

Researchers concluded that family (Rayfield et al., 2013; Rocca and Washburn, 2005; Shrestha et al., 2011) and friends (Shrestha et al., 2011) were a major influence on a student's choice of major and institution. Parents are such a big influence because they helped shape the student's expectations and gave advice about the institutions (Herren et al., 2011). Current students, graduates of the institution, degree program selected, and the high school agriculture teacher were additional people of influence (Robinson et al., 2007).

The role of campus visits varies within the literature as Herren et al. (2011) concluded campus visits and personal conversations with a professor were the most influential. Robinson et al. (2007) found over 75% of first-time enrollees stated that a "visit to campus" was useful in the college choice process and students who make a campus visit were more likely to attend the institution. However, research by Shrestha et al. (2011) found campus visits to be the least important source of information.

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²Agricultural Education and Studies; smalle16@iastate.edu

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One of the least influential resources were visits by university personnel to selected high schools. High school agriculture teachers were also found to have minimal influence on student's choice in selecting an agriculture college (Shrestha et al., 2011).

Robinson et al. (2007) identified important characteristics focusing on the quality of the degree program, including the quality and reputation of students, courses, and faculty. Washburn (2002) found scholarships, job opportunities, and potential income as being influential factors in influencing freshman enrollment. In addition, size of classes, safety of the campus, and city where the university is located were also important to prospective students (Garton and Washburn, 2007).

Chapman's (1981) model of student college-choice served as the theoretical basis for this study and identified two areas that influence college choice - student characteristics and external influences. Chapman (1981) identified socioeconomic status, aptitude, level of educational aspiration, and high school performance as factors which influenced students attending college. Additionally, the external factors were separated into three different categories (i.e., persons, college characteristics, and college effort to communicate with prospective students). The model of student college-choice suggests that significant persons, such as parents, counselors, teachers, and other students, influenced students' perceptions of a college. Chapman's model suggested that gaining a better understanding of the role of influential people enables colleges of agriculture to more efficiently use their resources to conduct outreach activities during the most critical times in the decision making process. The influential factors of students attending college continually change (DesJardins et al. 1999) which is why it is critical for colleges and departments to regularly learn more about the factors affecting student decisions to better tend to those student's needs.

Purpose/Objectives

The purpose of this quantitative study was to describe, compare, and contrast the people and factors that influenced new students' decisions to attend the colleges of agriculture at two Midwestern land grant universities (i.e. Iowa State University and South Dakota State University). The following research objectives guided this study:

1. Describe the demographics of new students.
2. Describe pre-collegiate experiences of new students.
3. Identify the people who influenced students' college decisions.
4. Identify the factors that influenced students' college decisions.

Methods

The population for this descriptive study consisted of students entering the colleges of agriculture as freshman at two Midwestern land grant institutions. Iowa

State University (ISU) had an undergraduate student population of 25,553 with the College of Agriculture and Life Sciences having a population of 3,900. South Dakota State University (SDSU) had an undergraduate student population of 2,135 in the College of Agriculture and Biological Science with an undergraduate population of 12,376. The Institutional Review Board at both institutions approved the study protocol and all participants were provided modified informed consent. Contact information was obtained for all full time freshmen and transfer students entering the college of agriculture for the fall semester in each college.

Instrumentation/Validity

University records were used to identify gender and a researcher-designed web based questionnaire was used to meet the research objective of this study. The instrument was researcher developed with a team of experts in higher education administration. Content validity was established by a panel of experts and the instrument was pilot tested for face validity prior to being administered.

Data Collection/Analysis

Dillman et al. (2009) tailored design method was used to develop the Qualtrics (Qualtrics Labs, Inc., Provo, UT) electronic survey instrument and guided the data collection process. Students were asked a variety of demographic questions and asked to identify and rank both people and factors that influenced their decision to attend their specific colleges. Students were asked to identify their involvement in academic and extracurricular experiences along with the form of communication they received during their decision making process to attend the land-grant institution.

Information was sent to all freshmen and transfer students in each Agricultural College. E-mail lists were obtained from their respective registrar's office. The total usable response rate was 75.46% (n=852) and represented students from two Midwestern land-grant institutions. ISU had a response rate of 79.46% (n=594) and SDSU had a response rate of 71.46% (n=258). To control for nonresponse error, we compared early, and late respondents as recommended by Lindner et al. (2001) and found no statistically significant differences. Data were analyzed using descriptive statistics. Each of these research questions were tested for differences between institutions using a Pearson Chi-Square.

