

RELATIONSHIP OF INSTRUCTIONAL SUPERVISION WITH AGRICULTURE TEACHERS' JOB SATISFACTION AND THEIR INTENTION TO REMAIN IN THE TEACHING PROFESSION

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Abstract

The purpose of this census study was to measure the extent to which supervision experienced by agriculture teachers in Iowa was related to job satisfaction and intention to remain in the teaching profession. Results demonstrated that roughly one-fifth of agriculture teachers were never observed teaching by their supervisor during an entire academic year. In addition, more than one half of the teachers had not participated in a preobservation conference, and about one third had not participated in a postobservation conference with their supervisor. It was concluded that a significant number of agriculture teachers in Iowa were neither supervised nor evaluated during a complete academic year. Selected components of supervision that included observation, preobservation conferencing, postobservation conferencing, supervisor support, and supervisor guidance were not useful predictors of agriculture teachers' job satisfaction nor of their intentions to remain in teaching. Two extraneous variables - education level and collegial environment - were positively and significantly related to job satisfaction and intention to remain in teaching. Agriculture teachers who experienced collaborative supervision reported a slightly but significantly higher level of job satisfaction than teachers who did not experience collaborative supervision.

Introduction

Instructional supervision is a process of improving instruction for the benefit of students (Glickman, 1990). Clinical supervision, a practice that evolved in the 1960s, is widely used in schools. In fact, Fritz (2002) discovered that university supervisors of agriculture student teachers most frequently used the structure of clinical supervision to guide their practice. Clinical supervision provides a low risk step-by-step process (Fritz & Miller, 2001).

Within the structure of clinical supervision, there is room for a variety of supervisory approaches. Glickman's (1990) developmental supervision model explains four supervisory approaches and provides the theoretical framework for this study. The approaches differ in the amount of power and control accorded the teacher. Nondirective supervision occurs when the teacher formulates his or her own plan about future

development. The teacher has the liberty of framing the supervisory interaction, and the supervisor is available to give advice. In collaborative supervision, the supervisor and the teacher share decision making about future improvement. The directive informational approach occurs when the supervisor frames the supervisory plan and the teacher decides whether to follow the plan. In the directive control approach, the supervisor frames the supervisory plan and expects the teacher to follow it. Supervisors should consider the teacher's level of knowledge and experience, issues related to responsibility and accountability, and teacher's motivation in deciding which approach to use. According to Glickman, collaborative supervision works best with most teachers.

Three supervisor responsibilities that are central to the process of supervision include carrying out observation, giving guidance and support, and giving feedback to the teacher. Observation provides the supervisor with an

opportunity to gain information about a wide range of teaching skills (Knoll, 1987). Information gathered during classroom observation may be used for different purposes by supervisors. A common purpose of observation, according to Bourisaw (1988), is to collect the necessary data to make accurate evaluative ratings.

Guidance and support should be part of the general supervision that teachers receive. Odell (1986) listed seven categories of support needed by new teachers or teachers in a new school: system information, finding resources and materials, instructional strategies, emotional support, and help in classroom management and discipline. Veenman (1984) further suggested that emotional support is important for teachers; but like classroom management, it is less needed than help in obtaining resources and materials or in applying a given teaching strategy.

Coupled with observation, guidance, and support, giving feedback to the teacher is one aspect of supervision that makes a difference.

Shantz and Ward (2000) observed that for teachers to improve instructional delivery, they rely on feedback given to them by supervisors. Constructive criticism and guidance given by supervising teachers are important in helping teachers develop their teaching proficiency.

Instructional supervision may be an important variable in understanding and addressing what some consider to be the most significant issue facing agriculture today - the shortage of agriculture teachers (Syngenta, 2002). In the most recent study of the supply and demand for agricultural education teachers, Camp, Broyles and Skelton (2002) wrote that "Agricultural Education programs nationwide experienced a continuing shortfall in the number of fully qualified teachers prepared to accept available teaching positions" (p. 31). Camp et al. recommended taking steps to increase the number of newly qualified teachers, conducting research to determine why some newly qualified teachers choose non teaching careers, and fostering collaboration among states - especially those without teacher preparation programs in agriculture. Perhaps the problem should also be addressed on another front. Research is needed to determine why agriculture teachers

leave the profession. As Talbert, Camp, and Heath-Camp (1994) pointed out, we can ill-afford to lose promising teachers.

