

SUPERVISORY BEHAVIORS OF COOPERATING AGRICULTURAL EDUCATION TEACHERS

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Abstract

The purpose of this study was to determine the extent to which cooperating agricultural education teachers used selected supervision models. The relationships between maturity characteristics of the cooperating teachers and their choices of a supervision model were also examined. Results showed that cooperating teachers commonly used clinical, contextual, and conceptual supervision models. They also commonly used nondirective and directive informational styles from the developmental supervision model. Maturity of the cooperating teachers was not related to their choices of structured or unstructured models of supervision. Future studies should examine the relationship between cooperating teachers' use of supervision models and contextual factors like teaching load and administrative responsibilities. The importance of student teacher characteristics as factors in cooperating teachers' choices of supervision models should also be examined.

Introduction/Theoretical Framework

Teacher supervision has been related to teachers' occupational constructs such as commitment to the job, interest in the job, attitudes toward the institution, job satisfaction, teacher retention, and efficacy (Billingsley & Gross, 1992; Edmeirer, 2003; Tack & Patitu, 1992; Thobega & Miller, 2003). Lack of a nurturing supervision for teachers can lead to low job satisfaction and a negative attitude towards the teaching profession (Blair, 2000). Likewise, the quality of supervisory relationships and supervision approaches experienced by student teachers can build either positive or negative perceptions about the teaching profession (Bennie, 1972). Cooperating teachers' approach to supervision is therefore of paramount importance in the teacher development process.

School supervision is not a static process. Studies on school supervision have led to a continuous evolution of supervision practice. While some researchers have written about teacher supervision as a tool for teacher development (Clark, 1999), other

researchers concentrated on developing the supervision process itself. These initiatives led to development of supervision models. There are several commonly accepted models of teacher supervision. Models include clinical, contextual, differentiated, conceptual, and developmental supervision.

Clinical supervision was developed by Goldhammer (1969) and Cogan (1973). The model is characterized by five phases: planning conference, classroom observation/data collection, analysis and strategy, supervision conference, and postconference analysis. The two authors asserted that the clinical supervision process should become more analytical and reflective as the supervisee gains higher levels of technical and professional sophistication.

Contextual supervision is characterized by the supervisor varying his or her supervisory approach to match the supervisee's readiness level. Readiness consists of confidence and competence when performing particular teaching tasks (Ralph, 1998). According to Ralph, supervision should be situational. Situational

variables rooted in the supervisee's confidence include willingness, motivation, interest, and enthusiasm to become engaged in a task. Variables rooted in the supervisee's competence are knowledge, skill, and ability to perform a task (Ralph).

Glathorn (1984) proposed another model of supervision called differentiated supervision. Differentiated supervision allows the supervisee to have options of supervision approaches. The options are intensive development, cooperative professional development, self-directed development, and administrative monitoring. Intensive development follows the clinical supervision phases. Cooperative professional development is a collegial process in which the supervisee meets with a small group of teachers to work toward professional growth. Self-directed development enables the supervisee to work independently on professional growth concerns. The supervisor serves as a resource. In administrative monitoring, the supervisor monitors the work of the supervisee, making brief and unannounced visits, to ensure the supervisee is carrying out assignments and responsibilities in a professional manner (Glathorn).

Conceptual supervision, as described by Beach and Reinhartz (1989), takes into consideration personal and organizational factors that influence the supervisee's performance. The supervision is based on the steps of clinical supervision, but as it was alluded to by Edmeirer and Nicklaus (1999), the conceptual model addresses organizational factors including role ambiguity, work overload, decision making, supervisory support, classroom climate, role conflict, and support from colleagues. The conceptual model also addresses personal factors such as intrapersonal, life stage, teaching assignment, level of self-concept, experience in education, and aptitude in a particular subject area. Conceptual supervision looks at supervision as a way to facilitate development of the supervisee's confidence and self-concept. It is the supervisor's responsibility to make sure that the supervisee's values and aspirations are in line with those of the school and the school staff (Fritz & Miller, 2003a).

Glickman (1990) introduced four supervisory approaches that are collectively called developmental supervision. The approaches differ in the amount of power and control accorded to the supervisee during the supervisory interaction. At one extreme, all power is given to the supervisor. At the other, all power is given to the supervisee. The approaches are nondirective supervision, collaborative supervision, directive informational supervision, and directive control supervision. Nondirective supervision is when the supervisee formulates his or her own plan for future development. In collaborative supervision, the supervisor and the supervisee share decision making about the supervisory process. The supervisee has the liberty to frame the supervisory interaction, while the supervisor only gives advice. Directive informational supervision empowers the supervisor to frame the supervisory plan and the supervisee to choose to either follow the plan or not. In the directive control approach, the supervisor frames the supervisory plan and expects the supervisee to follow it (Glickman).

