

## Characteristics of Distinguished Programs of Agricultural Education

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### *Abstract*

*Academic program rankings have become highly anticipated by universities, colleges, departments, faculty, and alumni. This study analyzed the perceptions of agricultural education departmental contact persons to identify esteemed postsecondary programs of agricultural education and the distinguishing characteristics of each program. The ten most distinguished programs were located at the University of Florida, Texas A&M University, The Ohio State University, University of Missouri, Iowa State University, Oklahoma State University, North Carolina State University, The Pennsylvania State University, Texas Tech University, and the University of Arizona. Faculty were cited as a distinguishing feature of each distinguished agricultural education program. Other distinguishing characteristics included research, graduate programs, range of programs, communication program, and teacher education. Since faculty are the most common distinguishing characteristic of highly regarded agricultural education programs, administrators should focus their efforts on recruiting, developing, and retaining talented faculty. Program administrators should also review other distinguishing characteristics cited in this study and consider strategies to enhance those features in their local program. Recognizing that program and faculty changes occur on a continuous basis, there is a need to replicate this survey every three to five years to reflect changes in those programs in order to acknowledge distinguished programs and the characteristics of those programs.*

### **Introduction**

Rankings of educational programs have been viewed with mixed reactions by university faculty and administrators in recent years (Hossler, 1998). Publicly, many opponents have downplayed the importance and value of program and institutional rankings and openly criticized the reported results. (Hossler, 2000; Meredith, 2004). Even so, college rankings are awaited with nervous anticipation by many university administrators each year (Meredith, 2004; Jaschik, 2008). Furthermore, many colleges and universities are more than willing to publicize high rankings in their recruitment literature (Hossler, 2000; Meredith, 2004; Monks & Ehrenberg, 1999). Public relations campaigns are planned to coincide with the dates when rankings are released (Jaschik, 2008) in order for institutions to use the information for marketing and recruitment purposes. Although rankings do not affect colleges and universities equally, some rely heavily on published rankings to enhance their prestige and visibility (Machung, 1998).

Academic and reputational rankings have been published for nearly a century (McDonough, Antonio, Walpole, & Pérez, 1998). Psychologist James McKeen Cattell was credited with introducing academic program quality rankings in 1910 (Webster, 1986). Cattell's

interest in differences among eminent scientists led to his work in academic program rankings. Cattell himself had a distinguished career that included being ranked as the second most distinguished research psychologist in the United States in 1903, ranking ahead of John Dewey (Webster, 1986).

*A Study of the Graduate Schools of America* (Hughes, 1925) reported reputational rankings in 20 graduate areas of study. Rankings were determined by asking professors within their respective graduate disciplines to identify institutions regarded as most desirable and then rank the institutions. The impetus for this type of research was based in the belief that the information would be useful to college presidents and deans who were continually searching for the best faculty to fill vacancies (Hughes, 1925). Hughes also acknowledged that rankings may not be exactly correct, however, they represented the combined opinion of experts in their respective fields which was probably nearer the truth than one individual's perception.

Soliciting input from professionals within their respective field continues to be a method used to determine rankings. Alan Cartter (1966) echoed Hughes by endorsing the proposition that summarizing expert opinions increased the accuracy of a reputational study based on graduate education. The opinions of administrative deans have also been utilized in reputational rankings (Camp, Hillison, & Jeffreys, 1987). Although the methods used to obtain data for rankings has been questioned over the years (Hossler, 2000; Meredith, 2004; Webster, 1992); the typical source of information used in educational rankings focused on knowledgeable campus officials and students (Hossler, 2000).

Publication and interest in educational rankings has continually grown since the time of Cattell, Hughes, and Cartter. The *U.S. News and World Report (USNWR)* magazine began publishing an annual ranking of colleges in 1983 (Ehrenberg, 2005; Meredith, 2004). The issue publishing college and university rankings has typically been one of the highest circulated editions each year (Ehrenberg, 2005; Meredith, 2004). A separate supplemental college guide has also gained widespread popularity in recent years (Monks & Ehrenberg, 1999). The success and marketability of these publications led others such as *Money Magazine* and *Business Week* to publish their own educational program rankings (Meredith, 2004). One major reason why rankings became so popular was that colleges and universities have aggressively used the results for promotional purposes among potential students, guardians, and alumni (Machung, 1998).