Studies on attrition of the general teaching force have indicated poor administrative support, poor salaries, student discipline, and lack of advancement in the job as some of the factors leading to attrition (Blair, 2000; Boe & Gilford, 1992; Gross & Billingsley, 1994; National Center for Education Statistics [NCES], 1994). Job satisfaction has also been correlated with propensity to remain in an organization (Billingsley & Gross, 1992). Knowing the number of teachers who leave teaching and the reasons they leave can help policy makers prepare for future demand (NCES, 1994).

Instructional supervision activities foster teacher motivation, inspiration, and trust, and help to improve teaching performance (Knoll, 1987; Pfeiffer & Dunlap, 1982; Rettig, 2000).

As a result, it may be reasonable to expect a positive relationship to exist between certain aspects of instructional supervision and teachers' job satisfaction and their intention to remain in teaching. No prior studies in agricultural education have examined these relationships.

Purpose

The purpose of this study was to measure the extent to which supervision experienced by agriculture teachers in Iowa was related to job satisfaction and their intention to remain in the teaching profession.

Objectives

1. Describe demographic characteristics of the agriculture teachers studied.
2. Identify supervisory practices used by school supervisors with agriculture teachers.
3. Describe relationships between components of supervision and job satisfaction and agriculture teachers' intention to remain in the teaching profession.

Hypotheses

1. Agriculture teachers who experience collaborative supervision will be more satisfied with their jobs than those who do not.

2. Agriculture teachers who experience collaborative supervision will be more likely to express an intention to remain in the teaching profession than those who do not.

Procedures

This ex post facto study utilized a static group comparison design (Campbell & Stanley, 1963) to measure the relationships between selected supervision-related variables and teachers' job satisfaction and intention to remain in the teaching profession. The population for this census study included all ($N=244$) high school agriculture teachers in Iowa. The list of teachers was obtained from the 2001-2002 Iowa Directory of Agriculture Teachers.

The questionnaire asked the agriculture teachers how many times their respective supervisors observed them teach, and how many times their supervisors held pre and postobservation conferences with them. The extent to which supervisors provided guidance and support was measured with a 5-point Likert-type scale. Response options included: Never (1), Rarely (2), Sometimes (3), Often (4), and Always (5). The type of supervision experienced by the agriculture teachers was determined by asking the teachers to choose from four descriptions of supervisory practice the one that best described their supervisor's approach. Job satisfaction and collegial environment were measured with a 5-point Likert-type scale. Response options included Strongly Disagree (1), Disagree (2), Undecided (3), Agree (4), and Strongly Agree (5). Teachers' intention to remain in the profession was measured with a single question, with yes or no as response options. A series of demographic questions were asked at the end of the questionnaire.

A panel of experts determined that the questionnaire possessed content and face validity. The panel consisted of a professor of Educational Leadership and Policy Studies, a professor of Agricultural Education, and a graduate student in Agricultural Education.

A pilot test was conducted to establish reliability coefficients for selected components of the questionnaire. Participants in the pilot test were selected based upon their having a similar professional background as

members of the target population. Nine former high school teachers filled out the questionnaire two times at an interval of 10 days. Test-retest reliability coefficients were .78 for observation, .63 for type of supervision, and 1.00 for intention to remain in teaching. The reliability coefficients represent the proportion of responses that were identical on the test and the retest.

Cronbach's alpha was used to assess the internal consistency of summated scales contained within the questionnaire. The coefficients were .82, .72, and .71 for questionnaire components designed to measure, respectively, guidance, support, and collegial environment. Job satisfaction was measured with an instrument developed by Brayfield and Rothe (1951). Brayfield and Rothe reported an odd-even product moment reliability of .77 for this instrument. Using data from the present study, Guttman split-half and Cronbach's alpha reliability coefficients were calculated and yielded results of .82 and .86 respectively.

