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**An analysis of pre-service teacher preparation and instructional supervisory practices  
in Agricultural Education**

by

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**DOCTOR OF PHILOSOPHY**

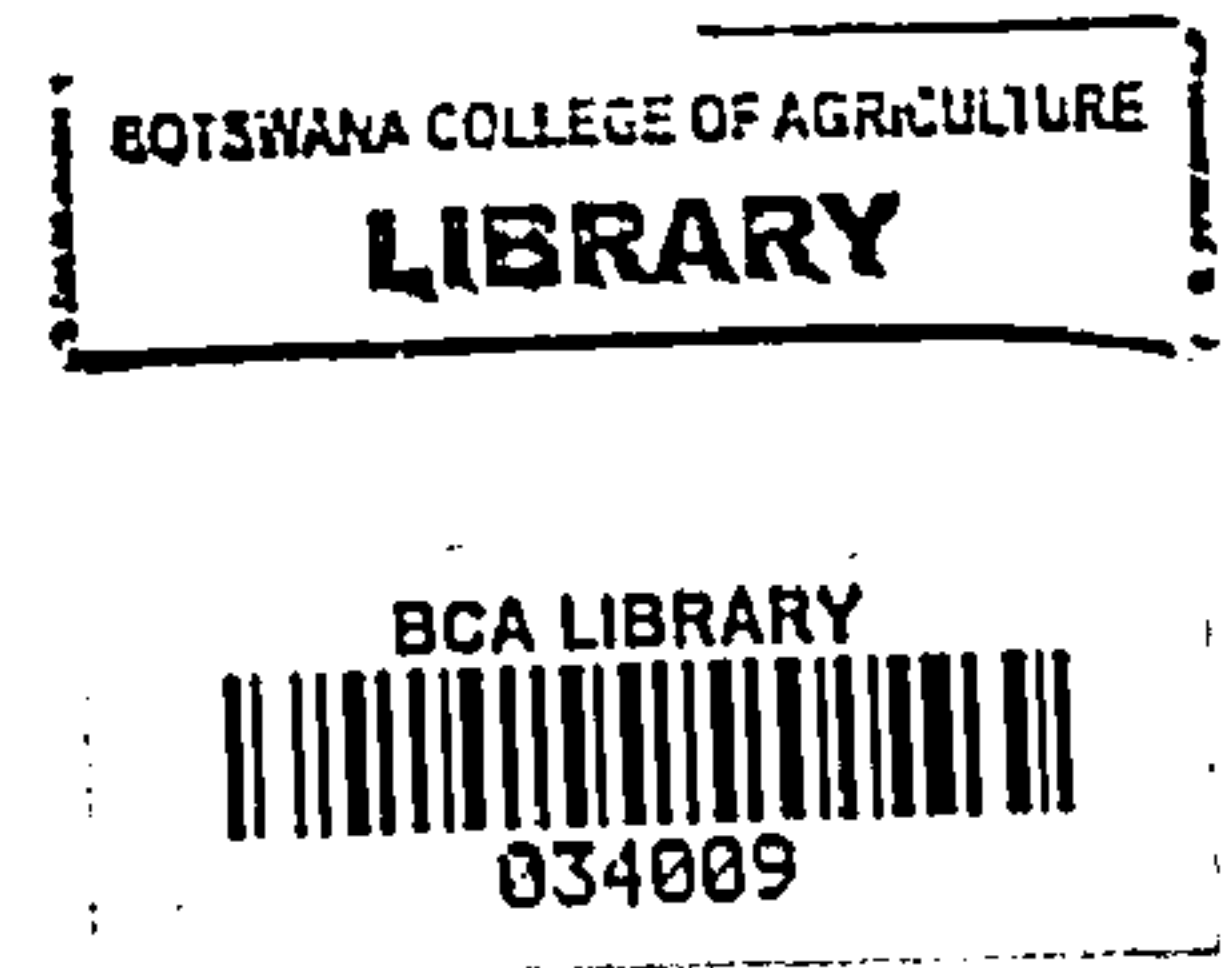
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In loving memory of my father, Mosupi Thobega and my sister, Florah Thobega.

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## CHAPTER I. GENERAL INTRODUCTION

### Background and Setting

There are two teacher preparation pathways used in many States around the USA. One is the certification pathway; the other is an alternative certification pathway. The certification pathway is common nationally. About 80% of new teachers today have gone through some kind certification program (United States Department of Education (USDE), 2005). The certification pathway is preferred because it is based on approved university programs (Darling-Hammond, et al. 2002) and research-based standards (Berry, 2005). To be certified, pre-service teachers are taken through a professional development process (Darling-Hammond, 2006; Liston, Whitcomb, & Borko, 2006). They first have to enroll in pre-service teaching programs in universities to acquire knowledge about teaching, and then their teaching skills are developed through student teaching programs. Thereafter, their teaching skills are continuously sharpened through years of classroom experience (Fritz, 2002; Liston, et al.).

The teacher certification pathway is typically characterized by three basic pillars of teacher preparation. These include subject matter preparation, pedagogy preparation, and field experiences (Berry, 2005; Darling-Hammond, et al. 2002; Fritz, 2002; Liston, et al.; Wilson, Floden, & Ferrini-Mundy, 2001).

Researchers continue to make inquiries about the three pillars of teacher preparation (USDE, 2005). In Agricultural Education, one such inquiry was by Knobloch and Whittington (2002); it involved establishing how novice teachers' perceptions of efficacy relate to the quality of their teacher preparation programs and their student teaching experiences. Quality teacher preparation refers to the extent to which the college curriculum



imparted relevant and useful subject matter and pedagogical knowledge on the novice teachers (Mclean & Camp, 2000). Quality of teacher preparation is also dependent on the quality of student teaching experiences of the pre-service teachers. A quality student teaching experience partly depends on the quality of supervision that the student teachers receive from their supervisors (Mclean & Camp). Quality supervision is characterized by guidance, support, advice, communication and feedback aimed at enhancing student teachers' professional growth (Borne & Moss, 1990; Edwards & Briers, 2001).

Some agricultural education literature has described the agriculture teacher preparation process in universities around the country (Barrick, 1993; McGhee & Cheek, 1990; Mclean & Camp, 2000). However, not much has been documented about how the quality of agriculture teacher preparation is evaluated and standards maintained in relation to depth and relevance of subject matter, pedagogical knowledge, and supervision during student teaching. Current measures of teacher's subject matter and pedagogical knowledge are based on beginning teachers' performance on external examinations, or, as it is the case in some states, on the pre-service teachers' college academic measures (USDE, 2000). It is not known whether there is a relationship between pre-service agriculture teachers' performance on external examinations and their performance on college academic measures.

Studies that address agricultural education student teaching were focused on student teacher and cooperating teacher relationships, relationships between cooperating teachers' and student teachers' styles of teaching, and student teachers' needs, satisfaction, and concerns about student teaching (Fritz & Miller, 2003; Garton and Cano, 1996; Garton & Chung, 1996; Borne & Moss, 1990). There is limited literature on how Agricultural Education student teachers were supervised during student teaching. One study (Fritz &

Miller, 2003) explored supervision practices of university supervisors. However, there is also a need to explore supervisory behaviors of cooperating teachers, and a need to determine student teachers' perceptions and preferences of the type of supervision they experience from their supervisors.

### **Purpose and Objectives**

This study purports to analyze preparation of pre-service agricultural education teachers with specific focus on measures of adequacy of academic preparation and the dynamics of supervision during the pre-service teachers' field experiences. Specific objectives of the dissertation were to:

1. Examine the relationship between the performance of pre-service agriculture teachers on initial licensing examinations and their performance on college academic measures.
2. Explore supervisory behaviors of cooperating agricultural education teachers when supervising student teachers.
3. Determine agricultural education student teachers' perceptions and preferences of the type of supervision they experienced from their student teaching supervisors.

### **Dissertation Organization**

This dissertation is divided into six chapters. Chapter one is a general introduction to the dissertation. Chapter two is a review of literature on teacher development and preparation. The third chapter is a research article that describes the relationship between pre-service teachers' performance on PRAXIS II (initial teacher licensing examination) and their performance on college academic measures. Chapter four describes agricultural education cooperating teachers' supervision behaviors as they supervise agricultural education student

teachers. Chapter five describes agricultural education student teachers' perceptions and preferences of the type of supervision they experienced from their student teaching supervisors. General conclusions of the dissertation are presented in chapter six.

#### Definition of terms

To enhance clarity, terms and concepts are listed below with their contextual definitions. The definitions are operational for this study only.

**Agriculture education teacher:** A secondary school teacher who teaches agriculture.

**Cooperating teacher:** A school teacher who is responsible for supervising a student teacher.

**Supervision:** An administrative activity in schools where cooperating teachers and university supervisors work with student teachers by guiding, advising, and supporting them during student teaching, all done with the aim of preparing the student teachers for practical classroom teaching (Glickman, 1990).

**University supervisor:** Any professional; a university professor or member of the university staff who supervises student teachers during student teaching to help them to improve their classroom teaching skills.

**Supervisee:** A student teacher who is being supervised.

**Supervision models:** The different approaches through which supervisors carry out student teacher supervision. The approaches vary according to the kind of supervisory transactions between the supervisor and the supervisee (Glickman).

**Teacher preparation:** The process of training individuals through an accredited educational program so that when they graduate they are competent in a specific subject area, they have adequate pedagogical knowledge and field experiences, and also, are aware of and appreciate

state, university, and school district educational policies and standards (Wilson, Floden & Ferrini-Mundy, 2001).

**Highly qualified teacher:** A teacher, who holds a bachelor's degree, has full state certification and has demonstrated subject area competence in each subject taught (United States Department of Education, 2005).

**Subject matter knowledge:** Minimum competence in a specific subject area that a pre-service teacher must possess before being considered for initial teaching license; in some states subject matter competence is measured by one's performance on the PRAXIS II content test (United States Department of Education, 2004).

**Pedagogical knowledge:** Minimum amount of foundations of education content that a pre-service teacher must possess before being offered an initial teaching license; in some states pedagogical content knowledge is measured by one's performance on the PRAXIS II principles of learning and teaching test (United States Department of Education, 2004).

**Field experiences:** The kind, timing and length of clinical training (student teaching) that pre-service teachers must undergo so as to qualify as classroom teachers (Wilson, Floden & Ferrini-Mundy, 2001).

**PRAXIS II examination:** An examination that beginning teachers have to pass before they can be offered initial teaching licenses in some states (Educational Testing Services, 2005).

**No Child Left Behind (NCLB):** A United States of America's Federal Act of 2001 that places a major emphasis upon the importance of teacher quality in improving student achievement (United States Department of Education, 2004).

## CHAPTER II. LITERATURE REVIEW

### Introduction

This chapter explores the theoretical framework on which teacher preparation is based. General teacher preparation and development will be explored with particular focus on academic preparation and field experiences. This chapter will discuss academic aspects of teacher development with respect to subject matter knowledge and pedagogical skills. The chapter will also discuss the field experience aspect of teacher development with respect to student teaching and student teacher supervision.

### Teacher development process

There are two pathways through which one can become a teacher; one way is to enter teaching from a university teacher education program. Such candidates enroll in the programs immediately after graduating from high school (Milner, Edelfelt, & Wilbur, 2001). There is another pool of teachers who are considered non-traditional education students. These individuals entered teaching as a second career; they decided to pursue other graduate degrees before training as teachers, or are para-professionals who have worked in schools and later decided to become teachers (Milner et al.).