Rankings and ratings were also the target of sharp criticism over the years. Early studies were criticized for potential bias due to regional favor, alma mater preference, and current educational ties (Cartter, 1966). Accusations with respect to rankings and ratings suggested that the studies created a pecking order and were only done to boost the egos of the distinguished universities (Cartter, 1966). Respondents were accused of ranking programs on the basis of institutional reputation rather than academic excellence and quality (Dolan, 1976). Program quality and perceived distinction are elusive attributes that are not easily measured (Cartter, 1966; Meredith, 2004). Furthermore, although criteria such as size of the library, faculty salaries, faculty:student ratio, and scholarly publications can be quantitatively measured; they may not be

valid measures of quality. Moreover, rankings have become such a high stakes phenomenon that there is some potential for institutions to report inaccurate or misleading data (intentionally or unintentionally), (Hunter, 1995; Machung, 1998). Each of these concerns have been raised as university and college rankings continue to evolve.

Met by criticisms and downplayed by campus administrators, college and program rankings are a focal point of debate in higher education (Hossler, 2000). Rankings and reputations are often used by institutions in an attempt to draw the best and brightest students to their campuses. A distinguished reputation provides marketing opportunities for an institution and a potential for competitive advantage (McDonough et al., 1998). Institutional reputation is a proxy indicator of the quality of the educational experience that a student can expect to receive (McDonough et al., 1998). Quality indicators used to distinguish programs may highlight areas of potential strength, areas that need improvement, or features to potentially emulate. Although rankings provide a measure of comparative information; they should not become an obsession. Universities should not become preoccupied with a first place ranking versus a second place ranking but rather look at their relative rankings over time. If an institution consistently ranks fairly high over time, that may be a good indication of the quality of the institution (Hossler, 2000).

Due to the dynamic nature of academic programs in colleges and universities, Hughes (1925) recommended that if ratings were to be of value, they should be completed at frequent intervals and he suggested every three years. Agricultural education researchers have identified common research topic areas and prolific authors on a periodic basis (Birkenholz & Ewing, 2005; Edgar, Edgar, Briers, & Rutherford, 2008; Moore, 1982; Radhakrishna & Xu, 1997). However, research that identified distinguished programs and their characteristics was limited. In fact, research reported by Camp et al. (1987) provided the only published ranking of agricultural education programs which also offered insight into the criteria valued in peer faculty rankings. This study builds upon Camp's research and fills a 20 year void in identifying distinguished agricultural education programs in the U.S.

### **Theoretical Foundation and Conceptual Framework**

Social expectations theory describes the process of developing and understanding group behavior. Burris posited that characteristics and routines of groups are identified and understood which leads to shaping and developing group norms (as cited in DeFleur & Dennis, 1991). Norms become the guidelines that groups strive toward (Hossler, 1998). Social expectations theory in this study is reinforced through professional interactions between agricultural education faculty and also reflected through the accumulation theory of minimal effects. Exposure over time and through repeated interaction influences the perceptions upon which professional colleagues base their opinions (Defleur & Dennis, 1991). Professional interactions in agricultural education might include professional meetings, articles, presentations, conversations, visibility, and professional service involvement. Respondents in this study were assumed to base their perceptions on disciplinary norms developed over time as a member of the academic community.

Their perceptions reflect a professional opinion that was assumed to be in alignment with normative expectations of the discipline of agricultural education.