Results and Discussion

Administrators and faculty have noticed a demographic change in the student population in Colleges of Agriculture over the past several decades. University statistics indicated that the college of agriculture at ISU has changed from 42.39% female students in 2000 to 50.68% female students in 2016, and at SDSU, that number has changed from 34.30% to 42.90% in that same time. Overall, the majority (54.9%) of the respondents for this study were female (n=468). ISU had

65.05% female respondents and at SDSU just over half of the responses were from females (52.70%).

The percent of students who enter the colleges with a production agriculture background has also changed over time. Just over half of the subjects reported that a member of their family was involved in farming or an agriculture-related business (58.72% of the students from ISU and 64.74% from SDSU. According to a Pearson Chi-Square there were not significant differences between the two institutions. This provides relevant information as we create recruitment materials and develop retention programs in the colleges.

Almost 80% of respondents (77.1%) participated in some form of athletics in high school, followed by National Honor Society, music, FFA, 4-H, and Boy's or Girl's State. Significantly, more students from ISU participated in National Honor Society ($\chi^2(1, N=702)=0.08, p<0.01$), while significantly more students from SDSU participated in music ($\chi^2(1, N=702)=4.51, p<0.03$), FFA ($\chi^2(1, N=702)=10.51, p<0.00$), and Boys/Girls State ($\chi^2(1, N=702)=0.05, p<0.03$) (Table 1). These results are significant when we consider our communication materials as well as campus visit experiences. Some students may be just as interested in learning about opportunities to participate in the marching band or play intramural sports as they are in collegiate FFA. Our prospective student materials should reflect these interests.

Parents were the most influential people when deciding to attend an institution. Fifty-seven percent of students indicated parents were important in their decision making. Pearson Chi-Square indicated no differences between institutions on the influence of parents. Almost fifty percent of students indicated that a classmate or friend was influential in their college decision (48.5%), followed by family member other than parent (38%), current college student (34.5%), agriculture science teacher (25.6%), and university staff/faculty (21.1%). Pearson Chi-Square found a family member other than a parent ($\chi^2(1, N=702)=4.05, p<0.04$) and extension staff ($\chi^2(1, N=702)=3.87, p<0.04$) were significantly more influential at ISU than at SDSU. Current college students ($\chi^2(1, N=702)=6.25, p<0.01$) and agriculture science teachers ($\chi^2(1, N=702)=4.69, p<0.03$) were more influential at SDSU (Table 2). Influential adults continue to be important as students make decisions about college. We should consider how we recruit parents to our colleges. Are we addressing their questions and concerns as well as the prospective students? In addition, what are we doing to build relationships with the non-parental influential adults in a prospective student's life? Do our alumni, friends, and stakeholders know about our current degree programs and opportunities for our students?

Do we acknowledge these contributions to our recruitment efforts?

Career related factors were influential for students as they chose a respective institution. Eighty-three percent of students indicated that, "Pursuing a career that interests me" was important, while just over half (52.7%) selected, "job placement", and just under half (47.9%) indicated "internships" were important. Pearson Chi-Square results showed that pursuing a career that interested them ($\chi^2(1, N=702)=4.85, p<0.02$), job placements rate ($\chi^2(1, N=702)=43.10, p<0.00$), and internship opportunities ($\chi^2(1, N=702)=0.09, p<0.03$) were more highly valued by students at ISU than SDSU (Table 3). For the group of students that participated

Table 1. Pre-collegiate Experiences of New Students Participation in High School

	Iowa State	South Dakota State	Grand Mean	Pearson Chi-Square	Sig.
Athletics	76.6	78.3	77.1	0.29	0.58
National Honor Society	50.3	49.2	50.0	0.08	0.01*
Music	46.0	53.9	48.4	4.51	0.03*
FFA	41.1	53.1	44.7	10.51	0.00*
4-H	37.5	38.0	37.7	0.01	0.90
Boy's State/Girl's State	35.4	40.7	37.0	0.05	0.03*
Student Government/Council	28.8	31.8	29.7	0.77	0.37
Drama/Speech	25.9	25.6	25.8	0.01	0.91
Newspaper/Yearbook	10.8	13.2	11.5	1.02	0.31
Faith/Religious Based	8.9	15.1	10.8	7.16	0.00*
Academic Bowl	7.6	8.9	8.0	0.43	0.50
Scouts	7.2	7.8	7.4	0.06	0.79
FCCLA	5.1	11.2	6.9	10.69	0.00*
BPA/FBLA	3.4	2.3	3.1	0.65	0.41
DECA	1.3	0.8	1.2	0.50	0.47