Fritz and Miller (2003b) put the five supervision models discussed above into one encompassing model called supervisory options for instructional leaders (SOIL). In the SOIL model, the five supervision models are placed on a continuum representing the amount of structure used in a particular supervision approach. The continuum also represents a combination of potential reward and risk that the supervisor and the student teacher may experience when using that approach. Clinical and conceptual supervision are in the structured level, contextual and developmental supervision are in the moderately structured level, and differentiated supervision is in the relatively unstructured level of the SOIL model. Supervision approaches at the structured level have low risk and low reward for the supervisor and the student teacher. There is some risk that the cooperating teacher may be criticized for being rigid and imposing on the student teacher, but again there is also low reward due to the possibility that the student teacher may not develop to his or her fullest potential through self-reflection (Fritz

& Miller, 2003b). The relatively unstructured level has a high risk and a possibility for high reward. Cooperating teachers operating at this level are those using differentiated supervision. There is a high risk that the supervisor may be criticized for allowing the student teacher to choose a supervision approach. There is also great potential for reward. The student teacher may fully realize her or his potential for growth as a result of experiencing the most appropriate model of supervision (Fritz & Miller, 2003b).

A number of organizational and personal factors have been related to the supervisor's use of supervision models (Edmeirer & Nicklaus, 1999). Factors mentioned by Edmeirer and Nicklaus are experience in teaching, life stage (age), and knowledge of the subject matter. According to these authors, supervisors' experience can influence whether the supervisors use structured models of supervision. Supervisors with little experience tend to employ structure in their supervision. However, in a related inquiry, Fritz and Miller (2003a) found no association between university supervisor maturity and their use of structure in supervision.

Glickman, Gordon, and Ross-Gordon (1995) opined that supervisory beliefs may dictate the degree of control and structure that the supervisor is willing to offer the supervisee. Justen, McJunkin, and Strickland (1999) also reported that supervisory beliefs can influence supervisor's choice of supervision model. They further characterized supervisory beliefs as a continuum of highly structured to unstructured communication between the supervisor and the supervisee. Those who believe in the structured approaches reflect a communication that is directive, while those who believe in the unstructured approaches give the supervisee considerable latitude in decision making.

Studies on supervision models have focused mainly on practices of school administrators (Fritz & Miller, 2003b; Montgomery, 1999; Pajak, 2002). Some have focused on supervisory practices of university supervisors (Boudreau, 1999; Clark, 2002; Fritz & Miller, 2003a; Ralph, 1994). Fritz and Miller (2003a) reported that

university supervisors were likely to use structured and some moderately structured models of supervision while Boudreau found that they used reflective approaches when supervising student teachers. A few studies (Glickman et al., 1995; Justen et al., 1999) have focused on supervision models used by cooperating teachers. These studies however were not discipline specific. Due to contextual factors presented by each discipline, the way teachers are prepared may differ slightly from discipline to discipline. By extension, the way cooperating teachers supervise student teachers may also differ by discipline. Agricultural Education cooperating teachers supervise student teachers within a context that is characterized by among other things, classroom instruction, FFA advising, and facilitation of Supervised Agricultural Experience (SAE) (Roberts & Dyer, 2004).

Fritz and Miller (2003a) found that "out of 803 articles published in the *Journal of Agricultural Education* between 1976 and 2001, only three were specifically on supervision" (p. 34). Studies by Edwards and Briers (2001) and Garton and Cano (1996) were the latest in Agricultural Education that addressed cooperating teachers' supervision of student teachers. The two studies however, did not address cooperating teachers' supervision approaches. Lack of information concerning supervisory models employed by cooperating teachers and factors related to their use of such models represents a gap in the knowledge base.

Purpose and Objectives

The purpose of this study was to determine which supervisory models were used by agricultural education cooperating teachers when supervising student teachers and whether the model used was related to the cooperating teachers' maturity characteristics. Maturity characteristics included the number of student teachers a cooperating teacher had supervised (supervision experience), years of teaching experience, age, and possession of college credit for a supervision class (formal training). Objectives of the study were to:

1. Describe the demographic characteristics of agricultural education cooperating teachers who supervised student teachers during the 2003/2004 academic year.
2. Determine the extent to which cooperating teachers used clinical, contextual, conceptual, differentiated, and developmental supervision models when supervising student teachers.
3. Determine the relationship between selected cooperating teachers' maturity characteristics (supervision experience, teaching experience, age, and formal training) and the amount of structure the teachers used in their approach to supervision.

