

AFFECTIVE SKILLS OF SELECTED AGRICULTURAL WORKERS AND SUPERVISORS

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Introduction

Historically, agricultural education programs have emphasized the cognitive and psychomotor domains of learning. However, many positions in agricultural occupations are service oriented. This results in more interpersonal contacts, thus, putting emphasis on the affective (socio-psychological) skills related to work. These skills are just as important to job success and survival as the psychomotor and cognitive skills.

The importance of affective skills training is supported by research from industry as well as education. In a study of industry workers, Burns (1973) found that personal traits were the reasons many workers did not progress or advance in their organization. Wilson (1973) suggested that more people fail or lose their jobs because of personal qualities or general attitudes than because of insufficient job skills or inadequate performance in their duties.

Educators are also aware of the impact of affective work competencies. Campbell (1974) stated:

The message is seemingly clear enough. Our schools must begin producing students who are not only capable of inquiry and the problem solving process (cognitive), but who have also developed the emotional stability and interpersonal skills necessary for a humanized existence (affective).

Claycomb and Stewart (1980) reported on a study related to the attitudes of young/adult farmers and instructors of vocational agriculture about job satisfaction and the meaning and value of work. Although major differences were not found between the groups, the emphasis on values and attitude development was noted to be of increasing importance.

A number of vocational educators agree with the necessity of teaching the personal-social aspects of work. Craven (1977), Lynch (1979), and O'Neil (1976) are but a few of the critics who claim that vocational education should teach affective as well as cognitive and psychomotor skills. While this is a position generally accepted by agricultural educators, little data are available to substantiate the types of affective competencies exhibited or needed in the agriculturally oriented labor force. Such information would provide an added dimension for program planners in agricultural education as they develop programs and materials to prepare agricultural employees. Therefore, the focal point of this investigation was to provide data concerning the affective competencies of workers in selected agricultural occupations.

Purpose of the Study

More specifically, the study attempted to ascertain if a difference existed between the affective competencies exhibited by production and agribusiness workers in agriculture and between supervisors and workers in agriculture. The following null hypotheses were formulated and tested at a .05 alpha level:

Ho₁: There is no significant difference in the affective competencies exhibited between production and agribusiness workers as measured on the *Affective Work Competencies Inventory*.

Ho₂: There is no significant difference in the affective competencies exhibited between supervisors and workers in agriculture as measured on the *Affective Work Competencies Inventory*.

Method

The study used an ex post facto design. The independent variables were area of work and job function. The dependent variables were the 15 affective work competencies.

Procedure

A random selection of agricultural employers representing agribusiness and production agriculture was obtained from a list maintained by state vocational placement specialists. From this random selection, employers were contacted by telephone and their cooperation solicited. An approximate number of inventories as specified by the cooperating businesses were mailed to each. Participating employers administered the instruments themselves and returned the raw data for analysis. A total of 550 usable responses was obtained from some 1,000 inventories made available

to employers, for a 55 percent return. The businesses and employers involved were guaranteed anonymity for their cooperation.

Data were analyzed using a two-way multivariate analysis of variance statistical procedure. Unequal cell sizes required a procedure allowing use of unequal Ns.

Hotelling-Lawley's Trace test was the method used to determine the overall statistical significance. This test was performed simultaneously for the 15 dependent variables. If significance was found, a univariate procedure was used to identify the source of the difference.

Instrumentation

The instrument used in this study was the *Affective Work Competencies Inventory* (AWCI) which was developed at the University of Missouri-Columbia in 1977 under a funded research project from the Research Coordinating Unit, Missouri State Department of Elementary and Secondary Education. From an exhaustive review of literature related to affective work competencies (Kazanas, 1978), a total of 63 affective work competencies were identified and grouped by a panel of experts into 15 competency clusters. The clusters describe similar behavioral characteristics and include the following:

1. *Ambitious* - showing great effort, aspiring, demonstrating strong desire to succeed or to achieve something.
2. *Cooperative/Helpful* - willing to work with and/or give assistance to others.
3. *Adaptable/Resourceful* - able to deal promptly and effectively with problems, difficulties, etc.; able to change without difficulty so as to conform to new or changed circumstances.
4. *Independent/Initiative* - self-sufficient, self-reliant, originating action.
5. *Accurate/Quality of Work* - free from errors and mistakes, precise and exact, displaying a degree of excellence.
6. *Pleasant/Friendly/Cheerful* - neighborly, marked by pleasing behavior, joy, good spirits, and hope.
7. *Follow Directions/Responsive* - to act in accordance with or react readily to suggestions, instructions, or regulations.

