Relationship of Supervision with Job Satisfaction and Retention of High School Agriculture Teachers

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Abstract

The purpose of this census study was to measure the extent to which supervision experienced by agricultural education 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. Three extraneous variables - education level, working conditions 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 and Conceptual Framework

School supervision is a process aimed at improvement of instruction and school climate. Though the practice has been re-ordered and redefined by today's new societies, governments, and economies, the concept of school supervision has stood the test of time (Bolin & Panaritis, 1992). Today's buzzword in school supervision is "clinical supervision," a practice that evolved in the 1960s. Bolin and Panaritis characterized clinical supervision as a practice emphasizing collegiality, where supervisor and supervisee work together to improve instruction, as opposed to an inspection approach, where a supervisor shows and tells a supervisee.

Supervisors vary in the way they approach supervision. Glickman (1990) introduced four categories of supervisory approaches. The approaches differ in the amount of power and control accorded to the supervisee during interaction with the supervisor. Some approaches give more control to the supervisor, while others give more control to the supervisee. In collaborative supervision, the supervisor and the supervisee share decision making about future improvement. Nondirective supervision occurs when the supervisee formulates his or her own plan about future development. The supervisee has the liberty to frame the supervisory interaction; the supervisor only gives advice. The directive informational approach occurs when the supervisor frames the supervisory plan and the supervisee decides whether to follow the plan. In the directive control approach, the supervisor frames the supervisory plan and expects the supervisee to follow it.

Central to the process of supervision are the three supervisor responsibilities of carrying out observation, giving guidance and support, and giving feedback to the supervisees. 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 in teaching is expected, and it 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 needed less than help in obtaining resources and materials or in applying a given teaching strategy.

Coupled with observation, guidance, and support, giving feedback to the supervisee 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 them by their supervisors. Constructive criticism and guidance given by supervising teachers are important in helping supervisees develop their teaching proficiency.

Losing experienced teachers can significantly affect quality of instruction. Knowing the number of teachers who leave teaching and the reasons they leave can help policy makers prepare for future demand for teachers by encouraging practicing teachers to remain in the profession (National Center for Education Statistics [NCES], 1994). In their study of predictors of commitment, job satisfaction, and intent to stay in teaching, Billingsley and Gross (1992) reported a moderate and consistent relationship between job satisfaction and propensity to

remain in an organization.

The shortage of agriculture teachers in the United States has been documented (Camp & Beckman, 2000). What is not known is why agriculture teachers choose to leave teaching or why graduates do not take teaching jobs. 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; NCES, 1994).

Researchers (Knoll, 1987; Pfeiffer & Dunlap, 1982; Rettig, 2000) have written extensively about the importance of supervision in schools. According to these researchers, supervisory activities foster teacher motivation, inspiration, and trust, and help to improve teaching performance. 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 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 agricultural education teachers in Iowa was related to job satisfaction and intention to remain in the teaching profession.

Objectives:

1. Describe demographic characteristics of the agricultural education 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 stay 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 state 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 five-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 was measured with a five-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 was 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.

To address reliability of the researcher-developed questions, a test-retest procedure was used. Twelve former high school teachers filled out the questionnaire two times at an interval of 10 days. These participants were chosen because they were deemed professionally similar to the intended participants of the study.

Reliability coefficients represent the proportion of responses that were identical on the test and the retest. This standard of requiring an identical response was applied to all questionnaire components, including the Likert-type scales. The coefficients were .78, .59, .63, and 1.00 for questionnaire components designed to measure, respectively, observation, guidance, type of supervision, and intentions to remain in the teaching profession. 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. The questionnaire, along with a cover letter explaining the purpose of the study and a self-addressed stamped return envelope, was 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 a 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

Objective1. Describe demographic characteristics of the agricultural education 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 a bachelor's degree, 23.3% had master's degrees and only 1.2% had a doctoral

degree. 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. Average teaching experience was 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 .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 supervision (36.9%), followed by collaborative supervision (28.2%), nondirective supervision (28.2%), and directive supervision (8.70%).

