

Administrators' Perceptions of
Professional Education Competencies Needed
by Teachers of Vocational Agriculture

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The administration of the local school system plays a pivotal role in the life of a school. In many ways, the local administrator is the most important and influential individual in any school. The leadership of the administrator sets the tone of the school, the climate for learning, the level of professionalism, and the morale of teachers.

Specifically, Miller, Madden, & Kincheloe (1972) suggested that responsibility for the instructional program deserves a top priority rating among the many administrative tasks of the administrator. The nature of the laws governing educational organizations and the special position the administrator occupies provide a means of dominant influence in the educational process of the local school. The administration holds a legal position in the school system between the public and the teacher. The nature of administrative concern for an educational program is integrative and relational. Therefore, school administrators are concerned with determining goals and purposes of instruction, seeking balance among the educational programs, and identifying the methods of instruction.

One of the ways the vocational program can be perceived by the local school administration is in terms of the professional education competencies performed by vocational teachers. There are varied opinions as to the competencies needed by these teachers.

The opinions of secondary school administrators concerning competencies needed by teachers in vocational education programs have been the focus of four recent studies. Cole (1979) reported on the importance of 23 criteria dealing with personal and professional preparation for teaching, as rated by principals. Farmer (1979) identified three pedagogical competencies that met the needs of those teaching inner-city, disadvantaged youth. The Massachusetts State

Department of Education (1977) completed a study to validate 550 competencies needed by vocational education teachers, middle managers, and administrators. And, the Texas Education Agency (1975) identified tasks performed and the relative amount of time spent on tasks by vocational-technical personnel as perceived by vocational teachers, administrators, and guidance personnel.

The identification of professional education competencies needed by teachers of vocational agriculture has received considerable attention from professional educators in the United States (Beamer, 1956; Cheek, & Beeman 1978; Garner, 1974; Herring, 1976; Matteson, Bjoraker, and Jensen, 1974; Lighari, 1979; McGhee, 1967; and Moore & Bender, 1975). These competency studies have identified the educational activities judged by agricultural educators to be most appropriate for vocational agriculture programs.

Few research studies were found which ascertained the needed professional education competencies of the vocational agriculture teacher as viewed by local school administrators. Furthermore, studies were not found which compared the perceptions of administrators with those of agricultural educators concerning the pedagogical competencies needed by teachers. This lack of information about the attitudes of administrators concerning competencies needed by vocational agriculture teachers became the focal point for this investigation.

Purposes

The specific purposes of this study were to verify the professional education competencies needed by teachers of vocational agriculture in Missouri as perceived by secondary school administrators in schools having programs of vocational agriculture and to compare those perceptions with those of agricultural educators.

The following null hypotheses were formulated for the purposes of this study and tested at the .05 alpha level:

Ho1: There is no significant difference among the mean scores of administrators and agricultural educators regarding their perceptions of the importance of professional education competencies needed by teachers of vocational agriculture.

Ho2: There is no significant difference among the mean scores of principals, superintendents, and directors regarding their perceptions of the importance of professional education competencies needed by teachers of vocational agriculture.

Method

Data were collected by using a mailed survey instrument consisting of 13 categories of competencies for teachers of vocational agriculture. The data from administrators were collected by Gott (1980) in the winter of 1980 and the data from agricultural educators were collected by Lighari (1979) in the winter of 1979.

Subjects

All the instructors of vocational agriculture, vocational-technical school directors, principals, and superintendents of secondary public schools with a vocational agriculture program, state supervisors of vocational agriculture, and teacher educators of agricultural education in Missouri were identified as the population for the study.

The sample included 20% of the superintendents and principals administering secondary vocational agriculture programs in Missouri, 20% of the vocational agriculture instructors in Missouri, all area vocational-technical school directors in Missouri administering secondary programs of vocational agriculture, all teacher educators, and all supervisors of agricultural education in Missouri. Returns were received from 139 (81%) of the superintendents, 31 (76%) of the principals, 59 (84%) of the teachers, 26 (93%) of the directors, nine (100%) of the teacher educators, and six (100%) of the supervisors.