8. *Careful/Alert/Perceptive* - watchful, cautious, wary, conscientious.
9. *Considerate/Courteous* - having or showing regard and/or concern for others and their feelings, good manners.
10. *Emotionally Stable/Judgemental/Poised* - not easily aroused by emotion; good sense, understanding.
11. *Perservering/Patient/Enduring/Tolerant* - persistent in effort or purpose, uncomplaining.
12. *Neat/Orderly/Personal Appearance/Manner* - tidy, clean, well-arranged.
13. *Dependable/Punctual/Reliable/Responsible* - trustworthy, on time, prompt.
14. *Efficient/Quantity of Work/Achieving/Speedy* - being productive with a minimum amount of time, swiftness.
15. *Dedicated/Devoted/Honest/Loyal/Conscientious* - to give or apply attention or time to some activity or purpose, acting honorably and justly.

Each of the 15 indicators provides a descriptive statement regarding work behavior. The response selected by the participant quantifies each indicator. This quantification proposes to measure magnitudes of the affective work competency clusters. The AWCI uses a five point Likert-type scale of never, seldom, sometimes, usually, and always. Respondents were asked to select the response that most nearly represented their job performance.

Findings .

The purpose of this study was to compare the rated level of affective work competencies as expressed by agricultural workers and supervisors. This comparison was made by determining if significant differences existed in the expressed level of affective work competencies between area (agribusiness and production worker) and function (supervisor and worker). The data analysis revealed a significant ($p < .05$) multivariate F-value (Table 1) for area and for function, but not for interaction.

A univariate comparison was run to determine if significant differences existed between groups for the affective work competencies and Fisher's Least Squares means were calculated. The comparisons for area and function are presented in Table 2.

Table 1

TWO-WAY MANOVA TEST OF THE
EFFECT OF AREA AND FUNCTION

Characteristics	Hotelling-Lawley Trace	F	DF	Prob F
Area Effect	.0556	1.97*	15,532	.0155
Function Effect	.1485	5.27*	15,532	.0001
Interaction	.0294	1.04	15,532	.4097

*Significant at the .05 level.

The findings from Table 2 are summarized as follows:

1. Significant differences existed between agribusiness workers and agricultural production workers in their ratings of five affective work competencies. Therefore, H_{01} was rejected.

The five affective work competencies that were significantly different were: AWC0 - Ambitious, AWC6 - Accurate, AWC11 - Persevering, AWC12 - Neat/Orderly, and AWC15 - Dedicated. In all cases, the agribusiness worker ratings were higher than the production worker ratings.

2. Significant differences existed between agricultural supervisors and workers in their perception of five affective work competencies. Therefore, H_{02} was rejected.

The five affective work competencies that were significantly different were: AWC2 - Cooperative, AWC4 - Considerate, AWC10 - Emotionally Stable, AWC14 - Efficient, and AWC15 - Dedicated. In all cases, the supervisor ratings were higher than the agricultural worker ratings.

Discussion and Implications

As we consider the findings of this study, a description of the persons and the groups would be appropriate. The agribusiness group was comprised of individuals working in agribusiness oriented jobs with major agricultural emphasis in Missouri. This