The questionnaire, along with a cover letter explaining the purpose of the study and a self-addressed stamped return envelope, were sent to all members of the population in September 2001. Two weeks after the first mailing, 58% of the teachers in the population had responded. At that time a follow-up mailing was sent to all nonrespondents. The follow-up mailing included a follow-up letter, the questionnaire, and a self-addressed stamped return envelope. A cut-off date for receiving responses was set at three weeks after the follow-up. The final response rate was 72%, which according to Miller and Smith (1983), falls with the range of high returns. All instruments received were useable.

The data were analyzed using the Statistical Package for the Social Sciences Version 8.0. A significance level of .05 was set a priori. The magnitude of all measures of association was interpreted using Davis' (1971) descriptors. To address the problem of nonresponse bias, a comparison was made between early and late respondents (Miller & Smith, 1983). Questionnaires were organized by date of receipt. The first half of respondents was considered early, and the second half late. The only statistically significant difference between early and late

respondents was on the variable job satisfaction. The results obtained for job satisfaction are not generalizable to the population.

Results

Objective 1

Describe demographic characteristics of the agriculture teachers studied.

The study provided a profile of agriculture teachers in Iowa. The age range of the agriculture teachers was 22 to 63 years. The average age was 39 years ($SD = 10.26$). Of a total of 172 teachers who responded, 143 were males and 29 were females. Most (75.6%) of the teachers had bachelor's degrees, 23.3% had master's degrees and only 1.2% had doctoral degrees. Teachers' salaries ranged from less than \$20,000 per year to more than \$60,000 per year. Six teachers (3.5%) were in the lowest salary range. Four teachers (2.3%) earned more than \$60,000 per year. The most common salary range was \$35,001-\$40,000. Teaching experience ranged from a few months to 34 years with an average teaching experience of 14 years ($SD = 9.37$). Principals supervised 90% of the agriculture teachers; assistant principals supervised the other 10%.

Objective 2

Identify supervisory practices used by school supervisors with agriculture teachers.

During the 2000-2001 school year, agriculture teachers were observed an average of 2.14 times ($SD = 2.99$). On average, preobservation conferences were held 0.79 times ($SD = 1.86$), and postobservation conferences were held 1.08 times ($SD = 1.04$).

Observation occurred nearly three times more often than preobservation conferences, and about two times more often than postobservation conferences. During the 2000-2001 school year, 21% of teachers were never observed teaching, 53% never participated in a preobservation conference, and 31% never participated in a postobservation conference. The most frequent type of supervision experienced by agriculture teachers was directive informational (36.9%), followed by collaborative (28.2%), nondirective (28.2%), and directive control (8.7%).

Extraneous variables

Job satisfaction is a function of a combination of several occupational factors (Cano & Miller, 1992; Chidume, 1987; NCES, 1997). The same can be said for teachers' intentions to remain in the profession (Blair, 2000; Boe & Gilford, 1992; Gross & Billingsley, 1994). Whether supervision and type of supervision (independent variables) were related to occupational factors that affect job satisfaction and intentions to remain in the teaching profession was not known. In this study, selected occupational factors were viewed as potential extraneous variables. Extraneous variables were eliminated as potential threats to internal validity if they were unrelated to the dependent and independent variables of interest (McCracken, 1991). Tables 1 and 2 summarize the analysis used to account for potential extraneous variables. Extraneous variables that were not ruled out as threats to internal validity for specific sets of relationships were acknowledged.