Instrumentation

The instrument consisted of 209 statements organized into 13 competency categories which were identified and verified by Lighari (1979). The instrument used forced responses on a six-point Likert-type scale. The reliability (internal consistency) of the instrument was established by using an item analysis computer program. This program used Cronbach's coefficient alphas to provide a measure of the reliability of the Likert-type scales and was an elaboration of the Kuder-Richardson Formula-20.

The reliabilities for all responses for the categories included in this study were as follows: program planning, development, and evaluation, .82; instructional planning, .84; instructional execution, .96; instructional evaluation, .88; instructional management, .91; guidance, .91; school-community relations, .92; FFA, .97; professional role and development, .95; supervised occupational experience programs, .97; adult/young farmer education, .97; agricultural mechanics, .84; and, teaching agricultural management, .96.

Analysis of the Data

Data were analyzed using a two-way multivariate analysis of variance procedure. Unequal cell or stratum sizes required a procedure allowing use of unequal numbers in the cells. Hotelling-Lawley's Trace was the method used to determine the overall significance of the data. This test was performed simultaneously for the 13 dependent variables.

Significant multivariate comparisons were followed by the results of a univariate analysis. The significant univariate analyses were followed by a Least Square means procedure to isolate the source of the difference. Prior to the analyses for testing the significance of the two null hypotheses, partial correlation coefficients among the 13

professional education competency categories and their probability of significance were performed. This analysis was used to determine whether there was a significant difference in interaction among the dependent variables. The correlation among the competency categories after the effects of the independent variable and their interaction were removed was revealed by the partial correlation coefficients. There was significant correlation ($p < .001$) among the dependent variables. This indicated a multivariate problem.

Findings and Conclusions

A comparison was made regarding the importance of professional education competency categories using the various groups of educators. The first null hypothesis of no significant difference among the mean scores of administrators and agricultural educators regarding their perceptions of the importance of professional education competencies needed by teachers of vocational agriculture was rejected. Hotelling-Lawley's Trace was the multivariate statistical procedure used to ascertain the overall significant effects of this comparison. The F-value for 65 and 752 degrees of freedom was 1.90, significant at the .05 alpha level. The results of this comparison are shown in Table 1.

Table 1

Manova Test of Competency Categories by Groups

Groups	Hotelling-Lawley's Trace ^a	F	df	Prob>F
Six administrator and agricultural education groups	0.82	1.90	65,752	0.001
Three administrator groups	0.39	1.19	26,160	0.255

^aHotelling-Lawley's Trace = $TR (E^{**} - 1 * H)$

The second null hypothesis of no significant difference among the mean scores of principals, superintendents, and directors regarding their perceptions of the importance of professional education competencies needed by teachers of vocational agriculture was not rejected. Hotelling-Lawley's Trace was used to ascertain overall significance. The F-value for 26 and 160 degrees of freedom was 1.19 and was not significant at the .05 alpha level.

Because the multivariate comparison of the importance of professional education competency categories among all six groups was significant, univariate comparisons of the 13 competency categories as they affect the different groups of educators were tested. The results of these analyses are shown in Table 2. This table also presents the means and least-square means of the groups by categories.

The mean responses of the groups of educators differed significantly for five of the categories of professional education competencies at the .05 alpha level. The significant categories included program planning and evaluation, instructional planning, instructional evaluation, supervised occupational experience programs, and adult/young farmer education. The examination of the data in Table 2 reveals that for each of the five categories where there were significant differences in responses, the administrator groups differed significantly from one or more of the agricultural education groups. Administrators rated the competency categories of program planning and evaluation, instructional planning, and instructional evaluation higher than did teachers. Teachers rated the category of supervised occupational experience programs higher than did superintendents. However, principals and directors also rated this category higher than did superintendents. The adult/young farmer education category had a different response pattern. Teacher educators and supervisors of agricultural education rated the category higher than did teachers, principals, and superintendents. In this case, the teacher group response was most similar to that of the local administrators.