Educational excellence is difficult to attain and to measure, but remains a worthy goal for all universities and departments (Camp et al., 1987). Measuring departmental prestige is also elusive and often based on scholarly productivity of faculty and graduates associated with those programs (Burris, 2004). Cartter (1966) and other studies as cited in Burris (2004) reported a positive correlation between faculty productivity and departmental prestige. The number of faculty within a department was also reported to be associated with prestige (Burris, 2004). Some have expressed concern that the size of an institution alone can influence its visibility; hence leading to a perception of elevated prestige. Even so, size alone may not be a good indicator of overall program quality. The visibility of “star” faculty has also been questioned with regard to the influence on program prestige and image, but may not be an accurate reflection of the overall program (Burris, 2004). Burris also suggested that prestige associated with academic departments in colleges and universities may be based on their social capital and serve as a reflection of institutional status. Characteristics of prestigious groups have been identified and often emulated in an attempt to narrow differences between groups and to elevate program image. Within each discipline there are understandings and characteristics that must be acquired before becoming distinguished within the discipline (DeFleur & Dennis, 1991).

Although social expectations theory provides a foundation for this research, Hossler (1998) proposed that the accumulation theory of minimal effects may also influence the ranking and rating of academic programs. As rankings continue to be published over time, individuals become increasingly aware of the media messages leading to an accumulation of minimal effects (Hossler, 1998). When media focuses on an issue repeatedly, accompanied with consistent and uniform interpretation, significant changes in one’s opinion can occur (DeFleur & Dennis, 1991). Based on the accumulation theory of minimal effects, the reporting of rankings and ratings may shape the norms, beliefs, and expectations of faculty, administrators, and students in the future (Hossler, 1998).

The authors developed a conceptual model (Figure 1) based upon previous work conducted by Camp et al. (1988). The most frequently cited criteria for distinguished agricultural education programs determined by Camp et al. (1988) provided the basic elements of the model. The center section of the model designates programs that may be perceived as distinguished within the profession in the judgment of peer faculty in the discipline. However, program distinction may be perceived differently in the context of each local institution (e.g. college or university) or in the context of the state in which the program was located. The right hand portion of the model illustrates that programs might ultimately seek to emulate or differentiate themselves, relative to other programs of agricultural education within their respective state or nationally, based on various distinguishing characteristics.

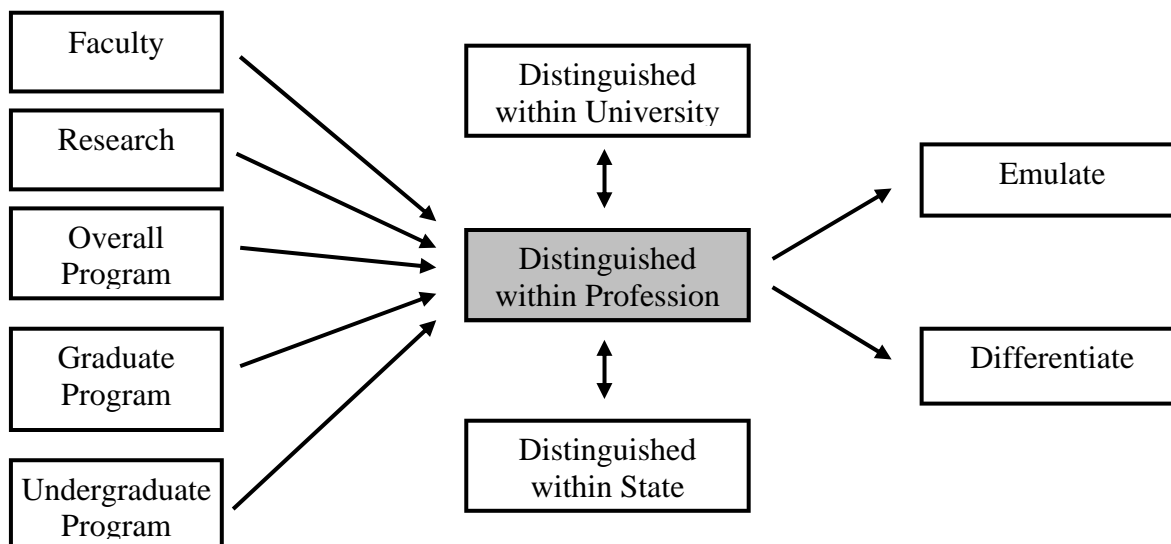


Figure 1: Theoretical Context of Distinguished Agricultural Education Programs

### Purpose and Objectives

The purpose of this study was to identify postsecondary (college or university) agricultural education programs in the United States (U.S.) that were held in high esteem as perceived by professional colleagues within the discipline. A secondary purpose was to ascertain program characteristics that were cited as distinguishing features of agricultural education programs that were held in high regard. The following research objectives were developed to guide the study:

1. Identify distinguished agricultural education programs as perceived by professional colleagues in the discipline.
2. Describe program characteristics of distinguished agricultural education programs.
3. Identify the home college of distinguished agricultural education programs.
4. Describe program areas included in departments that administer distinguished agricultural education programs.