The United States Department of Education (2005) reported that 80% of the Nation's teachers graduated from university teacher education programs. Wilson et al. (2001) summed up the university teacher preparation process with five issues that concern: 1) the kind and depth of subject matter that prospective teachers need; 2) the kind and depth of pedagogical training; 3) the kind, timing, and length of student teaching; 4) the policies and strategies that are used by states, universities, and school districts to improve and sustain the quality of

prospective teacher education; and 5) the components and characteristics of high quality alternative certification programs.

### *Teachers' academic development*

The kind and depth of subject matter, and the kind and depth of pedagogical training constitute the academic development of teachers. Subject matter preparation varies with the level at which the prospective teacher is destined to teach, for those who want to teach at the elementary school level, the subject matter often cuts across broad areas such as English, Mathematics, Life Sciences, Social Sciences, and Humanities (Morey, Bezuk, & Chiero, 1997; USDE, 2004). The subject matter narrows; becomes more specific and deeper for middle and high school pre-service teachers (USDE, 2004). Teachers' knowledge of subject matter is important. It was established that there is "a positive connection between teachers' preparation in their subject matter and their performance and impact in the classroom" (Wilson et al. 2001, p. i). Thus, with appropriate depth and kind of subject matter, teachers will demonstrate competence in teaching their specific subjects (USDE, 2005).

There is no one right kind of pedagogical preparation; it is a complicated concept that means many different things across institutions and grade levels (Wilson et al. 2001).

However, the basic content of pedagogy includes several learning areas such as linking theory and practice, the learning process, classroom management and discipline, the use of instructional technology, multicultural education, school law and finance, methods of teaching various subject areas, selection of instructional materials, classroom teaching techniques, and educational psychology (Morey et al. 1997; Wilson et al.). Unlike subject matter knowledge, the connection between the pedagogical knowledge of a teacher and

student learning is not yet established (Wilson et al.); however research findings “suggest some benefit of pedagogical preparation” (p. 12).

One of the teacher preparation questions that Wilson et al (2001) asked is centered on the policies and strategies that are used by states, universities, and school districts to improve and sustain the quality of prospective teacher education. Improvement and sustenance of high quality prospective teacher education has direct bearing on teacher quality. The No Child Left Behind (NCLB) legislation has also placed major emphasis upon the importance of teacher quality in improving student achievement. In response to the NCLB legislation, the Elementary and Secondary School Act (ESSA) required that all teachers of core academic subjects be highly qualified by the end of 2005-2006 school year (USDE, 2004). Under the legislation, a highly qualified teacher is defined as “one who holds a bachelor’s degree, has full state certification, and has demonstrated subject area competence in each subject taught” (USDE, 2005, p.6). To meet the NCLB legislation requirement, reliable measures of academic quality of teachers are necessary. Education systems around the country rely on beginning teacher’s college transcripts; self-reports about relevance of subject matter that the teacher possess; the number of courses taken, and external teacher examination scores for such measures (Wilson et al.).

Even though NCLB has clearly stipulated professional characteristics of a highly qualified teacher, it does not regulate teacher quality evaluation systems around the country. Specific measures of quality teaching are left to the discretion of individual states (U.S. Department of Education, 2005). Most states use pre-service teachers’ performance on external examinations as a measure of quality. The states rely on assessments by private testing companies like the National Evaluation Systems (NES) and The Educational Testing

Services (ETS) (U.S.D.E). However, a few other states still use college academic measures as indicators of the quality of a teacher (USDE, 2000).

### *Teachers' field experience*

Another component of teacher preparation is student teaching (Darling-Hammond, 2006). It is a cooperative venture between universities, communities, and schools. It engages the student teacher within a matrix of stakeholders comprising of the university, university supervisors, the cooperating school, cooperating teacher, and the school district (Wineburg, 2006). It is a defining phase in the teachers' professional training; the basic purpose of student teaching is to provide a situation in which student teachers learn and practice varied techniques of teaching while working with "real students" (Wentz, 2001). It helps student teachers make a transition from being a university student to becoming teachers (Wiseman, Cooner & Knight, 1999).

While it mostly presents benefits, student teaching could at the same time spell some shift in the student teacher's rhythm of life. The student teacher may be confronted by a new community; a new collegial environment, new friendships, and having to work with a new supervisor in a new place (Machado & Meyer-Botnarescue, 1997). This shift may bring feelings of trepidation because of the perceived risks and unknowns involved. It is thus important that student teachers be nurtured into teaching.

It is the responsibility of schools and universities to program a smooth student teaching experience for the student teachers (Wentz, 2001). One way to do that is to provide supervision that will make the student teachers grow professionally. Cooperating teachers (school supervisors) and university supervisors are thus important stakeholders in this regard. They can make the most impact on professional growth of the student teacher (Bennie, 1972;



Kent, 2001; Borne & Moss, 1990). Their function is student teacher supervision. Supervision entails among other things, helping, guiding, advising, facilitating, mentoring, supporting, encouraging, and modeling the art of teaching while offering student teachers opportunities for professional self-development (Boudreau, 1999; Penny, 2002; Zepeda, 2002).

Student teacher supervision is a key aspect of field experiences (Darling-Hammond, 1990). A liberal view of student teacher supervision casts student teachers as active participants in constructing knowledge that is applicable to classroom practice. Student teachers become engaged in a collaborative process (Zepeda, 2002). Instructional supervision should be supportive, guiding, and facilitate collaboration, dialogue and reflection (Zepeda, 2002). Supervision offers a chance for student teachers to experience individualized instruction. Supervisors have a chance to demonstrate one-on-one instruction (Henry & Beasley, 1982). Depending of how it is carried out, supervision can be beneficial to both the supervisor and the supervisee.

### *Supervision Models*

Studies on supervision revealed that supervisors can model their supervision around a variety of supervision models when supervising student teachers (Justen III, McJunkin & Strickland, 1999). Different supervision models include clinical supervision (Goldhammer, 1969; Cogan, 1973), contextual supervision (Ralph, 1998), differentiated supervision (Glathorn, 1984), conceptual supervision (Beach & Reinhartz, 1989), and developmental supervision (Glickman, 1990). Overall, the supervision models are blueprints of the dynamics of the supervisory transactions between the supervisor and the student teachers. The transactions vary according to the supervision model being employed. The variations

between the models emanate from the fact that each model has different supervisor/supervisee expectations, relationships, and anticipated outcomes (Stoller, 1996).

*Supervisors' conception of student teacher supervision*

During student teaching, cooperating teachers and university supervisors are important stakeholders who can see to it that student teacher supervision contributes to the professional growth of the student teacher (Boudreau, 1999). University supervisors and cooperating teachers do not differ in their conception of student teacher supervision (Justen III, McJunkin & Strickland, 1999), but their professional roles are different. Cooperating teachers are usually high school teachers. University supervisors are usually professors. Cooperating teachers spend the entire student teaching period with the student teacher while university supervisors only see the student teacher during their student teacher visits (Wilson & Saleh, 2000). Given the differences in professional roles and the length of time they spend with student teachers, it is plausible to expect them to approach student teacher supervision differently. Justen III et al. (1999) found university supervisors to believe in non-directive supervision. Fritz and Miller (2003) reported that university supervisors in Agricultural Education most frequently used structured approaches when carrying out student teacher supervision.

Various researchers have studied cooperating teachers' beliefs about supervision (Glickman, Gordon, and Ross-Gordon, 1995; Justen III et al. 1999). The authors asserted that cooperating teachers beliefs can influence their approach to supervision. Another study by Wilson and Saleh (2000) noted that cooperating teachers prefer their student teachers to write journals, conduct interviews with them, and hold conferences with them, which, according Wilson and Saleh, could be classified into what they called reflective supervision. Boudreau

(1999) concluded that cooperating teachers seem to prefer a trial and error approach to supervision as opposed to a reflective approach. It is not clear whether cooperating teachers use any specific supervision model when they supervise student teachers.

### *Student teachers' perceptions of supervision*

Student teachers, as well as first year teachers regard student teaching as a very positive experience for them (Borne & Moss, 1990). Student teaching is an important part of teacher preparation and it is associated with student teachers' perceptions of teacher efficacy (Knobloch & Whittington, 2002). Even though most teacher education programs engage their student teachers in the student teaching exercise, beginning teachers continue to be concerned with issues of classroom management, classroom interaction, student discipline, time management, teaching techniques, teaching methods, and use of resources (Stoller, 1996; Fritz & Miller, 2003). Therefore student teachers and supervisors have similar supervision concerns.

### *Teacher preparation in Agricultural Education*

There are numerous universities around the country that offer agricultural teacher education programs (Barrick, 1993). The programs do not differ much in structure and mandate within the larger field of education. Like other teacher preparation programs, agricultural teacher education conforms to the subject matter preparation, pedagogical preparation, field experience, and improvement and sustenance of quality in the profession (Wilson et. al. 2001). Also, as a member of the larger education field, agricultural education is also subject to pressures that call for reforms in teacher preparation (McLean & Camp). Slight differences in the agricultural education field emanate from the fact that, agriculture

teacher preparation may also train prospective teachers to be FFA advisors and managers of Supervised Agricultural Experience (SAE) programs (Mclean & Camp, 2000).

Agriculture curricula differ significantly among different agricultural education institutions (Barrick, 1993; Mclean & Camp, 2000). Mclean and Camp studied agricultural education programs in ten universities, the universities commonly offered, among other courses, methods of teaching agriculture, program planning in agricultural education, student teaching, orientation seminars, foundations and philosophies of agricultural education, field experiences, supervised agricultural experience, agricultural mechanics, computers in agricultural education, and classroom management. Prospective teachers could learn technical agriculture subject matter (McGhee & Cheek, 1990) from agriculture fields like animal science, horticulture, crop science, and agricultural economics. Given that agricultural teacher education programs are varied across institutions, questions of standards and quality do arise. As Mclean and Camp put it; "with the advent of national teacher licensure standards, research is needed to determine the degree to which agricultural teacher education program curricula address national trends" (p. 33).

Regarding field experiences, several agricultural education studies discussed student teachers' needs, concerns, school and community relationships, problem solving capabilities, and satisfaction with student teaching, (Edward & Briers, 2001; Fritz & Miller, 2003; Garton & Cano, 1996; Garton & Chung, 1996; Borne & Moss, 1990). Since student teacher supervision has been cited as a key aspect of field experiences (Darling-Hammond, 1990), it is necessary to keep improving it. There were a few studies that discussed agricultural education student teacher supervision as a way of enhancing teacher preparation and quality; Fritz and Miller (2003) studied supervisory practices of university supervisors as they

supervised agricultural education student teachers. Garton and Cano (1996) related student teachers' teaching strategies to that of their cooperating teachers. Student teacher supervision by cooperating teachers and student teachers' perceptions and preferences of the supervision they experience are also important in making field experiences enriching for prospective teachers.

### Conclusion

In the light of the current education reforms that call for highly qualified teachers in schools (USDE, 2005); there is need for a holistic approach to teacher preparation and development. Teachers could become highly qualified by completing teacher education programs that have strong and relevant subject matter content, pedagogical content, as well as relevant and nurturing field experiences.

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### **CHAPTER III: PREDICTING SCORES OF BEGINNING AGRICULTURAL EDUCATION TEACHERS ON THE PRAXIS II EXAMINATION**

A paper prepared for submission to the *Journal of Agricultural Education*

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#### **Abstract**

This descriptive-correlational study predicted performance of beginning Agricultural Education teachers on Principles of Learning and Teaching (PLT) and Agriculture Content (AgC) tests of the PRAXIS II examination using demographic and academic variables. Performance on the PRAXIS II was used for issuing initial teaching licenses for the Agricultural Education teachers. The study utilized existing records from the Department of Agricultural Education at Iowa State University. Professional education GPA explained significant variability in PLT scores. Males scored higher than females on the AgC test. Agriculture GPA did not explain significant variability in AgC scores. Additional research should be conducted to determine whether similar results would be obtained with other licensure areas. Further research should explore the relationship between gender and performance on the AgC test of the PRAXIS II examination.