Table 1
First-Order Correlations of Extraneous Variables With the Independent and Dependent Variables

Variable of Interest	Extraneous Variables					
	Age	Gender ^a	Salary	EDU	EXP	ENV
Observation	.04	-.13	.22	.24	.01	.10
Preobservation	-.14	-.03	.23	.15	-.12	.07
Postobservation	-.21	.01	.22	.21	.26	.05
Supervisor support	-.25	.02	.29	.28	-.24	.26*
Supervisor guidance	-.11	-.01	.32	.61*	-.06	.12
Collaborative supervision	.04	.12	.21	.07	.06	.15*
Job satisfaction	.04	-.01	.50	.63*	.06	.42*
Intentions ^b	.01	-.07	.13	.22*	.01	-.42*

Note. EDU = education level, EXP = teaching experience, ENV = collegial environment.

^a Male = 0, Female = 1. ^b Remain in teaching = 0, Leave teaching = 1.

* $p < .05$.

Table 2
Tests for Differences Among the Means for Extraneous Variables by Type of Supervision

Extraneous Variable	Test Statistic	Value
Age	<i>F</i>	.75
Gender	Cramer's <i>V</i>	.20
Salary level	Cramer's <i>V</i>	.21
Education level	Cramer's <i>V</i>	.11
Teaching experience	<i>F</i>	.96
Collegial environment	<i>F</i>	3.43*

Note. Types of supervision included collaborative, nondirective supervision, directive informational, and directive control.

* $p < .05$

Objective 3

Describe relationships between components of supervision and job satisfaction and agriculture teachers' intention to remain in the teaching profession.

Agriculture teachers who participated in this study had a mean job satisfaction score of 3.86, with a standard deviation of 0.44. According to the job satisfaction scale used, teachers were satisfied with their jobs. Regarding retention, 80.5% of the 174 respondents did not want to leave the teaching profession.

Table 3 shows relationships between components of supervision (observation, preobservation conference, postobservation conference, guidance from supervisor, and

support from supervisor) and job satisfaction. Observation and guidance from the supervisor had low positive correlations with job satisfaction, while all other components of supervision had negligible correlations with job satisfaction. None of the associations were statistically significant.

Table 3 also shows relationships between intention to remain in teaching and components of supervision. All components of supervision had low negative relationships with teacher intentions to remain in the profession. The extent to which teachers experienced postobservation conferences was significantly correlated with intention to remain in teaching.

Table 3

Correlations Between Components of Supervision and Job Satisfaction and Teachers' Intention to Remain in Teaching

Supervision Component	Job Satisfaction	Intention ^a
Observation	.11	-.12
Preobservation	.03	-.11
Postobservation	.04	-.16*
Guidance from supervisor	.11	-.11
Support from supervisor	.07	-.13

^a Remain in teaching = 0, Leave teaching = 1.

* $p < .05$.

Hypothesis 1

Agriculture teachers who experience collaborative supervision will be more satisfied with their jobs than those who do not.

To address the hypothesis that teachers who experience collaborative supervision are more satisfied with their jobs than those who experience other types of supervision, the job satisfaction levels of teachers experiencing different types of supervision were compared

(Table 4). The overall F was statistically significant. A Tukey test was chosen as the follow-up procedure to evaluate pair-wise differences among the means. The Tukey test revealed a significant difference in job satisfaction between teachers who experienced collaborative supervision and those who experienced nondirective supervision. Results indicate support for the hypothesis, but collegial environment was not ruled out as a potential extraneous variable.

Table 4
Job Satisfaction Means by Type of Supervision

Type of Supervision	<i>M</i>	<i>SD</i>	<i>F</i>
Collaborative	3.98	0.50	3.39*
Nondirective	3.71	0.49	
Directive informational	3.81	0.38	
Directive control	4.03	0.45	

* $p < .05$.

To further address the hypothesis an independent samples *t* test was calculated to evaluate whether teachers who experienced collaborative supervision were more satisfied with their jobs than those who experienced other types of supervision. The *t* test was statistically significant with the higher mean

being reported by teachers who had experienced collaborative supervision (Table 5). The hypothesis was supported. Collegial environment is, however, a plausible alternative explanation for the observed difference.

Table 5
Job Satisfaction Means by Collaborative Versus Non-Collaborative Supervision

Type of Supervision	<i>M</i>	<i>SD</i>	<i>t</i>
Collaborative	3.98	0.50	1.96*
Noncollaborative	3.82	0.42	

Note. Noncollaborative supervision consists of nondirective, directive informational, and directive control supervision.