Methods and Procedures

This study used descriptive survey research methodology. The target population was agricultural education secondary school cooperating teachers in Region III of the National Association of Agricultural Educators (NAAE). The region includes Wisconsin, Minnesota, North Dakota, South Dakota, Iowa, and Nebraska (National Association of Agricultural Educators [NAAE], 2003). The accessible population was cooperating teachers in the region who had supervised at least one student teacher during the 2003/2004 academic year. The list was obtained from seven universities in the region that have agricultural education programs and had utilized the services of cooperating teachers during the 2003/2004 academic year. The universities were; University of Wisconsin – Platteville, University of Wisconsin – Madison, University of Minnesota, North Dakota State University, South Dakota State University, University of Nebraska, and Iowa State University. Student teaching coordinators at these universities were contacted by electronic mail and asked to supply the list. The coordinators' electronic mail addresses were obtained from the American Association of Agricultural Education (AAAE) Directory of University Faculty in Agricultural Education (Dyer, 2003). All cooperating teachers (N = 119) who were identified as having supervised at least one

student teacher during the 2003/2004 academic year were included in the study.

The questionnaire used in this study had three sections. Sections I and III were adapted from a questionnaire developed by Fritz (2002). Section II was adapted from a questionnaire developed by Thobega and Miller (2003). Section I assessed the extent to which cooperating teachers actually used selected models of supervision. The section was composed of Likert-type items with four response options: never = 1, sometimes = 2, often = 3, and always = 4. Section II measured cooperating teachers' preferred approach from the developmental supervision model. From one of four options, respondents were asked to select the description that best represented the supervision approach they used when supervising student teachers. The descriptions corresponded with collaborative, nondirective, directive informational and directive control supervision. Section III included demographic questions.

A panel of three experts reviewed the questionnaire to ensure face and content validity. Experts included two professors of agricultural education and one graduate student in agricultural education who was formerly a secondary school cooperating agriculture teacher. Panel suggestions were integrated into the questionnaire. A group of 12 of Iowa State University's cooperating agricultural education teachers who were not in the sampling frame, participated in a pilot test to establish reliability of the survey instrument. The participants were also asked to read the items carefully and indicate if any of the items were not suitable for cooperating teachers. Cronbach's alpha was computed to assess the internal consistencies of the summated scales in the questionnaire. The coefficients obtained were .88, .77, and .84 for questionnaire item clusters designed to measure clinical, contextual, and conceptual supervision, respectively. Since differentiated supervision and developmental supervision were measured with one item each, the test-retest reliability procedure was used. Seven cooperating agricultural education teachers, who participated in the pilot-test, also participated in the test-retest. Participants

answered the questionnaire twice at an interval of ten days. Coefficients obtained were .57 for differentiated supervision and .86 for developmental supervision. The Institutional Review Board at Iowa State University approved the questionnaire and the study on March 9, 2004.

Data were collected during September and October 2004. Dillman's (2000) recommendations for data collection by mail in survey research were followed. A questionnaire, a cover letter explaining the purpose of the study, and a self-addressed stamped return envelope were sent to all 119 cooperating teachers. A follow-up mailing sent approximately three weeks after the first 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 mailing. The final response rate was 68%. Eight of the 81 respondents were discounted as frame error because they had not supervised a student teacher during the 2003/2004 academic year. After removing ineligible respondents, the response rate dropped to 66%.

Telephone interviews were carried out on a double-dipped sample (Miller & Smith, 1983) of nine nonrespondents (24% of the 38 nonrespondents) to address the problem of nonresponse bias. The sample was taken so that nonrespondents could be statistically compared to respondents on characteristics of interest to see whether the groups differed significantly (Ary, Jacobs, & Razavieh, 2002). The survey questionnaire was used as the interview schedule. One participant declined to respond because he had not supervised a student teacher during the year in question. This participant was included in the frame error count, and one more participant was randomly selected from the remaining nonrespondents. The double-dipped sample of participants responded to all items in the questionnaire. Their data were used together with the initial respondents' data. This increased the response rate to 74%.