#### **Introduction-Theoretical Framework**

Improving public education has gained much political attention since publication of the 1983 educational reform report "A Nation at Risk." One of the recommendations of the report was that teacher education programs should prepare prospective teachers that demonstrated an aptitude for teaching and competence in an academic discipline (National Commission on Excellence in Education, 1983; Nyirenda, 1994). Recently, the No Child Left Behind (NCLB) legislation has re-emphasized the importance of a quality teaching force

(U.S. Department of Education, 2002). NCLB requires that students achieve high standards and that schools be accountable (Brownell, Sindelar, Bishop, Langley & Seo, 2002; Halloway, 2002). It also requires that teachers be highly qualified by 2005-2006 (Brownell et al.; Haycock, 2003; U.S Department of Education). Teacher quality is thus regarded as an important factor in enhancing public education (Arhar, 2003).

There are several professional attributes that define teacher quality. One is teachers' educational credentials (Kaplan & Owings, 2003; Rotherham & Mead, 2003). Teacher credentials refer to the teachers' subject matter knowledge, pedagogical skills, and understanding of cultural and psychological factors that affect student learning (Halloway, 2002). Educational credentials depend on the type of professional preparation that teachers undergo. Teacher preparation however, is an elusive phenomenon (Wilson, Floden & Ferrini-Mundy, 2001). Modes and models of teacher preparation vary from institution to institution, and it means "many different things across the United States" (Wilson et al., p. 5).

Teacher preparation models are borne of somewhat different philosophic viewpoints in regards to the kind and depth of subject matter knowledge that teachers should have; the kind and extent of pedagogical training that teachers should undergo; the kind, timing and length of prospective teachers' field experiences; the states', universities' and district level educational policies and strategies that pre-service teacher education programs should conform to; and modes of prevailing teacher certification programs (Wilson et al. 2001). Grossman (1992) found that while researchers of teacher education "see the process of learning to teach through the lens of subject matter" (p. 171), others view it from an explicitly moral and ethical stance. Grossman's assertion underscores Wilson et al.'s findings

that all teacher preparation models are centered on subject matter and pedagogical knowledge.

Subject matter and pedagogical knowledge are thus important factors in determining teacher quality (Halloway, 2002; Kaplan & Owings, 2003; Rotherham & Mead, 2003); however, questions that address the minimum level of subject matter knowledge and pedagogical knowledge have to be answered. For example, how much and what types of pedagogical training, knowledge, and skills must teachers attain in order to teach students effectively (Rotherman & Mead)? Does obtaining a Master's or Ph.D. degree translate into one being an effective teacher (Lakdawalla, 2002)? Does studying a subject as a major as opposed to a minor help teachers to be effective (Rotherman & Mead)?

In the backdrop of the questions about teacher quality, the NCLB legislation set the minimum attributes of a highly qualified teacher at having a bachelor's degree, having full state certification or a teaching license, and demonstrating competence in each subject they teach (U.S. Department of Education, 2002). A survey by the National Center for Education Statistics (NCES, 2001) revealed that virtually all public school teachers in the nation had a bachelor's degree, and 45% held a Master's degree. While it is evident that teacher preparation is centered on prospective teachers' subject matter knowledge, pedagogical knowledge, and the teacher's participation in the certification process, literature did not reveal whether satisfying the three conditions can practically translate to high performance in teaching. From the NCLB perspective, possession of a teaching license is the most reliable measure of high quality teaching (U.S. Department of Education).

Nationally, 44 states use pre-service teachers' performance on external examinations to offer teaching licenses. The states rely on assessments by two testing companies, namely,

National Evaluation Systems (NES) and The Educational Testing Services (ETS) (U.S. Department of Education, 2005). In 39 of the states, the licensing examinations assess subject matter knowledge, pedagogical knowledge, and actual classroom competence. A few examples of such states are Georgia, Arizona, Indiana, and Hawaii (U.S. Department of Education, 2000). Most of the states use ETS's PRAXIS test series as the licensing examinations (Flippo, 2002). The PRAXIS series includes three tests. PRAXIS I (Academic Skill Assessments) is a qualifying test for individuals entering teacher education programs. PRAXIS II (Subject Assessments) are tests offered prior to issuance of initial teaching license. The examinations assess subject matter and pedagogical knowledge of pre-service teachers. PRAXIS III (Classroom Performance Assessments) is an observation-based evaluation of beginning teachers' classroom performance (ETS 2005b).

Even though NCLB legislation encourages teacher licensing, it does not regulate the teacher licensing examinations. What to test, when to test, and which examination agency to contract are left to the discretion of individual states, so consistency for teacher licensing may be somewhat questionable (Kaplan & Owings, 2003; U.S. Department of Education, 2005). Perhaps the decision by states to contract ETS was in response to the NCLB's recommendation that on top of holding a bachelor's degree, highly qualified teachers should have a state license and should have demonstrated strong subject area competency (Arhar, 2003). It is, however, not yet established whether high performance on the state licensing examination translates to high performance in the teaching job.

Currently, the state of Iowa does not use Praxis II for initial teacher licensing. To get such a license, the state requires that individuals must have graduated from



approved teacher preparation programs with a baccalaureate degree and have completed coursework equivalent to a major for the endorsements needed for specific teaching assignments. Each teacher candidate must be recommended by the college and complete a background check in order to obtain initial teacher license (Iowa Department of Education, 2005, p. 1).

While in college, candidates must have demonstrated proficiency on rigorous standards and competencies through performance on multiple assessments of content knowledge, professional knowledge, and pedagogy (Iowa Department of Education). Iowa's licensing requirements conform to the subject matter knowledge, pedagogical knowledge, and teaching competence model common nationally, but in the case of Iowa, the model standards are based on the internal college assessments.

The Iowa Board of Educational Examiners administered the PRAXIS II examination as a pilot study in 2002 and 2003 (Iowa Board of Educational Examiners, 2003). According to the Board, the two-year pilot program would determine validity, reliability, cut scores, and the need for the PRAXIS II examination. The pilot-study included tests for pedagogy and one content area for each individual who was applying for an initial teaching license; it was administered to individuals graduating during the 2001/02 and 2002/03 academic years. Fifty graduating seniors majoring in agricultural education at Iowa State University who were seeking initial teaching license between September 2001 and March 2003 participated in the pilot-study. For the agricultural education majors, the examination included an Agriculture Content (AgC) test and the Principles of Learning and Teaching (PLT) test for grades 7 through 12.

The Board decided not to use the PRAXIS II test for initial teacher licensing. It argued that there were multiple benchmarks against which institutions prepared teachers in Iowa thus rendering the PRAXIS II tests unnecessary (Hawkins, 2006). Also, the Board did not report whether PRAXIS II tests were found to be valid and reliable for use as determinants for initial teacher licensing. That notwithstanding, researchers continue to have doubts about reliability and validity of teacher licensure tests. Berk (1999) asserted that among other concerns, teacher licensure tests need special attention in regards to their reliability and validity evidence related to construction of response items, and in their reliability and validity evidence related to cut-score decisions. In support of Berks assertion, Wise and Leibbrand (2001) argued that teacher licensing is one of the facets of teacher preparation which does not have set standards. According to Wise and Leibbrand, different teacher quality assurance systems work independently, for example, the National Council for Accreditation of Teacher Education (NCATE) does not have strong links with the Interstate New Teacher Assessment and Support Consortium (INTASC), National Evaluation Systems (NES), and Educational Testing Services (ETS) (Wise & Leibbrand). This situation leads to licensure examination not being reliable across different licensure systems and states.

Iowa educators regard the state's program for prospective teachers as more comprehensive and balanced than the PRAXIS II examination (Rossi, 2006), but U. S. Department of Education continues to demand that beginning teachers need to pass a standardized content area test before being issued teaching licenses (Hawkins, 2006). As a result of that requirement, beginning 2007, new elementary school teachers in Iowa will be required to take PRAXIS II content area examination before being issued initial teaching license (Rossi). However, the state would continue to use college academic measures to issue

initial teaching license to secondary school teachers (Hawkins); it is plausible though to expect that in the future, the Iowa Board of Educational Examiners may consider extending the PRAXIS II examination requirement to the secondary school teachers. If that happens, knowledge of the association between the college academic measures and the PRAXIS II pilot-test scores may be useful to the Board for making the decision. A need therefore exists to examine the correlation between performance on the PRAXIS II pilot examination and existing college academic measures. If academic measures like number of credits earned and grade point average (GPA) in specific college courses would predict beginning teachers' content and pedagogical knowledge, then the PRAXIS II examination could be a redundant measure of currently available information. Answers to these questions may be of value to the Iowa Board of Educational Examiners if they ever entertain the idea of requiring the PRAXIS II for initial teacher licensing beyond elementary school teachers.

#### **Purpose and Objectives**

The purpose of this study was to predict the performance of pre-service agriculture teachers on PRAXIS II tests using selected demographic and academic variables. Specific objectives were:

1. To describe the 2001/02 and 2002/03 pre-service agriculture teachers in terms of age, gender, ACT score, type of matriculation (transfer status), transfer credits, college major, college minor, professional education GPA, agriculture content GPA, teaching status, and PRAXIS II examination scores.
2. To predict performance on the Principles of Learning and Teaching (PLT) (PRAXIS II) test using professional education GPA, age, gender, ACT score, type of

matriculation (transfer status), transfer credits, college major, college minor, and agriculture GPA.

3. To predict performance on the Agriculture Content (AgC) (PRAXIS II) test using agriculture GPA, age, gender, ACT score, type of matriculation (transfer status), transfer credits, college major, college minor, and professional education GPA.

### Methods

The population for this descriptive-correlational study consisted of 50 seniors majoring in agricultural education at Iowa State University. The 50 subjects graduated during the 2001/02 and 2002/03 academic years and were required by the Iowa Board of Educational Examiners to take the PRAXIS II tests to qualify for initial teacher licensing.

The PRAXIS II test scores for each candidate were obtained from ETS. For each candidate, there was a single overall score for AgC and PLT. Scores for individual test categories were not available. The AgC test categories included social and historical perspectives of agriculture; plant and soil science; animal science; agricultural mechanization and technology; agricultural business and economics; natural resources and environment; and program planning and management (ETS, 2005a). The PLT test categories included students as learners, instruction and assessment, teacher professionalism, and communication techniques (Educational Testing Services, 2002).

ETS did not specifically report validity and reliability for AgC and PLT tests in question, however, in their report titled *Validity for Licensing Tests: A Brief Orientation*, ETS (2004) presented validity evidence for PRAXIS series as having been accomplished through "a systematic analysis of job requirements (knowledge and/or skill level)" (p.3). According to ETS, the analysis involves gaining input of representative samples of educators

and reviewing national disciplinary standards. Test development committees of educators then worked with ETS subject experts to conduct reviews for the test content appropriateness and fairness. Each state or licensing agency then sets standards or passing scores by evaluating job-relatedness of the test for the state's entry-level teachers (ETS). Regarding reliability, ETS (2006) reported that their assessments are rigorously tested to check whether they are reliable and as free as possible of errors caused by random variation and external factors.

The demographic and college academic data were obtained from existing departmental records. The data included: number of credit hours for animal science; agronomy; agribusiness; horticulture; agricultural mechanics; and professional education courses. Agriculture content and professional education GPAs were calculated using the course grades and total number of credit hours for each course. Descriptive statistics were used to summarize the data. Step-wise regression analyses were conducted to identify factors that could predict PLT scores and AgC scores of the pre-service teachers.