Note: *p ≤ 0.05

Table 2. Individuals Who Influenced Students' College Decisions

	Iowa State	South Dakota State	Grand Mean	Pearson Chi-Square	Sig.
Parent	59.30	54.3	57.7	1.84	0.17
Classmate or friend	41.10	51.6	48.5	1.40	0.23
Family member other than parent	40.20	32.9	38.0	4.05	0.04*
Current College Student	31.80	40.7	34.5	6.25	0.01*
Agricultural Science teacher	26.10	24.4	25.6	0.26	0.60
University Staff/Faculty	21.50	20.2	21.1	0.21	0.64
High School Counselor	14.80	13.6	14.4	0.22	0.63
High School teacher other than Agricultural Science	7.70	12.4	9.2	4.69	0.03*
County or State Extension Staff	5.90	2.7	4.9	3.87	0.04*

Note: *p ≤ 0.05

Table 3. Individuals Who Influenced Students' College Decisions

	Iowa State	South Dakota State	Grand Mean	Pearson Chi-Square	Sig.
Pursuing a career that interests me	85.5	79.5	83.7	4.85	0.02*
Job placement rate	60.1	35.7	52.7	43.10	0.00*
Internships	51.0	40.7	47.9	0.09	0.03*
Academic clubs and activities	28.6	28.7	28.6	0.00	0.98
Study abroad opportunities	33.2	12.4	26.9	39.45	0.00*
Academic/merit-based scholarships	24.1	24.4	24.2	0.00	0.10
Intramural/club sports	20.9	22.9	21.5	0.42	0.51
Need-based financial aid	14.8	14.7	14.8	0.00	0.97
Off campus-recreational activities	12.6	14.3	13.1	0.46	0.49
Participate in faculty research	9.9	7.4	9.2	1.42	0.23
Student support services	9.3	8.5	9.0	0.11	0.73
Faith/religious based organization/Activities	8.1	10.9	8.9	1.70	0.19
Community service involvement	9.6	5.0	8.2	0.07	0.03*
Honors program	5.9	7.0	6.2	0.36	0.54
Ethnically diverse student populations	5.6	1.9	4.5	5.52	0.01*
Theater or music activities	2.5	5.4	3.4	4.67	0.03*
Off campus fine arts	0.5	0.4	0.5	0.05	0.81

Note: *p ≤ 0.05

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in this research, the opportunity to pursue a job that interested them was more important than the job placement rate. This result highlights the importance of story sharing with prospective students and not relying on the placement rate to tell the story about career opportunities.

Students also reported valuing co-curricular and extra-curricular experiences (Table 3). Study abroad opportunities ($\chi^2(1, N=702)=39.45, p<0.00$), community service involvement ($\chi^2(1, N=702)=0.07, p<0.03$), and ethnically diverse populations ($\chi^2(1, N=702)=5.52, p<0.01$) were more highly valued by students at ISU than SDSU. However, theater and music activities were more valued by students at SDSU than students at ISU ($\chi^2(1, N=702)=4.67, p<0.03$) (Table 3).

Not surprisingly, financial aid considerations were also important to prospective students. Students (24.2%) indicated that academic and merit-based scholarships were significant in their decision-making process, whereas, 14.8% indicated need-based financial aid was important. Pearson Chi-Square showed no significant differences between ISU and SDSU.

Summary

Universities need to be more conscious of the people and factors that influence prospective students' decisions to attend post-secondary institutions. These findings can guide recruitment efforts at land-grant universities by allowing institutions to be more intentional with their recruitment materials and activities. Specific details need to be provided to students regarding their interests and factors that influence their decisions. Participants valued the role of careers that interested them, job placement rate, and internship opportunities. It is critical to highlight these opportunities for students in marketing materials and on prospective college visits.

It is well documented in literature that parents play an important role in the college decision-making process (Rayfield et al., 2013; Rocca and Washburn, 2005). Results indicated parents were the most influential people in the decision-making process. It was also noted the influence of peers, current college students, agricultural educators, and family members other than a parent were involved in the decision-making process. As people involved in influencing a students' decision, it is important individuals have information pertinent to land-grant institutions and their related programs of study when students are deciding to attend college.

Future research in other parts of the country would be beneficial to understand if there are regional impacts on these results. In addition, future research needs conducted to determine the timing of students' decisions and if students persist at a university based on the factors that influenced them to attend.

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