Control of 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 profession was not known. Occupational factors represent 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
Summary of the relationships of extraneous variables with the independent and dependent variables

Variables of interest	Extraneous Variables [a]						
	Age	Gender[b]	Salary	Educ.	Exp.	Cond.	Env.
Observation	.04	-.13	.22	.24	.01	.02	.10
Preobservation	-.14	-.03	.23	.15	-.12	.10	.07
Postobservation	-.21	.01	.22	.21	.26	.06	.05
Supervisor support	-.25	.02	.29	.28	-.24	.19*	.26*
Supervisor guidance	-.11	-.01	.32	.61*	-.06	.11	.12
Collaborative supervision	.04	.12	.21	.07	.06	.05	.15*
Job satisfaction	.04	-.01	.50	.63*	.06	.52*	.42*
Intentions/remain[c]	.01	-.07	.13	.22*	.01	-.36*	-.42*

[a] Educ. = Education level, Exp. = Teaching experience, Cond. = Work conditions, Env. = collegial environment. [b] Male = 0, Female = 1. [c] Remain in teaching = 0, Leave teaching = 1.
* $p < .05$.

Table 2
Difference of means of extraneous variables within each type of supervision

Extraneous Variable	Test Statistic	Value
Age	*F*-test	.75
Gender	Cramer's V	.20
Salary level	Cramer's V	.21
Education level	Cramer's V	.11
Teaching experience	*F*-test	.96
Work conditions	*F*-test	.79
Collegial environment	*F*-test	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 .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 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 stay 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

Components of Supervision	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	Mean	SD	*F*-statistic
Collaborative	3.98	.50	3.39*
Nondirective	3.71	.49	
Directive	3.81	.38	
Directive control	4.03	.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	Mean	*SD*	*t*-value
Collaborative	3.98	.50	1.96*
Noncollaborative	3.82	.42	

Note. Noncollaborative supervision = {nondirective, directive informational, and directive control supervision}
* $p < .05$.

Hypothesis 2. Agriculture teachers who experience collaborative supervision will be more likely to stay in the teaching profession than those who do not.

For each of the four types of supervision, the proportion of those who intended to stay was compared to those intending to leave. Proportions of those who intended to remain were 0.83, 0.74, 0.80, and 0.85, 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 remain in the teaching profession. The relationship was not significant. The results did not support the hypothesis.

Table 6
Proportions of teachers who intend stay in the profession by type of supervision

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

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 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 is 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, three 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 express an intention to leave teaching. In addition, teachers who reported favorable working conditions and the existence of a 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 working conditions and the existence of a collegial 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. Perhaps the manner in which supervision is carried out is more important than whether it is carried out.

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. Both supervisor and teacher share decision making. When applied correctly, collaborative supervision is expected to result in a more satisfying experience for teachers.

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Thobega and Miller identify instructional supervision as an area to investigate in trying to solve problems with retention of agriculture teachers. They do a good job of summarizing some of the literature on supervision, but this section is a little weak on presenting the rational for the study as related to agriculture education. Also, the discussion of results indicates that the information from the study should be shared with supervisors because they influence the work environment for teachers which could be better linked with the conceptual framework developed early on in the paper.

The Methods section is fairly well written and concise as is the section presenting the findings. However, the authors need to consider presenting raw data in tables and summarizing their findings in ways that are logical. For example, presenting the number of supervisory visits as the mode rather than the mean might make sense for purposes of discussion. It is also important to be consistent with the presentation of decimals in the text.

Several questions come to mind as I read the paper to aid in the discussion:

1. Does intention to stay in the job equate with actual retention? What would be the benefits of surveying or interviewing former teachers who have left the profession to identify whether supervision played a key role in their decision to quit teaching?

2. There was some discussion of the types of supervision, and significance found between collaborative supervision job satisfaction (vs. non-collaborative). Do you think our preservice programs adequately prepare teachers to participate in supervision that is collaborative in nature?

3. What role do state departments of education play in guaranteeing that teachers receive adequate and quality supervision? If all four types of supervision are used, how can equity of the process be ensured?

4. Is it fair that most of us in attendance at this meeting have left the classroom, yet we expect others to stay in it? What alternatives to retention of current teachers exist to ensure that we have an ongoing and adequate supply of quality teachers of agriculture?

Thobega and Miller have opened the door for some good discussions on teacher retention and improvement of the work environment through effective supervision.