Before step-wise regression was conducted, intercorrelations were computed among all dependent and independent variables. Independent variables that were significantly correlated with PLT scores and AgC scores were included in the step-wise analyses. The decision to include only variables with significant correlations was based on the theory by Ferguson (1971) which states that having a significant correlation between two variables implies that predicting one from the other is possible, and it is better than a random guess.

Leaving out variables with non-significant correlations also helped reduce the risk of collinearity in the regression model. Cohen, Cohen, West, and Aiken (2003) warned that in situations of small sample size, the risk of collinearity could be reduced by minimizing the

number of independent variables. Berry and Feldman (1985) stated that "one must avoid regression analysis when the number of independent variables is greater or equal to the number of cases in the sample; as such situations necessarily lead to perfect collinearity" (p. 38). In the present study, there were 50 cases. By leaving out independent variables with non-significant correlations, it was ensured that the case to independent variable ratio remained high, thus reducing the risk of collinearity. To further ensure that the regression analysis was at no risk of collinearity, the intercorrelation coefficients were examined to find out whether there were any perfect or near perfect correlations between any pair of independent variables. Any such correlation would pose a problem of collinearity in the regression model (Berry & Feldman).

### Results

Table 1 shows that 46% ( $n = 23$ ) of the pre-service teachers were male. Thirty-six percent ( $n = 18$ ) of the pre-service teachers entered the university straight from high school. Only 12% ( $n = 6$ ) of the pre-service teachers had a second major. Three of them double majored in Animal Science, one in Agronomy, and two in other majors. Twenty-two percent ( $n = 11$ ) of pre-service teachers had a minor. Five of them had a minor in Agronomy, one had a minor in Animal Science, one minored in Agricultural Business, two students minored in horticulture, and the other two took subjects in other colleges. Table 2 shows that the mean age for the pre-service teachers involved in the study was 23.1 years ( $SD = 3.96$ ). The mean ACT score for the pre-service teachers was 22.9 ( $SD = 2.88$ ). The highest ACT score was 30 and the lowest was 19. The mean number of transfer credits was 23.0 ( $SD = 29.18$ ). The number of transfer credits ranged from 0 to 118. The mean GPA for agriculture coursework was 3.00 ( $SD = .50$ ) and the mean GPA for professional education coursework was 3.63 ( $SD$

= .22). The average AgC score for the Praxis II examination was 578.8 ( $SD = 64.70$ ). Scores ranged from 450 to 720. The PLT scores ranged from 134 to 183 with a mean of 168.4 ( $SD = 9.42$ ).

Table 1  
*Frequencies for selected demographic and academic variables*

Variable	<i>f</i>	%
Gender		
Male	23	46.0
Female	27	54.0
Type of matriculation		
Straight from high school	18	36.0
Transfer student	32	64.0
Double major		
Yes	6	12.0
No	44	88.0
Minor		
Yes	11	22.0
No	39	78.0

Table 2  
*Means and standard deviations for selected demographic and academic variables*

Variables	<i>n</i>	Mean	SD	Minimum	Maximum
Age at graduation	50	23.10	3.96	21.00	49.00
ACT score	47	22.90	2.88	19.00	30.00
Transfer credits	50	23.00	29.18	0.00	118.00
Agriculture GPA	50	3.00	0.50	2.17	4.00
Professional ed. GPA	50	3.63	0.22	3.23	4.00
Ag. content score	50	578.80	64.70	450.00	720.00
PLT score	50	168.40	9.42	134.00	183.00

The intercorrelations (Table 3) show that collinearity was not a problem. None of the correlation coefficients were very high or perfect (Davis, 1971). Correlations between PLT scores and the independent variables revealed that PLT scores were significantly correlated with Professional Education GPA (EGPA),  $r = .56$ ; Agriculture GPA (AGPA),  $r = .51$ ; and ACT score,  $r = .29$  (Table 3). Professional education GPA, Agriculture GPA, and ACT score were therefore included in the step-wise regression analysis.

Agriculture content score was significantly correlated with Agriculture GPA,  $r = .30$ ; gender,  $r_{pb} = -.45$ ; ACT score,  $r = .46$ ; and transfer credits (TCr),  $r = -.31$  (Table 3). Agriculture GPA, gender, ACT score, and transfer credits were therefore included in the step-wise regression analysis.



Table 3  
*Intercorrelations among dependent and independent variables*

	AGPA	EGPA	Age	Gen	ACT	TSt	TCr	Maj	Min	AgC	PLT
AGPA	1.00										
EGPA	.69*	1.00									
Age	-.01	-.22	1.00								
Gen	-.05	.16	-.16	1.00							
ACT	.16	.18	.23	-.02	1.00						
TSt	-.07	-.23	-.16	-.02	-.43*	1.00					
TCr	.02	-.12	-.04	.01	-.40*	.59*	1.00				
Maj	-.16	-.18	.48*	.09	.19	-.24	-.26	1.00			
Min	.14	-.04	-.05	-.09	-.13	.00	-.09	-.05	1.00		
AgC	.30*	.18	.10	-.45*	.46*	-.27	-.31*	.03	-.17	1.00	
PLT	.51*	.56*	-.17	.20	.29*	-.27	-.24	.08	.05	.40	1.00

*Note.* AGPA = Agriculture GPA, EGPA = professional education GPA, Age = age at graduation, Gen = gender, ACT = ACT score, TSt = transfer status, TCr = transfer credits Maj = double major, Min = college minor, AgC = Agriculture content score, PLT = principles of learning and teaching score.

Gender, 0 = male, 1 = female; Double major, 0 = no, 1 = yes; Minor, 0 = no, 1 = yes; Transfer status, 0 = freshman, 1 = transfer student.

\*Significant correlation ( $p < .05$ )

A step-wise regression analysis was conducted to identify a subset of independent variables that could be used to predict PLT scores and AgC scores of the pre-service teachers. The step-wise procedure automatically selects independent variables to include in the regression model based on the variable's individual contribution to the variability in the dependent variable (Cohen et al., 2003).

Table 4 shows that EGPA made a significant, unique contribution to the variability in PLT scores. EGPA accounted for 28.7% ( $p = < .001$ ) of the variability in PLT scores. ACT scores and gender made significant, unique contributions to the variability in AgC scores. ACT scores uniquely accounted for 21.4% ( $p = .001$ ) and gender uniquely accounted for 18.9% ( $p = .001$ ) of the variability. The two variables collectively accounted for a significant proportion ( $R^2 = .403, p = .001$ ) of the variability in AgC scores.

Table 4  
*Step-wise regression of PLT and AgC scores on selected independent variables.*

Variables	$R^2$	$R^2$ Change	Significance
<b>PLT Scores</b>			
EGPA	.287	.287	<.001
<b>AgC scores</b>			
ACT score	.214	.214	.001
Gender	.403	.189	.001

### Conclusions/Implications

EGPA explained a significant proportion (28.7%) of variability in PLT scores. Still, 71.3% of the variability was not explained. This outcome raises questions about professional education core requirements at the university. Do the courses in secondary education curriculum cover appropriate professional education content? Is the content effectively taught? If so, is the PLT test an accurate reflection of what teachers should know in professional education?

ACT scores and gender collectively and individually explained significant proportions of the variability in AgC scores. Gender explained 18.9% of the variability in

AgC. The correlation between gender and AgC scores indicated that males scored higher than females on the AgC test. This result was surprising and needs to be studied further. Perhaps this result was due to the different ways males and females were socialized. The differential socialization of males and females perpetuates the stereotype that agriculture and science are male domains (Sutphin & Newson-Stewart, 1995). Males might enroll in agricultural science and work hard at it due to social pressure, while females are encouraged to pursue different occupational opportunities. Additionally, parents may view agriculture and science careers as not suited for females (George, 2000).

Agriculture coursework requirements at the university and the agriculture content tests of the PRAXIS II examination did not provide equal emphasis on the academic domains of Agricultural Science (Iowa State University, 2005; ETS, 2005a). The agriculture coursework content required at least, 6 credits of agronomy, 7 credits of animal science, 12 credits farm business and accounting, while agricultural mechanics and horticulture requirements could be satisfied with 3 credits each (Iowa State University, 2005). The PRAXIS II examination gave each of the agriculture content domains relatively equal emphasis. The test had 15 – 17% from each of the following areas; plant and soil science, animal science, agricultural mechanization and technology, agricultural business and economics, and program planning and management. Also 9-11% of the examination focused on social and historical perspectives of agriculture, and natural resources and environment.

The disparity between Agriculture course work content and the PRAXIS II Agriculture content test might imply that Agricultural Education pre-service teachers at Iowa State University were likely to have learned less horticulture and agricultural mechanization content through their college courses (Iowa State University), yet the PRAXIS II

examination gave horticulture and agricultural mechanization the same weight in the AgC test. Therefore, the discrepancy between males' and females' performance on the AgC test may be related to the fact that the pre-service agriculture coursework curriculum was not well aligned with the PRAXIS II agriculture content test. Males might have acquired knowledge, particularly related to agricultural mechanics and horticulture outside their college curriculum, a phenomenon that might also be attributed to differences in socialization and prior life experiences of males and females.

AGPA did not explain a significant proportion of the variability in AgC scores. This result was not surprising given the disparities in coverage of the PRAXIS II AgC test and the agriculture coursework content. It is likely that the disparity caused the low association between AgC and AGPA. The agriculture content area licensure test must match the agriculture coursework content of the teacher certification curriculum; otherwise, the licensure test may lead to inappropriate discrimination between males and females. If in the future, PRAXIS II tests are required of pre-service teachers, teacher educators in agriculture must provide leadership in selecting or developing an appropriate content area licensure examination.

### **Recommendations**

1. Further research should explore the relationship between gender and performance on the AgC test of the PRAXIS II examination.
2. This study focused only on Agricultural Education majors. The study should be repeated using other licensure areas. This would provide the Iowa Board of Educational Examiners with a more reliable conclusion regarding the necessity for the PRAXIS II examination.

3. Since the PRAXIS II examination assesses content and pedagogical knowledge for beginning teachers, further research should establish whether the teachers transfer this knowledge to effective classroom teaching. Thus, future research should establish the relationship between teachers' performance on PRAXIS II tests and PRAXIS III assessments.

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## CHAPTER VI. SUPERVISORY BEHAVIORS OF COOPERATING AGRICULTURAL EDUCATION TEACHERS

A paper accepted for publication in the *Journal of Agricultural Education*

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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 like 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 thus 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, 1984).

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, 1990).

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 III, 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 (1999) found that they used reflective approaches when supervising student teachers. A few studies (Glickman, Gordon, & Ross-Gordon, 1995; Justen III, McJunkin, & Strickland, 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 had 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 for 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 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 coefficient 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. The double-dipped sample 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 version 10) 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 1 student teacher, 12.2% of the teachers had supervised 2 student teachers, 1.2% of the teachers had supervised 3 student teachers, and 1.2% had supervised 4 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*

<b>Supervision Models</b>	<b><i>N</i></b>	<b><i>M<sup>a</sup></i></b>	<b><i>SD</i></b>
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

<sup>a</sup>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 options 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

<i>Teachers' Perceptions of Their Preferred Developmental Supervision Styles</i>		
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 <sup>a</sup>	100.0

<sup>a</sup>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

*Relationships Between Cooperating Teachers' Level<sup>a</sup> of Structure in their Supervision and Indicators of Professional and Chronological Maturity*

Maturity Indicators	Association	Magnitude <sup>b</sup>
Supervisory experience	-.17 <sup>c</sup>	low
Formal training <sup>d</sup>	.19 <sup>c</sup>	low
Teaching experience	.06 <sup>c</sup>	negligible
Age	.09 <sup>c</sup>	negligible

<sup>a</sup>Relatively unstructured (differentiated) = 1; moderately structured (contextual) = 2; structured (clinical) = 3. <sup>b</sup>As described by Davis (1971). <sup>c</sup>Spearman correlations.