Conclusions

Based upon the findings of this study, the following conclusions were formulated:

1. The three groups of administrators had similar response patterns in rating the importance of the professional education competencies needed by teachers. Therefore, it may be concluded that the views of principals, directors, and superintendents were generally congruent in terms of the importance of the competencies needed by teachers of vocational agriculture in Missouri.

2. The perceptions of superintendents in the competency category of supervised occupational experience programs were significantly lower than those of principals and directors. Therefore, it could be concluded that superintendents did not view supervised occupational experience programs to be as important a part of the vocational agriculture program as did principals and directors.

3. The opinions of teachers, principals, directors, and superintendents for the category of adult/young farmer education were lower than those of teacher educators and state supervisors. Therefore, it could be concluded that administrators perceive the appropriate role of adult/young farmer education to be of a lower priority in the program of vocational agriculture than do those providing program leadership in agricultural education.

Table 2

A Comparison of Groups Regarding the Importance of Professional Competency Categories

Categories	Means and Least-Square Means						F-value	Probability
	Teachers	Principals	Directors	Super-intendents	Teacher educators	State supervisors		
Program planning, development and evaluation	$\frac{4.59}{64.20^a}$	$\frac{4.92}{68.90}$	$\frac{5.02}{70.27}$	$\frac{4.89}{68.51}$	$\frac{5.22}{73.11}$	$\frac{5.13}{71.83}$	4.80	0.0005*
Instructional planning	$\frac{4.79}{38.31^b}$	$\frac{5.16}{41.26}$	$\frac{5.27}{42.12}$	$\frac{5.09}{40.72}$	$\frac{5.31}{42.56}$	$\frac{5.10}{40.83}$	4.17	0.0015*
Instructional execution	$\frac{4.56}{178.00}$	$\frac{4.86}{189.65}$	$\frac{4.79}{186.92}$	$\frac{4.66}{181.87}$	$\frac{4.87}{189.89}$	$\frac{5.03}{196.17}$	2.04	0.0749
Instructional evaluation	$\frac{4.56}{47.83^c}$	$\frac{5.23}{52.29}$	$\frac{5.22}{52.19}$	$\frac{4.98}{49.79}$	$\frac{5.27}{52.67}$	$\frac{5.25}{52.50}$	4.14	0.0015*

^aTeachers differ significantly at $p < .05$ from principals, directors, superintendents, teacher educators, and state supervisors.

^bTeachers differ significantly at $p < .05$ from principals, directors, superintendents, and teacher educators.

^cTeachers differ significantly at $p < .05$ from principals, directors, and teacher educators.

*Significant at $p < .05$.

Table 2 (continued)

Categories	Means and Least-Square Means						F-value	Probability
	Teachers	Principals	Directors	Superintendents	Teacher educators	State supervisors		
Instructional management	$\frac{5.24}{83.80}$	$\frac{5.41}{86.48}$	$\frac{5.18}{82.81}$	$\frac{5.21}{83.28}$	$\frac{5.29}{84.56}$	$\frac{5.56}{89.00}$	1.20	0.3104
Guidance	$\frac{5.02}{50.20}$	$\frac{5.00}{49.97}$	$\frac{5.09}{50.88}$	$\frac{4.95}{49.49}$	$\frac{5.00}{50.00}$	$\frac{5.47}{54.67}$	0.93	0.4666
School community relations	$\frac{4.62}{60.02}$	$\frac{4.61}{59.97}$	$\frac{4.65}{60.46}$	$\frac{4.59}{59.72}$	$\frac{4.82}{62.67}$	$\frac{5.21}{67.67}$	1.02	0.4101
FFA	$\frac{5.22}{135.78}$	$\frac{5.15}{133.84}$	$\frac{5.01}{130.38}$	$\frac{4.86}{126.36}$	$\frac{5.14}{133.56}$	$\frac{5.44}{141.50}$	1.82	0.1118
Professional role and development	$\frac{4.78}{81.22}$	$\frac{5.11}{86.81}$	$\frac{5.12}{87.04}$	$\frac{4.78}{81.28}$	$\frac{4.88}{82.89}$	$\frac{5.13}{87.17}$	1.73	0.1292
Supervised occupational experience program	$\frac{5.12}{81.92}$	$\frac{5.03}{80.52}$	$\frac{5.07}{81.15}$	$\frac{4.70}{75.26^d}$	$\frac{5.20}{83.22}$	$\frac{5.47}{87.50}$	2.68	0.0234*

