Image of Agricultural Education Teacher Training Programs in Colleges of Education and Agriculture at Three Major Universities

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The image that others have of agricultural teacher education has tremendous importance to the total profession in teacher education. Our image affects our collegial relationships with our peers, our students, our promotion and tenure and even our funding. There are even points in a budgeting process where facts and rationalism may be overweighed by image. If that image is negative, then funding decisions may be likewise. The result is often stress-producing upon faculty when decisions are not supportive, even in light of the facts, and occur time-after-time. This study was undertaken to focus upon this major concern of agricultural education, that is, the image held by peers within their university.

Image, as a construct, has evolved out of contemporary literature in business and marketing. Brand names have been concerned about their image, as are car companies, grocery store chains and others. The image of science and scientists has been studied (Smith & Krajkovich, 1979), and higher education institutions vie for recognition in image studies which are often conducted in specialty areas (Lawrence & Solomon, 1981). Measurement of image has been investigated (Fisk, 1961; Kunkel & Berry, 1968; Menezes & Elbert, 1979) to establish the validity and reliability of given scales, and a Likert-type scale has been shown to assess image adequately (Menezes & Elbert, 1979).

Departments of agricultural education, as the name implies, operate in the realms of technical agriculture and education. A problematic situation arises when agriculturalists view the profession as behavioral in nature and not fitting-in with hard science colleagues and when education peers view agricultural education programs as mavericks because of the technical base.

If the prestige of agricultural education is to be elevated, the current status of the image must first be determined. This study proposes to describe the status of the image at three land-grant institutions. In two cases, agricultural education was in colleges of agriculture and in the college of education for the third.

Purposes

The purpose of the study was to determine the image of agricultural education held by faculties in colleges of education and agriculture at Mississippi State University (MSU), The Ohio State University (OSU) and Virginia Polytechnic Institute and State University (VPI).

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Research Questions

1. What is the image of the agricultural education programs at each institution?

2. Was there a significant difference between the image held by faculties in the college of education and the college of agriculture across all institutions and within each institution?

3. Was there a significant difference in the image held by faculties among institutions and between colleges among institutions?

Procedures

A collaborative agreement represented the efforts of three faculty members, one representing each institution, to conduct the study. The three individuals agreed on the approach and the responsibilities for each person. The study was a descriptive study employing survey methodology.

The instrument used to collect data consisted of a series of statements about agricultural education with specific sections on faculty, students, research, mission, teaching and service. Separate analyses of these areas by program facet were not reported herein; therefore, these results were confined to total image. Respondents were asked the extent to which they agreed with each of 57 statements by using a 4-point, Likert-type scale, with 1 representing strongly disagree (a negative image) to 4 representing strongly agree (a positive image). The instrument was pilot tested at Cornell University, refined and evaluated for content validity and reliability. The Cronbach alpha reliability coefficient was .97.

Selection of subjects was through a stratified random sampling procedure from six independent, finite populations. The strata were faculties in colleges of education and agriculture at the three institutions who were assigned instructional responsibility for 50% or more of their time. The randomization procedure controlled the sampling bias threat. Selection and frame errors were controlled by using up-to-date faculty lists and by carefully purging the lists of duplications. To control any non-response error, a 10% random sample of non-respondents was contacted. Data were gathered on image, and statistical analysis (Chi Square) was conducted between respondents and non-respondents which revealed no significant difference between the two groups. Therefore, the results were generalizable to the populations. The sample size was determined for a 5% margin of error with a 90% confidence level, and a mailed questionnaire was used with three follow-ups. Appropriate statistical analyses procedures were used for each research question, and, where hypotheses were tested, an a priori alpha level of .10 was utilized.

Results

These findings describe the image of agricultural education at these institutions within the parameters of the margin of error and risk prescribed by the sampling procedure. Each researcher followed the same procedures.

Table 1 provides information on respondents by college and by institution. Readers should note that the non-response error was controlled. However, among those responding, disparity existed among institutions and colleges. Unusable responses were deemed such when a

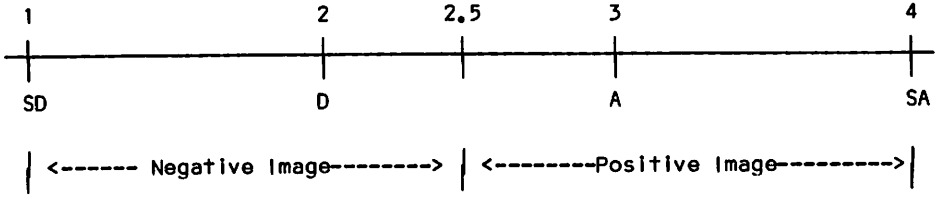
respondent indicated N/A, Inadequate Opportunity to Observe. Coupling the response rate with this finding, one might conclude that others really do not know enough about agricultural education, and awareness programs within these colleges would be justified. Data produced on the image questionnaire were then analyzed to address the research questions.

Table 1

Respondent Information

College	Institution		
	OSU	VPI	MSU
Agriculture			
N	190	90	23
n (sample)	91	59	22
Accepting sample	58	51	20
% returned	64	86	91
Data sample	52	36	18
% usable	89	71	90
Education			
N	139	91	82
n (sample)	77	60	53
Accepting sample	38	57	46
% returned	49	95	87
Data sample	31	39	39
% usable	82	68	85

To address Question 1, the descriptive statistics in Table 2 note the mean rating across the 57 statements by institution. The instrument was scaled with strongly disagree (1), disagree (2), agree (3) and strongly agree (4). With scale values reversed for negatively worded items, summated mean ratings were interpreted as:



Applying these standards, the images at MSU (2.74), OSU (2.69) and VPI (2.61) were all on the positive side of the continuum.