<sup>d</sup>Yes = 1; no = 2. <sup>e</sup>Rank-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) findings examining 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 over time. 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 III, McJunkin, and Strickland (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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## **CHAPTER V: PERCEPTIONS OF SUPERVISION PRACTICES BY AGRICULTURAL EDUCATION STUDENT TEACHERS**

A paper prepared for submission to the *Journal of Agricultural Education*

Moreetsi Thobega and Greg Miller

### **Abstract**

The purpose of this study was to describe student teachers' perceptions of the type of supervision they experienced while interacting with their university supervisors and cooperating teachers. The study also determined the student teachers' preferences for specific supervision practices. The results revealed that student teachers perceived both their cooperating teachers and university supervisors to engage in contextual and clinical supervision practices. More cooperating teachers were perceived to use contextual supervision than university supervisors; cooperating teachers were also perceived to use the non-directive style of developmental supervision while most university supervisors were perceived to use collaborative style. Most student teachers felt that supervision practices from all supervision models were important to them. The highest number of students felt that contextual and clinical supervision approaches were important to them. Of the developmental supervision styles, most student teachers preferred the collaborative supervision style. Future studies should examine how supervisor beliefs, supervisory situation, and student teachers' personal and professional characteristics influence the supervisors' supervisory behaviors.

### **Introduction**

Teachers go through many stages of professional development in their teaching careers. One stage is student teaching (Fritz, 2002). Student teaching is regarded as the most important pre-service experience by first-year teachers (Smith, 1990). It helps the student

teacher transition from being a student to becoming a teacher (Ralph, 1994; Wiseman, Cooner & Knight, 1999).

Student teaching provides an opportunity for student teachers to learn and practice varied techniques of teaching while working with “real students” (Wentz, 2001). Student teaching may also put a student teacher in a new community, new collegial environment, new friendships, and under a new supervisory authority in a new place. All these changes may bring conflicting messages to the student teacher (Clark, 2002). During student teaching, student teachers are in a fragile, uncertain and anxious emotional state that can lead to gain or loss of interest in teaching (Machado & Meyer-Botnarescue, 1997). It is therefore important that student teaching be nurturing.

A nurturing student teaching experience depends partly on the type of supervision that the student teacher is accorded. If done clinically, supervision can help student teachers improve their instructional capabilities (Smith, 1990). To student teachers, the supervision they experience may be the only form of individualized instruction that they would experience (Henry & Beasley, 1982). To supervisors, supervising student teachers offers an opportunity to engage in one-on-one instruction, which is a highly regarded teaching technique (Henry & Beasley). Student teacher supervision is thus beneficial to both the supervisors and the supervisee (Penny, 2002). Despite being beneficial, modes of student teacher supervision continue to elicit mixed reactions from student teachers (Smith, 1990). Student teachers were not satisfied with the process of student teaching because of lack of variety in supervision approaches (Morin, 1993). Supervisors tended to be too direct in supervision; they did not give adequate feedback and coaching assistance to the student teachers (Morin).

Studies on supervision approaches revealed that supervisors can model their supervision around a variety of supervision approaches (Justen III, McJunkin & Strickland, 1999). Different supervision models include clinical supervision (Goldhammer, 1969; Cogan, 1973), contextual supervision (Ralph, 1998), differentiated supervision (Glatthorn, 1984), conceptual supervision (Beach & Reinhartz, 1989), and developmental supervision (Glickman, 1990).

The supervision models are blueprints of the dynamics of the supervisory transactions between the supervisors and the student teachers. The transactions vary with the supervision model being employed. The variations between the models emanate from the fact that each model has different supervisor/supervisee expectations, relationships, and anticipated outcomes (Stoller, 1996).

In clinical supervision, a supervisor asks questions to the student teacher about the supervisory interaction, the questions are asked during pre observation and post observation conferences so as to encourage reflection and self-analysis by the student teacher (Cook, 1996). This reflection helps the supervisors to determine what works and what does not. In contextual supervision, the supervisor is concerned with the supervisee's readiness for a particular teaching task. The supervisor has to adjust their supervisory approach to the student teacher's developmental level in teaching (Ralph, 1998). Differentiated supervision is student teacher driven, the supervisor acts as a mentor, they focus their efforts where they are needed most (Glatthorn, 1997). In conceptual supervision, the supervisor considers occupational factors that may affect the student teacher in doing their job; characteristics of the system and the structure within which both the student teacher and the supervisor operate are taken into consideration when the supervisor advises the student teacher on how to teach.



Developmental supervision makes use of different supervision styles which vary in the amount of supervisory decision making power accorded the student teacher (Glickman, 1990), in one extreme all the decision making power is given to the supervisor, in the other extreme, the decision making power is given to the student teacher (Glickman).

During student teacher supervision, supervisors do not make discrete choices of what model to use; the models themselves are not discrete. Through their supervisory options for instructional leaders (SOIL) model, Fritz and Miller (2003b) demonstrated that supervision models can be placed on a continuum according to the amount of structure used in each model. The continuum runs from highly structured to relatively unstructured models. Depending on their approach to supervision, a supervisors' supervisory behaviors can be placed anywhere in that continuum of structure (Justen III et al. 1999). According to Justen III et al., the reality is that supervisors tend to use a combination of models during supervision, but supervisory behaviors from one model usually dominate.

Cooperating teachers' and university supervisors' conception of student teacher supervision is that of helping, guiding, advising, facilitating, mentoring, supporting, encouraging, and modeling the art of teaching to student teachers while offering them opportunities for professional self-development (Boudreau, 1999; Penny, 2002). The university supervisors and cooperating teachers do not differ in their conception of student teacher supervision (Justen III et al. 1999); however, their professional roles are different.

Cooperating teachers are usually high school teachers; university supervisors are university professors. Cooperating teachers spend the entire student teaching period with the student teacher while university supervisors only see the student teacher during their student teacher visits (Wilson & Saleh, 2000). Given the differences in professional roles and the

length of time they spend with student teachers, it is plausible to expect them to approach student teaching supervision differently; after all they have different concerns. Cooperating teachers are concerned with relationship; they regard the cooperating teacher – student teacher relationships and school - community relationships as important elements of student teaching (Carr, Reeves, Meditz, & Wyatt, 1999; Edwards & Briers, 2001). University supervisors on the other hand are concerned with academic aspects of student teaching (Horton & Harvey, 1979). University supervisors are interested in how well teaching goes in the classroom and how well it ties with theory (Borne & Moss, 1990).

Studies show that cooperating teachers' approaches to supervision resembled the developmental model of supervision (Boudreau, 1999). Justen III et al. (1999) and Thobega and Miller (in press) found that cooperating teachers preferred nondirective over collaborative, directive-informational, and directive styles of developmental supervision. They also engaged in supervisory tasks that are characteristic of contextual, clinical, and conceptual supervision (Thobega & Miller). Like cooperating teachers; university supervisors tend to believe in non-directive supervision (Justen III et al. 1999). On the use of structure in supervision, Fritz and Miller (2003a) reported that university supervisors in agricultural education most frequently used structured approaches when carrying out student teacher supervision. The structured approaches were characteristic of clinical and conceptual supervision approaches (Fritz & Miller).

Cooperating teachers' and university supervisors' values, perceptions and practices related to student teaching are important to the student teacher supervision exercise. However all studies about supervisors' supervisory approaches were informed by self-reports from the

supervisors themselves. It is important to know how student teachers perceive their supervisors' supervisory practices.

### **Purpose and Objectives**

The purpose of this study was to describe student teachers' perceptions of the type of supervision they experienced while interacting with their university supervisors and cooperating teachers. The study also determined the student teachers' preferences for specific supervision practices. Specific questions were:

1. What are student teachers' perceptions of supervision practices they experienced from their cooperating teachers?
2. What are student teachers' perceptions of supervision practices they experienced from their university supervisors?
3. Which supervision practices were important to student teachers?

### **Methods and Procedures**

The population for this descriptive survey study consisted of Agricultural Education student teachers from four universities; Texas A & M University, Oklahoma State University, Iowa State University, and the University of Wisconsin – River Falls. The accessible population was agricultural education student teachers in the four universities who had been student teaching during the spring 2006 semester. A questionnaire was used to collect data. The questionnaire had three sections. Items in sections I and II were developed by rephrasing items from questionnaires which were developed for university supervisors (Fritz & Miller, 2003a) and cooperating teachers (Thobega & Miller, 2003), respectively. Section I included a list of supervision practices. All items were in a nominal dichotomy scale with 'yes' and 'no' response categories. Participants were required to respond by

checking 'yes' or 'no' as to whether their university supervisors and/or their cooperating teachers engaged in such a supervisory practice and also check 'yes' or 'no' whether they felt that the practice was important to them as student teachers. Out of the 22 supervisory practices listed, five were associated with clinical supervision, five with conceptual supervision, five with contextual supervision, and six with differentiated supervision practices.

Section II was adopted and rephrased from Thobega and Miller (2003). It presented four descriptions of developmental supervision styles that supervisors might engage in when supervising student teachers. Student teachers were asked to select from the four options, the description that best represented the supervision style used by their cooperating teachers and university supervisors. The participants were also asked to indicate the style that they preferred their supervisors to use. The descriptions corresponded with collaborative, non-directive, directive informational, and directive control supervision. Section III included demographic questions.

A panel of three experts reviewed the questionnaire for validity. The panel included two experts in the field of student teacher supervision and a graduate student who had just completed her student teaching the previous semester. The two experts were Dr. Carrie Fritz, an assistant professor in Agricultural Education at University of Tennessee who has conducted extensive research in the field of student teacher supervision. Items in section I of the questionnaire were rephrased from Dr. Fritz previous questionnaire designed for university supervisors. The other expert was Dr. Veronica Stalker, a clinician in the Department of Educational Leadership and Policy Studies at Iowa State University. The two experts were asked to assess whether the items were suitable for student teachers who had

just completed student teaching and have experienced supervision. The experts were also requested to assess whether content and the underlying constructs for each item corresponded to the supervisory behavior being measured. The third reviewer, Ms Hannah Callahan, had just completed her student teaching in the previous semester; she was therefore was similar in most respects to the target population of the study. Ms Callahan was requested to assess whether the items in section I and II were comprehensible, and written in a language that is suitable for student teachers who had completed student teaching. The panel judged the questionnaire to be content and construct valid, the questionnaire was also judged to be suitable for the target population. The suggestions they made were incorporated into the questionnaire.

A test-retest reliability procedure was conducted to establish reliabilities for different parts of the questionnaire. Participants in the test-retest procedure were Iowa State University's Elementary Education student teachers. The questionnaire was administered to six volunteers during their mid-semester student teaching seminar. The questionnaire was sent to the volunteers after 10 days for the re-test. Table 1 shows test-retest reliability coefficients for the different scales of the questionnaire. Average reliability coefficients for the subscales of clinical, conceptual, contextual, and differentiated supervision were within the acceptable range of .70 and above (McMillan & Schumacher, 1997). Developmental supervision had a low reliability of .50 for all of its subscales. The items were framed in such a way that participants had to choose from a list of four detailed descriptions, it is possible that consistent responses may have been too demanding. Caution should be exercised in interpreting the results of this aspect of the study.