Independent sample t-tests and chi-square analyses were conducted to determine whether respondents and nonrespondents differed significantly on the

supervision approaches they used and on selected supervisor maturity characteristics. No significant differences were found. All data were analyzed using Statistical Package for Social Sciences (SPSS 10.0, 2001) for Windows computer program. Descriptive statistics (frequencies, percentages, correlations, means, and standard deviations) were used to give meaning to the data. Magnitude for all correlations was interpreted using Davis' (1971) descriptors.

Findings

Objective 1: Describe the demographic characteristics of Agricultural Education cooperating teachers who supervised student teachers during the 2003/2004 academic year.

Cooperating teachers who participated in the study were predominantly (78.5%) male. The average age of the cooperating teachers was 40.9 years with a standard deviation of 8.9 years. The teachers' ages ranged from 26 to 57 years. Teaching experience for the cooperating teachers averaged 17.9 years with a standard deviation of 8.6 years. Years of teaching experience ranged from 3 to 36. Cooperating teachers' student teacher supervision experience ranged from 1 to 32 student teachers. The average number of student teachers supervised per cooperating teacher was 7.0 with a standard deviation of 6.0 students. During the 2003/2004 academic year, 85.4% of the cooperating teachers had supervised one student teacher, 12.2% of the teachers had supervised two student teachers, 1.2% of the teachers had supervised three student teachers, and 1.2% had supervised four student teachers.

Objective 2: Determine the extent to which cooperating teachers used clinical, contextual, conceptual, differentiated, and developmental supervision models when supervising student teachers.

Table 1 shows that cooperating teachers often engaged in supervisory tasks that characterize three of the supervision models: contextual, clinical, and conceptual supervision. Differentiated supervision was the least used model.

Table 1
Means and Standard Deviations Describing the Extent to Which Cooperating Teachers Used Supervision Models

Supervision Models	<i>N</i>	<i>M</i>	<i>SD</i>
Contextual Supervision	82	3.21	1.09
Clinical Supervision	82	3.20	0.51
Conceptual Supervision	82	3.18	0.47
Differentiated Supervision	82	2.39	0.90

Note. Scale: 1 = never, 2 = sometimes, 3 = often, 4 = always.

To measure the extent to which the cooperating teachers used each of the four developmental supervision approaches (Glickman, 1990), cooperating teachers were asked to select the description that best represented the style they used when supervising student teachers from one of four supervision styles in the questionnaire. The descriptions corresponded with collaborative supervision, nondirective

supervision, directive informational supervision, and directive control supervision. Table 2 shows that the cooperating teachers most frequently (34.6%) used nondirective supervision. Directive informational supervision was the second most commonly (33.3%) used approach; it was followed by collaborative supervision (28.4%) and directive supervision (3.7%).

Table 2
Teachers' Perceptions of Their Preferred Developmental Supervision Styles

Developmental Supervision Styles	<i>f</i>	%
Nondirective supervision	28	34.6
Directive informational supervision	27	33.3
Collaborative supervision	23	28.4
Directive supervision	3	3.7
Total	81 ^a	100.0

^a*n* = 81, one participant did not respond to this item.

Objective 3: Determine the relationship between selected cooperating teachers' maturity characteristics (supervision experience, teaching experience, age, and formal training) and the amount of structure the teachers used in their approach to supervision.

To represent the level of structure in the

cooperating teachers' supervision, one supervision model was chosen to represent each level of the supervisory options for instructional leaders (SOIL) model (Fritz & Miller, 2003b). Clinical supervision was chosen to represent the structured level, contextual supervision was chosen to represent the moderately structured level,

and differentiated supervision was chosen to represent the relatively unstructured level. Table 3 shows that more than one-half of the cooperating teachers (53.5%, $n = 38$) most frequently used a structured approach to

supervision. About one third (29.6%, $n = 21$) of the teachers used a moderately structured approach. The relatively unstructured approach was the least frequently used (16.9%, $n = 12$).

Table 3
Teachers' Use of Structure in Supervision

Level of structure	<i>f</i>	%
Structured	38	53.5
Moderately structured	21	29.6
Relatively unstructured	12	16.9
Total	71	100.0

Note. Structured level = clinical supervision; moderately structured level = contextual supervision; relatively unstructured level = differentiated supervision.