Table 2

ITEM MEANS, CUMULATIVE LEAST SQUARE MEANS, AND ANOVAS
FOR COMPETENCIES BY AREA AND BY FUNCTION
FOR AGRICULTURAL WORKERS

Competencies	Area				Function			
	Agribusiness (N=401)	Prod. Worker (N=149)	F-Value	Prob F	Super. (N=316)	Worker (N=234)	F-Value	Prob F
Ambitious	$\frac{4.14^a}{40.99^b}$	$\frac{3.99}{39.76}$	6.11*	.0138	$\frac{4.14}{40.57}$	$\frac{4.02}{40.18}$	0.59	.4425
Cooperative	$\frac{4.03}{23.90}$	$\frac{3.89}{23.31}$	3.51	.0617	$\frac{4.08}{23.98}$	$\frac{3.87}{23.24}$	5.49*	.0194
Adaptable	$\frac{4.16}{24.80}$	$\frac{4.09}{24.58}$	0.55	.4592	$\frac{4.18}{24.90}$	$\frac{4.08}{24.47}$	2.11	.1468
Considerate	$\frac{4.21}{20.79}$	$\frac{4.05}{20.42}$	2.04	.1542	$\frac{4.28}{21.18}$	$\frac{4.01}{20.03}$	19.58*	.0001
Independent	$\frac{4.14}{16.39}$	$\frac{4.02}{16.11}$	1.39	.2391	$\frac{4.18}{16.48}$	$\frac{4.00}{16.01}$	3.77	.0526
Accurate	$\frac{4.10}{24.55}$	$\frac{3.99}{23.74}$	7.61*	.0060	$\frac{4.08}{23.96}$	$\frac{4.06}{24.33}$	1.53	.2162

Careful	$\frac{4.10}{24.53}$	$\frac{4.12}{24.63}$	0.10	.7513	$\frac{4.11}{24.54}$	$\frac{4.10}{24.63}$	0.09	.7671
Pleasant	$\frac{4.05}{32.31}$	$\frac{4.00}{31.85}$	0.98	.3244	$\frac{4.05}{32.04}$	$\frac{4.02}{32.13}$	0.04	.8493
Follow Directions	$\frac{4.25}{25.40}$	$\frac{4.24}{25.44}$	0.02	.9001	$\frac{4.26}{25.51}$	$\frac{4.22}{25.32}$	0.33	.5640
Emot. Stable	$\frac{4.02}{23.93}$	$\frac{3.92}{23.67}$	0.62	.4305	$\frac{4.06}{24.19}$	$\frac{3.90}{23.40}$	5.91*	.0154
Perservering	$\frac{3.97}{19.80}$	$\frac{3.89}{19.25}$	4.71*	.0304	$\frac{3.94}{19.32}$	$\frac{3.95}{19.73}$	2.63	.1052
Neat/Orderly	$\frac{3.89}{30.97}$	$\frac{3.76}{30.00}$	4.17*	.0416	$\frac{3.90}{30.61}$	$\frac{3.80}{30.36}$	0.29	.5888
Dependable	$\frac{4.27}{25.48}$	$\frac{4.20}{25.19}$	0.88	.3489	$\frac{4.29}{25.46}$	$\frac{4.20}{25.21}$	0.61	.4339
Efficient	$\frac{3.87}{22.86}$	$\frac{3.70}{22.43}$	1.45	.2294	$\frac{3.95}{23.39}$	$\frac{3.65}{23.39}$	17.45*	.0001
Dedicated	$\frac{4.18}{41.51}$	$\frac{4.04}{40.46}$	4.48*	.0347	$\frac{4.22}{41.50}$	$\frac{4.05}{40.47}$	4.31*	.0384

*Significant at the .05 level.

^aItem means.

^bCumulative Least Square Means.

included persons in supervisory positions and in sales positions who were in contact with people. The group identified as production workers were those employed for wages by major firms that involved production oriented activities. Based on the backgrounds of the people and the types of position held, it is not inappropriate to find, as was noted in this study, that those persons working in agribusiness and dealing with people tended to be more ambitious, accurate, persevering, neat, and dedicated than did those persons working for wages in a more production oriented area of agriculture.

The second hypothesis dealing with functions of workers classified the respondents in terms of supervisory and worker positions and included all persons previously described. Therefore, it seems appropriate that we found supervisors, as a group, to be more cooperative, considerate, emotionally stable, efficient, and dedicated than were the workers. Either by position or selection for position, these affective traits became important.

This instrument was used to distinguish between functions and areas of workers in agriculture. The information provided gives us a basis for providing help as we plan agribusiness programs and as we work with students desiring to work with people in businesses. It further provides information to use in documenting the affective attitudes needed by persons hoping to advance to supervisory positions. Persons preparing materials and working with students as they enter phases of agribusiness must be more cognizant of the importance of affective skills needed for success in these positions. This study should provide a baseline set of data for use in identifying those types of affective skills most needed for workers and supervisors in agribusiness.

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