**Table 1**  
*Reliability coefficients for different scales of the questionnaire*

<b>Supervision approach</b>	<b>Cooperating Teacher</b>	<b>University Supervisor</b>	<b>Importance</b>
Clinical	.97	.93	.90
Conceptual	.83	.78	.89
Contextual	.93	.60	.87
Differentiated	.86	.83	.78
Developmental	.50	.50	.50

Student teaching coordinators in the four participating universities were contacted by electronic mail and requested to administer the survey questionnaire for the researchers during their respective student teaching seminars. The questionnaires were sent out to the student teaching seminar coordinators during the first week of May. Thirty-seven questionnaires were sent to Texas A & M University, 17 questionnaires to Oklahoma State University, six questionnaires to the University of Wisconsin – River Falls, and 13 questionnaires to Iowa State University. The number of questionnaires sent to each university corresponded to the number of eligible participants in that university. All student teachers responded. Only one questionnaire was not useable. The total number of participants was 73, with 72 useable responses; the response rate was 99%. Due to high the response rate, non-response error was not considered a threat to the validity of this study.

### **Results**

There were 72 student teachers who participated in the study. Thirty-six of the participants were from Texas A & M University, 17 from Oklahoma State University, 13 from Iowa State University, six from University of Wisconsin - River Falls. There were a total of thirty-nine females. The participants' age ranged from 21 to 41 years ( $M = 23$  years;

$SD = 2.8$  years). The length of student teaching ranged from 8 to 19 weeks ( $M = 12$  weeks;  $SD = 2.1$  weeks). The student teachers experienced an average of ten classroom observation by their cooperating teachers ( $SD = 9.0$ ). The number of formal classroom observations conducted by cooperating teachers ranged from 0 to 45. The student teachers experienced an average of 3.8 formal classroom observations from their university supervisors ( $SD = 2.6$ ). The number of observations by university supervisors ranged from 1 to 15.

**Research Question 1:** *What are student teachers' perceptions of supervision practices they experienced from their cooperating teachers?*

Table 2 shows percentages of student teachers who experienced each of the listed supervision practices. The table shows that most cooperating teachers were perceived to engage in contextual supervision and clinical supervision practices. Between 61.1% and 97.2% of the student teachers perceived their cooperating teachers to practice the five contextual supervision behaviors that were listed. The results also show that 50% or more of the student teachers perceived their cooperating teachers to engage in four of the five clinical supervision practices. One clinical supervision practice "holding pre-observation conference" was experienced by less than 50% of the student teachers (Table 2). Most of the conceptual and differentiated supervision practices were experienced by less than half of the student teachers.

There were five, five, six and six supervision practices listed for each of clinical, contextual, conceptual and differentiated supervision approaches respectively. Table 3 shows the percentage of supervision practices for each supervision approach that student teachers experienced from their cooperating teachers and university supervisors. The percentages represent the proportion of supervision practices for each supervision approach that student

teachers reportedly experienced. The table also shows percentage of the supervision practices that student teachers deemed important. The cooperating teachers were perceived to engage in 77.2% ( $SD = .23$ ) of the contextual supervision practices; 64.7% ( $SD = .32$ ) of the clinical supervision practices; 44.0% ( $SD = .31$ ) and 42.8% ( $SD = .32$ ) of the conceptual and differentiated supervision practices respectively.

**Research Question 2: *What are student teachers' perceptions of supervision practices they experienced from their university supervisors?***

Table 2 shows that most university supervisors engaged in clinical supervision and contextual supervision practices. Three clinical supervision practices, "meeting with the student teacher to discuss the lesson observed (post-observation conference)", "taking notes during observation", and "sharing the teaching analysis with the student teacher" had percentage frequencies over 90%. However, like cooperating teachers, less than half (43.1%) of the university supervisors were perceived to hold pre-observation conferences. Over 50% (61.1% to 90.3%) of the student teachers perceived their supervisors to engage in all the five contextual supervision practices. Most conceptual and differentiated supervision practices were experienced by less than half of the student teachers, however, "having student teachers evaluate themselves by video tape, journaling, inventories, or portfolio", a differentiated supervision practice, was experienced by 81% of the student teachers (Table 2).

Table 3 shows that the student teachers perceived their university supervisors to practice 76.7% ( $SD = .23$ ) of the clinical supervision; 74.0% ( $SD = .26$ ) of the contextual supervision; 52.8% ( $SD = .26$ ) of the differentiated supervision, and 47.9% ( $SD = .30$ ) of conceptual supervision behaviors.

**Research Question 3: *Which supervision practices were important to student teachers?***



The participants were asked to indicate their preferences of supervision practices by checking “yes” or “no” to indicate whether the corresponding supervision practice was important. More than 50% of the student teachers felt that each of the listed supervision practices was important to them (Table 2). Table 3 further confirms that student teachers felt that 92.8% ( $SD = .13$ ) of contextual supervision practices; 85.0%, ( $SD = .21$ ) of the clinical supervision practices; 70.6% ( $SD = .27$ ) of the conceptual supervision practices, and 68.8% ( $SD = .27$ ) of the differentiated supervision were important to them.

Table 2

*Percentage of student teachers who experienced each supervision practice and who indicated that each practice was important (N=72)*

Supervisory Behaviors	Experienced with		Important
	CT	US	
<b>Clinical Supervision Practices</b>			
Conducted a meeting with you to discuss the lesson before observing you teach.	48.6	43.1	63.9
Met with you to discuss the lesson they observed.	76.4	91.7	94.4
Took notes while they observed you teaching.	94.4	95.8	91.7
Shared with you their analysis of your teaching	84.5 <sup>a</sup>	93.0 <sup>a</sup>	98.6 <sup>a</sup>
Asked you to respond to their critique of the lesson.	50.0	59.7	76.4
<b>Conceptual supervision practices</b>			
Established benchmarks to be achieved by specific dates that were based on your needs.	38.9	51.4	63.9
Asked you about your teaching experience prior to student teaching.	51.4	48.6	61.1

Table 2 continued...

Supervisory Behaviors	CT	US	Important
Asked you whether you felt your workload was high.	25.0	31.9	65.3
Asked you how you felt about classroom environment.	62.5	73.6	93.1
Discussed your knowledge of the subject matter before you began teaching.	58.3	41.7	84.7
Asked you about your relationship with other teachers in the school.	27.8	40.3	55.6
<b>Contextual supervision practices</b>			
Asked you whether you felt confident about your teaching.	61.1	75.0	88.9
Asked whether you felt comfortable with teaching the subject matter.	63.9	61.1	91.7
Gave you less direction as you became confident in teaching.	87.5	70.0 <sup>b</sup>	90.3
Allowed you to make your own instructional decisions as you gained teaching experience.	97.2	90.3	100
Encouraged you to go on when you felt overwhelmed.	76.4	73.6	93.1
<b>Differentiated supervision practices</b>			
Asked you to choose how you wanted him/her to supervise you.	32.4 <sup>a</sup>	28.2 <sup>a</sup>	60.6 <sup>a</sup>
Held conferences with you to monitor your progress towards achieving your goals.	56.9	73.6	88.7
Had other teachers supervise you during student teaching.	45.8	37.5	68.1

Table 2 continued...

Supervisory Behaviors	CT	US	Important
Had you visit other classrooms in the school.	47.2	56.9	65.3
Had you provide feedback to other teachers about their teaching.	27.8	40.3	51.4
Had you evaluate your teaching either by video tape, journaling, inventories, or portfolio.	45.8	80.6	79.2

*Note.* CT = cooperating teacher; US = university supervisor; Importance = whether the supervision practice was important to the student teacher.

<sup>a</sup>*n* = 71 <sup>b</sup>*n* = 70

Table 3

*Percentage of supervision practices for each supervision approach that were experienced and deemed important by the student teachers (N=72).*

Type of supervision	Experienced with					
	Cooperating Teacher		University Supervisor		Importance	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Clinical	64.7	.32	76.7	.23	85.0	.21
Contextual	77.2	.23	74.0	.26	92.8	.13
Conceptual	44.0	.31	47.9	.30	70.6	.27
Differentiated	42.8	.32	52.8	.26	68.8	.27

A separate scale was used to measure student teachers' perceptions and preferences of developmental supervision styles. The student teachers were asked to select from four descriptions of developmental supervision styles (Glickman, 1990); a description that best represented the supervision style used by their cooperating teachers and university supervisors. The student teachers were further asked to indicate the style that they preferred their supervisors used.

Table 4 shows the number of cooperating teachers who used each of the developmental supervision style as perceived by student teachers. Most (39.4%) cooperating teachers used non-directive supervision, 29.6% used collaborative supervision and 25.4% used directive informational supervision. Only 5.6% cooperating teachers used directive supervision. Table 5 shows the percentages of university supervisors who used each of the developmental supervision styles. The most popular style for university supervisors was collaborative supervision (37.1%) followed by non-directive supervision (31.4%) and directive informational supervision (28.6%). The least used style was directive supervision (2.9%).

Table 4 also shows the percentages of student teachers who preferred each of the developmental supervision styles. Collaborative supervision was the most preferred (42.3%) style of supervision by student teachers. Directive informational was the second preferred style (29.6%), followed by non-directive supervision with (22.5%). The least preferred style was directive supervision with only 5.6% of the student teachers preferring it. Also, it can be observed that over half of the student teachers who preferred nondirective, collaborative, and directive informational styles of supervision actually experienced the same styles from their cooperating teachers. Table 4 shows that 12 of 16; 18 of 30, and 13 of 21 student teachers preferred and experienced nondirective, collaborative, and directive informational supervision respectively. Directive supervision was experienced by less than half (1 of 4) of the student teachers who preferred it. To confirm the association between student teachers' preferred and perceived styles of developmental supervision, *Cramer's V* was computed. The analysis revealed a significant positive correlation between cooperating teachers'

developmental supervision style and student teachers' preferences (*Cramer's V* = .46,  $p < .001$ ) (Table 4).

As was the case with cooperating teachers, over half of the student teachers who preferred nondirective, collaborative, and directive informational styles of supervision experienced the same styles from their university supervisors. Table 5 shows that 11 of 16; 19 of 29, and 14 of 20 student teachers preferred and experienced nondirective, collaborative, and directive informational supervision respectively. *Cramer's V* analysis revealed a significant positive correlation between university supervisors' developmental supervision style and student teachers' preferences (*Cramer's V* = .45,  $p < .001$ ) (Table 5).

Table 4

*Cross-tabulation of cooperating teachers' developmental supervision approach and the approach preferred by student teachers.*

	Student Teacher Preferences									
	Nondirective		Collaborative		<sup>a</sup> Directive Inf.		Directive		Total	
<sup>b</sup> CT Approach	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Nondirective	12	16.9	9	12.7	6	8.5	1	1.4	28	39.4
Collaborative	2	2.8	18	25.4	1	1.4	0	0.0	21	29.6
<sup>a</sup> Directive Inf.	1	1.4	2	2.8	13	18.3	2	2.8	18	25.4
Directive	1	1.4	1	1.4	1	1.4	1	1.4	4	5.6
Total	16	22.5	30	42.3	21	29.6	4	5.6	71	100

*Cramer's V* = .46,  $p < .001$ . <sup>a</sup>Directive informational supervision

<sup>b</sup>Cooperating teacher.