## Methods and Procedures

A mail, survey instrument was designed by the researchers to collect data needed to fulfill the objectives of this study. The instrument included an alphabetical listing of all 82 agricultural education programs in the U.S. Respondents were asked to identify, in rank order, the ten agricultural education programs they held in the “highest professional regard.” Respondents were also asked to identify characteristics or features that distinguished each agricultural education program they identified. Respondents were instructed to not include the agricultural education program in which they were currently employed, which resulted in a response bias as a result of eliminating one program from the list of all agricultural education programs in the U.S. The final section of the survey instrument requested demographic information about each respondent and the agricultural education program in which they were employed.

The population frame for this study was comprised of the primary contact person for each agricultural education program listed in the *2007 Directory of Teacher Educators in Agricultural Education* (AAAE, 2007). Data collection instruments were mailed to the agricultural education departmental contact person at each of the 82 institutions offering agricultural education programs in the U.S. Self-addressed, post-paid envelopes were provided for respondents to return their completed instrument. Respondents were assured that individual responses would not be revealed and that only grouped data would be reported. A second instrument was sent to non-respondents two weeks after the first instrument was mailed. An email reminder was sent two weeks after the second instrument.

A total of 56 instruments were returned, although four did not provide useable data. Therefore, the results of this study were based on data collected from 52 respondents for an overall response rate of 63%. Non-respondent follow-up procedures were not employed. Therefore, the results of this study cannot be generalized beyond the respondents who provided usable data.

Weighted scores were allocated to each of the distinguished agricultural education programs identified in rank order. For each respondent, the most distinguished program (i.e. ranked #1) received a weighted score of 10, the second most distinguished program (i.e. ranked #2) received a weighted score of 9, continuing in descending order until the tenth listed program received a weighted score of 1. All other programs (i.e. those not listed) received a score of zero for each respondent, respectively. The listing order of the ten most distinguished agricultural education programs was based on the summation of weighted scores for all respondents.

Characteristics of the distinguished programs provided by respondents were reviewed, categorized, and summarized by the researchers to fulfill research objective two. Frequency counts were used to determine the priority order of characteristics associated with each of the distinguished agricultural education programs. The three most frequently cited program characteristics were reported for each program.

Research objective three was to determine the administrative home college for each distinguished agricultural education program. Respondents were asked to identify the administrative home college for their respective agricultural education program and that information was used to fulfill the research objective.

The fourth research objective involved identifying program areas encompassed within the academic department that administered the distinguished agricultural education program. Respondents from each distinguished program provided information about program areas in their department, and the researchers used that information to fulfill the fourth research objective.

### **Results and Findings**

Weighted scores summed across all respondents were used to identify the ten most distinguished agricultural education programs in the United States as listed in Table 1. University of Florida received the highest overall weighted score followed by Texas A&M University, The Ohio State University, University of Missouri, Iowa State University, Oklahoma State University, North Carolina State University, The Pennsylvania State University, Texas Tech University, and University of Arizona. Table 1 summarizes data regarding the frequency that each institution was cited by respondents in rank order for the ten most distinguished agricultural education programs.

Although faculty respondents were asked not to include the program in which they were currently employed on their list of the ten most distinguished programs, they were not prevented from listing an institution from which they had graduated. Of the respondents, there were nine respondents who had received their doctoral degree from The Ohio State University, six from Iowa State University, five from University of Missouri, four from Virginia Polytechnic and State University, and three each from The Pennsylvania State University and Texas A&M University, respectively. Ten other institutions were identified by two or fewer respondents as the university from which their doctoral degree was awarded. The researchers did not attempt to determine if there was an association between the respondent's doctoral degree granting institution and likelihood of citing that institution as a distinguished program of agricultural education. However, it should be acknowledged that a potential for response bias favoring one's alma mater may have existed.