Selected supervisor maturity indicators were correlated with the level of structure underlying each supervisory approach. Level of structure was an ordinal variable with 3 levels. The least structured approach was given the lowest score, while the most structured approach was given the highest score. Maturity indicators included number of student teachers supervised (supervision experience), years of teaching experience, possession of college credit for a supervision class (formal training), and age of the supervisor. Supervision experience, teaching experience, and age were all ratio scales while formal training was a nominal dichotomous scale. Spearman rank-correlations were used to describe the relationship between the three ratio scaled

variables and level of structure, while Rank-biserial correlation coefficient (r_{rb}) was used to describe the relationship between formal training and level of structure (Glass & Stanley, 1970).

Table 4 shows supervisory experience as having a low negative correlation with the level of structure. The data indicated that as cooperating teachers gained more supervisory experience, they tended to reduce structure in their supervision. Formal training had a low positive correlation with level of structure. Cooperating teachers who had some formal training tended to use structure in their supervision. Correlations for teaching experience and age of supervisor were negligible (Table 4).

Table 4
Relationships Between Cooperating Teachers' Level^a of Structure in Their Supervision and Indicators of Professional and Chronological Maturity

Maturity Indicators	Association	Magnitude ^b
Supervisory experience	-.17 ^c	low
Formal training ^d	.19 ^e	low
Teaching experience	.06 ^c	negligible
Age	.09 ^c	negligible

^aRelatively unstructured (differentiated) = 1; moderately structured (contextual) = 2; structured (clinical) = 3. ^bAs described by Davis (1971). ^cSpearman correlations.

^dYes = 1; no = 2. ^eRank-biserial correlation coefficient (r_{rb}).

Conclusions, Implications and Recommendations

The cooperating teachers who participated in this study often used contextual supervision, clinical supervision, and conceptual supervision when supervising student teachers. They sometimes used differentiated supervision. Regarding the use of levels of the SOIL model, findings of this study differed from Fritz and Miller's (2003a) results when they examined university teacher educators. They found that "teacher educators in agricultural education most frequently used the supervisory models from the moderately structured level" (p. 40) of the SOIL model. In this study, cooperating teachers most frequently used supervisory approaches from the structured level of the SOIL model. Perhaps this can be explained by Boudreau's (1999) finding that teachers view teaching as a situational decision-making process which becomes schemed and routine-like overtime. According to Boudreau, it is plausible to assert that cooperating teachers would tend to extend the routine to their supervision practices; hence the tendency exists to use structure in their supervision. At least two questions remain about cooperating teachers' use of supervision models. First, is there a best model for attaining change in student teachers' instructional behaviors? Second, should the selection and/or application of any model be based on specific contextual factors?

The cooperating teachers involved in the study were asked to report their preferred approach of developmental supervision. The nondirective style was most commonly used, followed by the directive informational approach. The directive approach of developmental supervision was the least preferred. Justen et al. (1999) obtained similar findings in their study on supervisory beliefs of cooperating teachers. They found that cooperating teachers preferred the nondirective approach of supervision over the collaborative and directive approaches of supervision. Developmental supervision approaches are about power relations between student teachers and cooperating teachers regarding planning and decisions made during supervisory interactions. The nondirective approach gives all the planning and decision-making power to the student teacher, while the directive approach gives all the supervisory planning and decision-making power to the cooperating teacher. From the findings of this study, it could be concluded that cooperating teachers had a range of preferences regarding the balance of supervisory planning and decision-making power between the teacher and the student teacher. While most of the teachers preferred to give all the power to the student teacher, there were still a few who preferred to plan and make the supervisory decisions themselves. Future research should determine how cooperating teachers decide which approaches to use. Do they engage in

situational analysis and decision-making or do their approaches depend upon personal preferences.

Cooperating teachers' maturity characteristics had low or negligible relationships with the amount of structure in their most frequently used supervision approach. A related study (Fritz & Miller, 2003a) tested the hypothesis that there would be a high correlation between selected indicators of university supervisors' maturity characteristics and the most frequently used level of the SOIL model. Fritz and Miller's hypothesis was not supported. We conclude that supervisor maturity is not an important factor in determining whether a supervisor uses structured or unstructured approaches to supervision. As Fritz and Miller (2003a) noted, selection of the supervision approach may be most influenced by other variables.

The supervision models discussed in this study were self-reported by cooperating teachers. Participants might have reported what they believed in rather than what they actually do when supervising student teachers. Observational studies focused on cooperating teacher behaviors during student teacher supervision are recommended. Future studies should also examine the relationship between cooperating teachers' use of supervision models and contextual factors like teaching load and administrative responsibilities. Other studies should focus on student teacher characteristics and how such characteristics relate to cooperating teachers' choices of supervision models. More research is needed to investigate student teachers' perceptions and preferences of supervision models they experience.

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