Table 5

*Cross-tabulation of university supervisors' developmental supervision approach and the approach preferred by student teachers.*

	Student Teacher Preferences									
	Nondirective		Collaborative		<sup>a</sup> Directive Inf.		Directive		Total	
<sup>b</sup> US approach	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Nondirective	11	15.7	6	8.6	2	2.9	3	4.3	22	31.4
Collaborative	1	1.4	19	27.1	5	7.1	1	1.4	26	37.1
<sup>a</sup> Directive Inf.	3	4.3	3	4.3	14	20.0	0	0.0	20	28.6
Directive	1	1.4	1	1.4	0	0.0	0	0.0	2	2.9
Total	16	22.9	29	41.4	21	30.0	4	5.7	70	100

*Note.* Totals for student teacher preferences are slightly different from those in table 4 because of a missing value in one of university supervisors' measures.

*Cramer's V* = .45, *p* < .001. <sup>a</sup>Directive informational supervision

<sup>b</sup>University supervisor.

### Conclusions/Implications/Recommendations

Student teachers involved in this study perceived both their cooperating teachers and university supervisors to engage in contextual and clinical supervision behaviors more than they did for conceptual and differentiated supervision. Higher percentages of cooperating teachers were perceived to engage in contextual supervision practices than clinical supervision. On the contrary, higher percentages of university supervisors were perceived to engage in clinical supervision compared to contextual supervision. Ralph (1994) stated that a supervisor who uses contextual supervision considers unique contextual variables that affect each supervisee. Some of the variables are curricular/school policies and practices, personal relationships or characteristics of the supervisee that includes their confidence and competence. In a related study, Edwards and Briers (2001) confirmed that Agricultural Education cooperating teachers were concerned with their relationship with student teachers,

but also with the relationship between their agriculture programs, the school and the community were also their concern. Consideration of such contextual factors by cooperating teachers might explain why cooperating teachers in this study were perceived to use contextual supervision more than other types of supervision.

Clinical supervision represents a supervision protocol characterized by three basic phases; planning for the forthcoming lesson (pre-observation conference), classroom observation of student teacher by a supervisor, and a reflective, analytic post-observation conference (Cook, 1996). It is an accepted supervision standard (Glickman, 1990); it is thus not surprising that most supervisors use it. In the current study, student teachers perceived both cooperating teachers and university supervisors to engage in clinical supervision practices. Higher percentages of student teachers perceived clinical supervision practices from their university supervisors than they did from their cooperating teachers.

Unlike cooperating teachers who are concerned with relationships, university supervisors are more concerned with connections between the pedagogical knowledge they taught in their college classes and how the student teachers practically apply the knowledge in the classroom (Carr et al. 1999; Horton & Harvey, 1979; Borne & Moss, 1990; Wilson & Saleh, 2000). Because of these concerns, university supervisors may tend to assess the student teachers instead of supervising, supporting, and guiding them (Wilson & Saleh, 2000), as a result, university supervisors might resort to employing structure (Fritz & Miller, 2003a) in their supervision, hence their tendency to follow the rather definite structure of clinical supervision. Also, the fact that university supervisors are limited by time when they visit student teachers (Wilson & Saleh) might motivate them to use the structured, hence time efficient clinical supervision procedures. Perhaps the time limitation might also explain why

most university supervisors skipped the pre-observation conference. However, a more comprehensive inquiry is needed to investigate why supervisors tend not to hold pre-observation conference when supervising student teachers; could there be other supervisory practices that they engage in instead of pre-observation conference?

Regarding developmental supervision, student teachers involved in this study perceived most of their cooperating teachers to use non-directive style of supervision; however, considerable percentages of the cooperating teachers as well used collaborative and directive informational styles. Very few student teachers perceived their supervisors to use directive supervision. Most university supervisors were perceived to use collaborative supervision with considerable percentages using non-directive and directive informational styles of developmental supervision. Very few university supervisors were perceived to use directive supervision. These findings are consistent with what Justen III et al. 1999) and Thobega and Miller (in press) found about cooperating teachers.

It could be concluded that most supervisors do not want to unilaterally lead the supervisory decision making. The supervisors tend to use supervision styles that involve the student teacher, at least to some extent. Supervisors tend to be willing to either give the student teachers the sole decision making power in supervision or share the responsibility of planning the supervision with the student teacher. Supervisors are thus becoming less evaluative (Knoll, 1987) and more developmental; they are turning to supervision methods that foster the student teachers' motivation, inspiration, trust, and help the student teachers improve their teaching performance (Boudreau, 1999; Knoll, 1987; Penny, 2002; Pfeiffer & Dunlap, 1982). These types of supervision are more welcome than evaluative ones (Knoll).



It is evident that from the results of this study that supervisors tended to use clinical and contextual supervision practices more than conceptual and differentiated supervision practices; however considerable numbers of supervisors were still perceived to engage in conceptual and differentiated supervision practices. Supervisors were also perceived to use non-directive, collaborative and directive-informational styles of developmental supervision, but still a few used the directive style. It is concluded that supervisors use combinations of supervision approaches and styles when supervising student teachers. There is no one recommended approach to supervision; however, as Justen III et al. (1999) concluded, supervisory behaviors from one model may tend to dominate. The question that remains is what factors influence supervisors to engage in particular supervision practices? Could it be supervisors' supervisory beliefs as Justen III et al. (1999) suggested; could it be the supervisory situation as proponents of contextual supervision suggested, or could be the student teacher's personal or professional characteristics? How much does each of these factors influence the ultimate supervisory behavior of a supervisor? Further research is recommended to investigate these questions.

Student teachers involved in this study deemed each of the supervision practices listed as important to their development as teachers. Consistent with their perceptions about cooperating teachers and university supervisors' practices, the most important supervision practices were mostly clinical and contextual supervision practices. Structured procedures of clinical supervision were important to most student teachers; even so, they still like to be allowed to make their own teaching decisions; a practice provided for by contextual supervision. Of the four developmental supervision styles, the student teachers preferred the collaborative style most, directive informational and non-directive styles were also preferred

by a considerable number of student teachers indicating that the student teachers actually want to share the supervisory decision making with their supervisors, very few student teachers preferred directive supervision. Student teachers' developmental supervision preferences were consistent with the supervision styles they perceived from their supervisors. This is evidenced by the moderate positive associations between supervisors' perceived supervision styles and student teacher preferences. As far as developmental supervision, supervisors' practices and student teachers' preferences were related, implying that student teachers are likely to be satisfied with the developmental supervision they experienced from their supervisors.

The fact that all the supervision practices were important to student teachers underscores the assertion that a combination of supervision approaches works (Justen III et al. 1999). Student teacher supervisors are urged to analyze their supervisory situations so that they can come up with combination of approaches that is optimum for student teachers professional growth and development. Situational analysis should be made an integral part of supervisors' training.

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## **CHAPTER VI. GENERAL CONCLUSIONS**

### **General Discussion/Implications/Recommendations**

This dissertation contained three papers that explored teacher preparation in Agricultural Education. One article described the relationship between pre-service teachers' performance on PRAXIS II (initial teacher licensing examination) and their performance on college academic measures. Another article described agricultural education cooperating teachers' supervision behaviors as they supervise Agricultural Education student teachers. The third article described Agricultural Education student teachers' perceptions and preferences of the type of supervision they experienced from their student teaching supervisors.

In 2002 and 2003, Iowa Board of Educational Examiners administered the PRAXIS II as a pilot examination to prospective teachers who were seeking initial teaching licenses in those years. The pilot examination scores were obtained from the Educational Testing Services and were used to examine the relationship between beginning agriculture teachers' performance on college academic measures and PRAXIS II examination scores. The relationship was not strong. Males performed better than females on the Agriculture content test of the PRAXIS II examination. It was concluded that the PRAXIS II examination content and content of the college pedagogical and subject matter courses might not be well aligned. Findings of this study should be made available to educational policy makers, including the Iowa Board of Educational Examiners and the Educational Testing Services. Further investigations to determine why males performed better on the Agriculture content test were recommended.

The dissertation also explored student teacher supervision as a component of field preparation of teachers. One article determined 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.

The third article of the dissertation described student teachers' perceptions of the type of supervision they experienced while interacting with their university supervisors and cooperating teachers. The study also determined the student teachers' preferences for specific supervision practices. The results revealed that student teachers perceived both their cooperating teachers and university supervisors to engage in contextual and clinical supervision practices. Most cooperating teachers were perceived to use the non-directive style of developmental supervision while most university supervisors were perceived to use the collaborative style. Most student teachers felt that supervision practices from all supervision models were important to them. Of the developmental supervision styles, most student teachers preferred the collaborative supervision style. Student teachers' preferences of developmental supervision styles were significantly correlated with the styles they perceived their supervisors to engage in.

It was concluded that cooperating teachers use a combination of approaches when supervising student teachers. Student teachers appreciate all types of supervision practices. Supervisors should be trained on how to analyze supervisory situations so as to come up with

a combination of supervision approaches that is optimum for student teachers' professional growth and development. The training should provide supervisors with a basic framework of procedures and practices for each model of supervision; however, it should be cognizant of the fact that, choosing the appropriate supervision approach may be dependent on both science and art.

From the dissertation, the following general conclusions were drawn.

1. The state of Iowa does not use Agricultural Education beginning teachers' performance on the PRAXIS II examination to offer initial teaching licenses.
2. Measures of beginning agriculture teachers' academic quality used by Iowa State University and those used by Educational Testing Services are not strongly associated.
3. Cooperating teachers used a combination of supervision approaches when supervising student teachers. Most of the cooperating teachers tended to use contextual and clinical supervision approaches.
4. Student teachers valued a combination of supervision practices. Most of the student teachers valued clinical and contextual supervision practices, but they also appreciated being allowed to make their own instructional decisions.

This study has raised the following questions for further research:

1. What is the relationship between pre-service teachers' performance on PRAXIS II and performance on college academic measures in other licensure areas?
2. What is the relationship between pre-service teachers performance on PRAXIS II and PRAXIS III assessments?



3. How much do supervisors' supervisory beliefs, supervisory situations, and student teachers' professional or personal characteristics influence the supervisors' supervisory behavior?

**APPENDIX A. INSTITUTIONAL REVIEW BOARD STUDY APPROVALS**

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Institutional Review Board  
Office of Research Compliance  
Vice President for Research  
2810 Beardshear Hall  
Ames, Iowa 50011-2030  
515 281-4500  
FAX 515 281-7223

**DATE:** February 3, 2005  
**TO:** Moreetsi Thobega  
**FROM:** Ginny Austin Eason, IRB Administrator  
**RE:** IRB ID # 05-024

**STUDY REVIEW DATE:** February 2, 2005

The Institutional Review Board has reviewed the project, "Relationship between Scores on Praxis II Tests and College Academic Achievement (GPA) for Beginning Agriculture Teachers" requirements of the human subject protections regulations as described in 45 CFR 46.101(b) 4. The applicable exemption category is provided below for your information. Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

The IRB determination of exemption means that this project does not need to meet the requirements from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects, unless required by the IRB. We do, however, urge you to protect the rights of your participants in the same ways that you would if your project was required to follow the regulations. This includes providing relevant information about the research to the participants.

Because your project is exempt, you do not need to submit an application for continuing review. However, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or required by the IRB.

Any modification of this research must be submitted to the IRB on a Continuation and/or Modification form, prior to making any changes, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: Ag Ed & Studies  
Greg Miller

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Institutional Review Board  
Office of Research Compliance  
Vice Provost for Research and  
Advanced Studies  
2510 Beardshear Hall  
Ames, Iowa 50011-2030  
515 284-4500  
FAX 515 284-7286

TO: Moreetsi Thobega

FROM: Ginny Austin, IRB Administrator

RE: IRB ID # 04-147

DATE REVIEWED: March 9, 2004

The project, "*Supervision Models Practiced by Agriculture Cooperating Teachers in Region III of the National Association of Agricultural Educators*", has been declared exempt from Federal regulations as described in 45 CFR 46.101(b)(6) according to the review and decision made by the IRB Committee.