Based on a summary of the data collected, University of Florida and The Ohio State University were cited as distinguished agricultural education programs by 43 (83%) respondents. Four agricultural education programs (Texas A&M University, University of Missouri, Iowa State University, and Oklahoma State University) were cited by 33 to 39 of the respondents. Texas Tech University, The Pennsylvania State University, and University of Arizona were cited by 24 to 29 of the respondents. Overall, the agricultural education program at the University of Florida was ranked #1 or #2 by 23 (50%) respondents.

Table 1

*Distinguished Agricultural Education Programs (N=52)*

Distinguished Program	Rank Frequency										Total Frequency	Weighted Score <sup>a</sup>
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10		
University of Florida	13	10	3	3	7	2	1	1	2	1	43	329
Texas A&M University	7	8	11	4	3	3	1	1	1	0	39	300
The Ohio State University	6	7	6	9	4	4	2	3	1	1	43	298
University of Missouri	8	4	5	2	8	2	0	1	4	1	35	240
Iowa State University	4	9	2	4	3	3	2	2	2	3	34	219
Oklahoma State University	0	2	6	7	1	6	4	3	2	2	33	182
North Carolina State University	0	1	3	8	2	8	3	5	1	4	35	174
The Pennsylvania State University	3	1	4	2	2	2	4	5	3	2	28	146
Texas Tech University	3	0	2	1	4	4	6	5	2	2	29	142
University of Arizona	1	3	2	1	3	0	5	1	4	4	24	113

<sup>a</sup>Weighted score is the sum of weighted rank scores in which the frequency of #1 rankings was multiplied by 10, the frequency of #2 rankings was multiplied by 9, and so on in descending order.

Table 2 presents a summary of program characteristics that respondents cited as distinguishing features of the distinguished agricultural education programs they identified. The three most frequently cited characteristics were listed for each distinguished program. *Faculty* were cited as a distinguishing characteristic for each of the ten distinguished programs of agricultural education. *Research* was cited for five programs, *graduate program* for four programs, *range of programs* for three programs, *communication* for two programs, and *teacher education* for two programs. Distinguishing characteristics cited for only one program included: *distance education, international emphasis, leadership program, size of program, technology/innovation, and undergraduate program.*

Table 2

*Characteristics of Distinguished Agricultural Education Programs*

Institution	Distinguishing Characteristics
University of Florida	Graduate program, faculty, and research
Texas A&M University	Research, leadership program, and faculty
The Ohio State University	Research, faculty, and graduate program
University of Missouri	Faculty, teacher education, and graduate program
Iowa State University	Research, faculty, graduate program, and international emphasis
Oklahoma State University	Faculty, communications program, and range of programs
North Carolina State University	Faculty, distance education, and technology/innovation
The Pennsylvania State University	Faculty, range of programs, research, and size of program
Texas Tech University	Faculty, range of programs, and communications program
University of Arizona	Faculty, undergraduate program, and teacher education

Clearly, *faculty* were reported as the most commonly cited feature of distinguished programs of agricultural education. In addition, *research* and *graduate program* were cited as characteristics of four of the five most distinguished programs. Six distinguished agricultural education programs were cited with a characteristic that was unique in the context of other distinguished programs. Therefore, it appears that some programs may be viewed as distinguished on the basis of a unique programmatic niche that it serves within the discipline.

Research objective three was to determine the administrative home college for each of the distinguished agricultural education programs. All ten of the distinguished agricultural education programs were housed in colleges of agriculture at their respective institution.

Respondents were also asked to identify program areas included in the department that administered the agricultural education program and the results are presented in Table 3. All ten distinguished programs of agricultural education included *teacher education*, nine included *leadership*, eight included *communication*, seven included *extension*, four included *distance education*, and one included *agricultural mechanics*.