* $p < .05$.

Hypothesis 2

Agriculture teachers who experience collaborative supervision will be more likely to express an intention to remain in the teaching profession than those who do not.

For each of the four types of supervision, the proportion of those who intended to remain was compared to those intending to leave. Proportions of those who intended to remain were .83, .74, .80, and .85, for collaborative supervision, nondirective

supervision, directive informational supervision, and directive control supervision, respectively (Table 6). A two-way contingency table analysis was used to evaluate whether teachers who experienced collaborative supervision were more likely to express an intention to remain in the teaching profession. The relationship was not significant. The results did not support the hypothesis.

Proportions of Teachers Who Intend To Remain in the Teaching Profession by Type of Supervision

Type of supervision	Intend to Leave		Intend to Remain	
	<i>f</i>	%	<i>f</i>	%
Collaborative	7	16.7	35	83.3
Noncollaborative	23	21.5	84	78.5
Nondirective	10	25.6	29	74.4
Directive informational	11	20.0	44	80.0
Directive control	2	15.4	11	84.6

Note. Phi = .04, $p = .59$.

Conclusions/Recommendations/ Implications

Results demonstrated that roughly one-fifth of agriculture teachers in Iowa were never observed teaching by their supervisor during an entire academic year. In addition, more than one half of the teachers had not participated in a preobservation conference and about one-third had not participated in a postobservation conference with their supervisor. It was concluded that a significant number of agriculture teachers in Iowa were neither supervised nor evaluated during a complete academic year. Furthermore, it may be reasonable to imply that agriculture teachers were more likely to be evaluated than supervised. While it is difficult to separate supervision and evaluation, they do serve different purposes. Evaluation is generally executed to judge performance against a standard and is used in making personnel decisions, while supervision is primarily concerned with providing assistance to teachers so they can improve performance (Hedges, 1989). Supervision requires more than observation of performance. Efforts made by the Iowa Association of Agricultural Educators and Iowa State University to provide professional development opportunities, mentoring, and feedback for

teachers are of particular importance in light of this study. Agriculture teachers interested in becoming better teachers are more likely to find what they need from within the agriculture teaching profession as opposed to within their school.

Directive informational supervision was the type of supervision most frequently used with agriculture teachers in Iowa. The directive informational approach is likely to be the easiest for supervisors, because it involves them alone in formulating the plan. It may also appeal to many teachers because their thinking and participation are limited. All they have to do is listen to the supervisor's suggestions.

It was concluded that components of supervision were not useful predictors of agriculture teachers' job satisfaction nor of their intention to remain in teaching. On the other hand, two extraneous variables were positively and significantly related to job satisfaction and intention to remain in teaching. Teachers with higher levels of education expressed a higher level of job satisfaction but were more likely to express an intention to leave teaching. In addition, teachers who reported favorable collegial environment expressed a higher level of job satisfaction and were more likely to express

an intention to remain in teaching. Results of this study should be shared with supervisors of agriculture teachers in Iowa. Supervisors have the potential to influence collegiality in the work environment. They also may be able to influence variables (e.g., autonomy, recognition, student discipline, and influence on policy) found by others (Boe & Gilford, 1992; NCES, 1994, 1997) to be related to either job satisfaction or intention to remain in teaching.

Agriculture teachers who experienced collaborative supervision reported a slightly but significantly higher level of job satisfaction than those who experienced other types of supervision. The reader is reminded that collegial environment was not ruled out as a potential extraneous variable. Theoretically, any type of supervision is appropriate given the correct set of circumstances. However, collaborative supervision is based on democratic principles. The supervisor and teacher share decision making and their relationship is characterized by acceptance and equality (Glickman, 1990). We recommend that supervisors of agriculture teachers begin with a collaborative approach. After becoming more familiar with a particular teacher and their situation, the approach may be adjusted (if necessary) to more effectively facilitate growth and development.

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