Table 2

Analysis of Variance of Image by Institution

	Institution		
	OSU	VPI	MSU
f	83	75	57
Mean	2.69	2.61	2.74
S.D.	.23	.27	.35

Source	df	SS	MS	F
Between Groups	2	.51	.26	3.182
Within Groups	212	16.99	.08	
Total	214	17.50		

Note. Mean scores connected by a common underline differ significantly, $p<.10$, Scheffe.

Questions 2 and 3 proposed to determine if significant differences existed between colleges across institutions and between institutions by college. Analysis of variance was used to test significance for which the assumptions (Downie & Heath, 1970) were met by random sampling from independent groups and Bartlett's Box F tests affirming homogeneity of variance.

Faculty in the two colleges at VPI had a significantly lower image of agricultural education than at MSU or OSU (Table 2). The image of agricultural education held by education faculty across institutions was significantly higher than that held by agriculture faculty (Table 3). At MSU, agriculture faculty ($\bar{x}$=2.57) was significantly lower than education faculty ($\bar{x}$=2.81); at OSU, agriculture ($\bar{x}$=2.64) was not significantly different from education ($\bar{x}$=2.77); and at VPI agriculture ($\bar{x}$=2.50) was significantly lower than education ($\bar{x}$=2.72) at a .10 alpha level.

The analysis of image held in colleges of agriculture (Table 4) showed OSU to be significantly more positive than VPI, but no differences greater than could have occurred by chance were found between OSU and MSU or VPI and MSU. The image held by faculty in the colleges of education (Table 5) were not significantly different.

Discussion

The image of agricultural education was moderately positive at all three institutions, with VPI being significantly lower than the other two institutions. Conceptually, even though significance was identified among the institutions, the relative position of the mean ratings

Table 3

Analysis of Variance of Image by College Across Institutions

	College	
	Agriculture	Education
f	106	109
Mean	2.58	2.77
S.D.	.25	.28

Source	df	SS	MS	F
Between Groups	1	1.94	1.94	26.6*
Within Groups	213	15.57	.07	
Total	214	17.51		

*p<.10.

Table 4

Analysis of Variance of Image in Colleges of Agriculture by Institution

	Institution		
	OSU	VPI	MSU
f	52	36	18
Mean	2.64	2.50	2.57
S.D.	.24	.28	.21

Source	df	SS	MS	F
Between Groups	2	.40	.20	3.231
Within Groups	103	6.37	.06	
Total	105	6.77		

Note. Mean scores connected by a common underline differ significantly, p<.10, Scheffe.

Table 5

Analysis of Variance of Image in Colleges of Education by Institution

	Institution		
	OSU	VPI	MSU
f	31	39	39
Mean	2.77	2.72	2.81
S.D.	.20	.23	.38

Source	df	SS	MS	F
Between Groups	2	.18	.09	1.09
Within Groups	106	8.62	.08	
Total	108	8.79		

illuminates the need for each agricultural education program to be concerned about its image.

The findings illustrated that image within colleges of agriculture need more improvement than in education. Given that agricultural education is located in the college of education at VPI and in the college of agriculture at MSU and OSU, the overall impact of the findings speaks to the congruence of mission between agricultural education and education in general. Agricultural faculty may operate from a frame of reference married closely to technical knowledge and experimental research methods which clouds their image of agricultural education where such methodology does not predominate and the technical base for agricultural education is not viewed as being as definable as agronomy, for example.

Within colleges of agriculture, VPI had a significantly less positive image than OSU which might be partially explained by the college home. However, such an explanation is confounded when comparisons between VPI and MSU are examined. One might have hypothesized that those departments administered within colleges of agriculture would have a significantly more positive image in that college. Such a hypothesis would not have been consistently supported.

No significant differences were observed between faculties in colleges of education. Once again, logic would have posited a directional hypothesis with the department administered in a college of education (VPI) having a significantly higher image than those administered in agriculture. Such a hypothesis would not have been supported. While the significance test indicated that the differences could have occurred by chance, the trend produced in the mean data was in the opposite direction. The mean score for the agricultural education program administered in a college of education (VPI) was less than those administered in colleges of agriculture (OSU and MSU).

Recommendations

1. Other agricultural teacher education programs should study their image so results can be compiled to approximate parameters. Given that these three institutions studied are heavily committed to graduate programs and the research function, institutions with other priority profiles might produce variability in image. More comprehensive data would permit examination of other antecedent and moderating variables to be examined to seek better explanation of image in the total profession.

2. Theories from business and marketing should be examined to propose appropriate strategies for improving the image of agricultural teacher education.

3. The data should be further analyzed for each domain within the instrument (faculty, students, research, teaching and service) to test for differences to help further describe the image of the programs.

4. Data should be further analyzed to ascertain if personological characteristics of the respondents can help explain the image held of agricultural teacher education.

5. The results should be communicated to the profession. If these institutions are representative, the profession should be concerned and begin initiatives to remediate the situation.

6. Studies with other groups, such as university-level administrators, should be undertaken.

7. Longitudinal studies should be undertaken to document the trends in the image of agricultural teacher education as various policy interventions may occur.

8. Comparative studies with other departments in education and/or agriculture should be undertaken to examine the relative position of agricultural education among those sister departments or programs.

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