^dSuperintendents differ significantly at $p < .05$ from teachers, principals, directors, teacher educators, and state supervisors.

*Significant at $p < .05$.

Table 2 (continued)

Categories	Means and Least-Square Means						F-value	Probability
	Teachers	Principals	Directors	Super-intendents	Teacher educators	State supervisors		
Adult/young farmer education	$\frac{4.46}{75.75}^e$	$\frac{4.46}{75.90}^f$	$\frac{4.76}{81.00}$	$\frac{4.25}{72.78}^g$	$\frac{5.09}{86.56}$	$\frac{5.37}{91.33}$	3.19	0.0090*
Agricultural mechanics	$\frac{5.51}{33.03}$	$\frac{5.65}{33.90}$	$\frac{5.56}{33.38}$	$\frac{5.52}{33.13}$	$\frac{5.45}{32.67}$	$\frac{5.56}{33.33}$	0.54	0.7454
Teaching agricultural management	$\frac{4.95}{84.22}$	$\frac{5.10}{86.71}$	$\frac{4.98}{84.62}$	$\frac{4.87}{82.82}$	$\frac{5.05}{85.89}$	$\frac{5.41}{92.00}$	1.06	0.3825

^eTeachers differ significantly at $p < .05$ from teacher educators and state supervisors.

^fPrincipals differ significantly at $p < .05$ from state supervisors.

^gSuperintendents differ significantly at $p < .05$ from teacher educators and state supervisors.

*Significant at $p < .05$.

4. The opinions of teachers in the categories of program planning, development, and evaluation; instructional planning; and, instructional evaluation were significantly lower than the administrator groups. Therefore, it could be concluded that the perceptions of teachers were not congruent with the administrators with which they work.

Discussion

An examination of the competencies perceived to be important by administrators and agricultural educators revealed differences in perceptions among these groups. However, the differences focus on specific competency categories rather than on all the pedagogical competencies needed by a teacher of vocational agriculture.

The administrator groups rated higher than teachers those categories related to organizing, planning, and executing the instructional program. These competencies were also rated higher by other agricultural education groups than by teachers. In the categories of supervised occupational experience programs and adult/young farmer education, principal and superintendent ratings were lower than the other groups. These two phases of the vocational agriculture program differ from the more traditional programs that most principals and superintendents supervise. These are viewed by the program leadership persons in agricultural education as being important and of a higher priority than indicated by the principals and superintendents. It is interesting to note that the vocational school directors did not differ significantly from the agricultural education groups in their ratings of these two categories. While the directors evidently perceived these categories to be of major importance, their perceptions were not shared by the other administrators in the schools.

School administrators play a pivotal role in the operation of the local school. They are concerned with both program and financial leadership responsibilities. As school districts experience greater demands for limited resources, vocational educators and agricultural educators, in particular, will likely be called upon to justify expenditures for funding of programs that differ from the norm. The findings of this study indicated that the supervised occupational experience program and young farmer/adult education were not perceived to be as important to administrators as to agricultural educators. Therefore, the implications are clear that additional data must be collected to justify continuation of these phases of the vocational agriculture program. In addition, teachers would be well advised to pay more attention to the planning and organizing of the instructional phase of their work to gain additional support of administrators.

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(continued on page 37)