Table 3

*Program Areas in Departments with Distinguished Agricultural Education Programs*

Distinguished Agricultural Education Programs	Program Areas					
	Teacher Education	Leadership	Communication	Extension	Distance Education	Agricultural Mechanics
University of Florida	X	X	X	X		
Texas A&M University	X	X	X	X	X	
The Ohio State University	X	X	X	X		
University of Missouri	X	X				
Iowa State University	X	X	X	X	X	
Oklahoma State University	X	X	X	X	X	
North Carolina State University	X	X	X	X		
The Pennsylvania State University	X	X	X	X		
Texas Tech University	X	X	X		X	
University of Arizona	X					X

**Conclusions, Recommendations, and Implications**

The purpose of this study was to identify distinguished programs of agricultural education in the U.S. and to identify the program characteristics that respondents used in their selections. Since these rankings reflect a subjective analysis and synthesis of the collective perceptions of agricultural education institutional contact persons throughout the United States,

the results should be interpreted with a degree of caution. Even so, previous researchers have suggested that combined opinions of knowledgeable experts may be more accurate than one person's perspective (Hughes, 1925).

Readers should avoid inferring that programs omitted from the list are not of high quality; since this study was not conducted as an assessment of program quality. Therefore, it is important to recognize and clearly acknowledge that the listing of the ten most distinguished agricultural education programs is based on summed weighted scores, which should not be misinterpreted as a quantitative (proxy) measure of program quality. Although perceptions of program quality may have been taken into consideration by the respondents in formulating their responses, this study should not be viewed as a program evaluation effort. Rather, this study was designed and conducted to identify the characteristics of agricultural education programs that professional colleagues consider as distinguishing features, based on the assertion that faculty colleagues and program administrators may seek to emulate those distinguishing characteristics for long term program improvement. Faculty and administrators with responsibility for agricultural education programs in colleges and universities throughout the U.S. should continually strive for program improvement by developing strategies to strengthen features that distinguish their local program in the context of peer institutions. However, programs may also have the potential to distinguish themselves by emphasizing a unique niche within the discipline. Agricultural education program faculty and administrators might also consider strategies to distinguish the program within the context of the state in which it is located and the institution in which it is administered.

This study revealed a slightly different array of distinguished agricultural education programs compared to the previous study completed over 20 years ago by Camp et al. (1987). Agricultural education programs listed on both studies included: The University of Florida, Texas A&M University, The Ohio State University, Iowa State University, Oklahoma State University, and The Pennsylvania State University. The University of Missouri, North Carolina State University, Texas Tech University, and the University of Arizona were included in the current listing, whereas those programs were not reported in the 1987 study. Also, it was noted that the listing order of the most distinguished agricultural education programs had changed slightly since the previous study.

Respondents in this study identified faculty as the most common feature that distinguishes highly regarded agricultural education programs in the United States. Research was the second most common feature, and the graduate program also appeared to be a distinguishing feature.

Each of the ten distinguished agricultural education programs were found to be administered through a college of agriculture at their respective institution. In addition, most of the departments that administered a distinguished agricultural education program included program areas of teacher education, extension, leadership, and communication.

The following recommendations were developed as a result of this study:

1. University, college, and program administrators should be reminded that faculty are clearly the most distinguishing feature of highly regarded agricultural education programs. Therefore, it is important that targeted efforts should be directed toward recruiting, developing, and retaining talented faculty in agricultural education programs. This study reinforces the premise that faculty selection, development, and retention are important determinants that distinguish agricultural education programs.
2. Faculty and program administrators associated with agricultural education programs should examine the distinguishing characteristics cited in this study and consider strategies to enhance those characteristics in their local program. Striving to emulate characteristics of distinguished programs may provide leverage for program improvement initiatives at each institution.
3. Departmental and college administrators should examine the range of program areas offered in their local agricultural education program. Specifically, agricultural education programs should consider the potential and need for including teacher education, leadership, communication, and extension in the department that administers the agricultural education program, which reflects the scope of most of the distinguished programs identified in this study.
4. This study should be replicated every three to five years to maintain an updated listing of distinguished agricultural education programs in the United States. In addition, as the structure and organization of departments evolve, it will be important to examine the implications of such changes on programs of agricultural education in the future.

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