**(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.**

To be in compliance with ISU's Federal Wide Assurance through the Office of Human Research Protections (OHRP) all projects involving human subjects, must be reviewed by the Institutional Review Board (IRB). Only the IRB may determine if the project must follow the requirements of 45 CFR 46 or is exempt from the requirements specified in this law. Therefore, all human subject projects must be submitted and reviewed by the IRB.

Because this project is exempt it does not require further IRB review and is exempt from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects.

We do, however, urge you to protect the rights of your participants in the same ways that you would if IRB approval were required. This includes providing relevant information about the research to the participants. Although this project is exempt, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent, if applicable to your project.

Any modification of this research should be submitted to the IRB on a Continuation and/or Modification form to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: Ag Ed & Studies  
Greg Miller  
HSRO OCR 9.02

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Institutional Review Board  
Office of Research Assurances  
Vice Provost for Research  
1138 Pearson Hall  
Ames, Iowa 50011-2207  
515 294-4300  
FAX 515 294-4267

**DATE:** February 24, 2006

**TO:** Moreetsi Thobega

**FROM:** Dianne Anderson, IRB Co-Chair

**RE:** IRB ID # 06-066

**STUDY REVIEW DATE:** February 23, 2006

The Institutional Review Board has reviewed the project, "Student Teacher Preferences of Supervision Approaches by their Supervisors" requirements of the human subject protections regulations as described in 45 CFR 46.101(b)(2). The applicable exemption category is provided below for your information. Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

The IRB determination of exemption means that this project does not need to meet the requirements from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects, unless required by the IRB. We do, however, urge you to protect the rights of your participants in the same ways that you would if your project was required to follow the regulations. This includes providing relevant information about the research to the participants.

Because your project is exempt, you do not need to submit an application for continuing review. However, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or required by the IRB.

Any modification of this research must be submitted to the IRB on a Continuation and/or Modification form, prior to making any changes, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: AGEDS  
Greg Miller  
File

**APPENDIX B. COOPERATING TEACHER SURVEY**

SECTION II: Listed below are possible supervisory approaches. Please indicate how often you use each approach. There are no right or wrong answers.

# COOPERATING TEACHER SURVEY

Statements

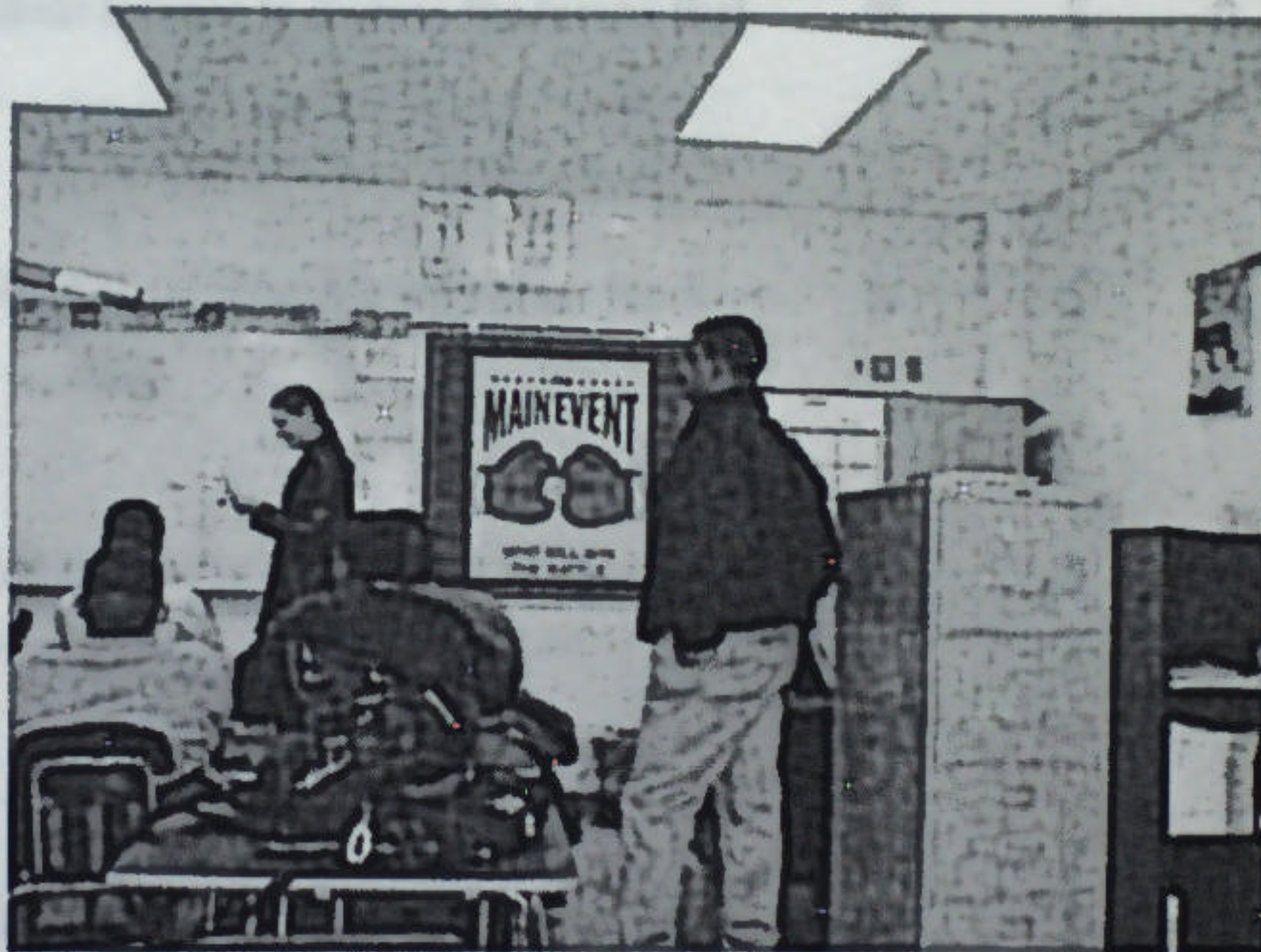
Circle One

1. Contact a meeting with the student teacher to discuss progress.

2. Ask the student teacher to prepare a lesson plan for the school.

3. Have other teachers in the school observe the student teaching experience.

4. Meet with the student teacher to discuss progress.



**Department of Agricultural Education and Studies  
College of Agriculture  
Iowa State University**

**April 2004**

5. Ask the student teacher to prepare a lesson plan for the school.

6. Have other teachers in the school observe the student teaching experience.

7. Meet with the student teacher to discuss progress.

8. Contact a meeting with the student teacher to discuss progress.

**SECTION I: Listed below are possible supervisory approaches. Please indicate how often you use each approach. There are no right or wrong answers.**

<b>KEY</b>	
<b>N</b>	<b>= NEVER</b>
<b>S</b>	<b>= SOMETIMES</b>
<b>O</b>	<b>= OFTEN</b>
<b>A</b>	<b>= ALWAYS</b>

Statements	Circle One			
1. Conduct a meeting with the student teacher to discuss the lesson that you will observe.	N	S	O	A
2. Ask the student teacher about his/her relationship with other teachers in the school.	N	S	O	A
3. Have other teachers in the school supervise the student teacher during the student teaching experience.	N	S	O	A
4. Meet with the student teacher to discuss the lesson that you observed.	N	S	O	A
5. Establish bench marks with the student teacher to be achieved by specific dates based on his/her particular needs.	N	S	O	A
6. Adjust your leadership style to accommodate the needs of the student teacher you are working with.	N	S	O	A
7. Ask the student teacher to choose the type of supervision he/she wants.	N	S	O	A
8. Hold conferences with the student teacher to monitor his/her progress toward achieving his/her goals.	N	S	O	A
9. Record the data from your observation and give to the student teacher.	N	S	O	A



10.	Ask the student how he/she feels about the classroom environment.	N	S	O	A
11.	Ask the student teacher to assess his/her workload.	N	S	O	A
12.	Have the student teacher visit other classrooms in the school.	N	S	O	A
13.	Have the student teacher provide feedback to other teachers about their teaching.	N	S	O	A
14.	Ask the student teacher about the quality of supervisory support that you provide.	N	S	O	A
15.	Adjust your supervision approach as the student teacher progresses in his/her student teaching experience.	N	S	O	A
16.	Ask the student teacher about his/her teaching experience.	N	S	O	A
17.	Have the student teacher evaluate his/her teaching either by videotape, journaling, inventories, or portfolio.	N	S	O	A
18.	Ask the student teacher to provide feedback about your critique of his/her lesson.	N	S	O	A
19.	Observe the student teacher's decision making process.	N	S	O	A
20.	Serve as a teaching advisor to the student teacher.	N	S	O	A
21.	Assess the student teacher's confidence level.	N	S	O	A
22.	Allow the student teacher to control the supervision process.	N	S	O	A

23. Have the student teacher develop a list of goals for student teaching. N S O A
24. Have the student teacher commit to a set of dates for student teaching goals to be achieved. N S O A
25. Arrange for the student teacher to be part of a two or three teacher team that observes each other's classroom teaching. N S O A
26. Adjust the amount of structured teaching plans you give to the student teacher. N S O A
27. Adjust the type of encouragement that you give each student teacher. N S O A
28. Talk with the student teacher about his/her knowledge of the subject matter he/she will be teaching. N S O A
29. Document observation of the student teacher teaching a lesson. N S O A

<b>SECTION II:</b>	<b>The following are examples of how cooperating teachers might interact with their student teachers. Please circle the letter to the left of the description that best describes the approach you would most likely use with your student teacher(s).</b>
<b>A</b>	<b>I present what I saw in the classroom and then I ask for the student teacher's perceptions. We listen to each other's responses. After clarifying the position, each one of us proposes ideas. Finally we agree on what is to be done in the classroom. We mutually identify an objective and agree to an action plan that both of us will work together to carry out. The plan is for both of us to make.</b>
<b>B</b>	<b>I listen to the student teacher as he/she discusses what is going on in the classroom. If the student teacher asks, I offer my opinions regarding what I</b>

	observed. I encourage him/her to analyze my opinions further, and I ask questions to make sure he/she is clear about my views. If he/she requests for my views on how to proceed I respond, but only if he/she asks. Finally, I ask the student teacher to determine and detail the action he/she will take. I do help if he/she needs help. It is the student teacher who draws the plan.
<b>C</b>	I share my observations with the student teacher and I tell him/her what I believe should be the major focus for improvement. I ask for his/her input into my observations and interpretations. Based on my experience and knowledge, I carefully delineate what I believe are alternative actions to improve the classroom and I ask him/her to consider and select from the options. The student teacher chooses the plan to follow from my suggestions.
<b>D</b>	I present my believes about the situation and ask the student teacher to confirm or revise my interpretation. After identifying the discrepancy, I offer him/her directions on what should be done and how to proceed. Its either I go into the classroom to demonstrate what I was telling him/her to do, or I ask him/her to observe another teacher who does well in that particular area. I praise him/her for following the given assignment. I draw up the supervisory plan.

---

**SECTION III: *Information about you.***

---

1. How many years have you supervised student teachers

\_\_\_\_\_ YEARS

2. How many student teachers have you supervised?

\_\_\_\_\_ STUDENT TEACHERS

3. Have you received formal training in instructional supervision? (Please place a check next to your response)

\_\_\_\_\_ YES

\_\_\_\_\_ NO

4. Briefly describe the formal supervision training that you have received.

5. How many student teachers did you supervise in the period beginning Fall, 2003 and ending Spring, 2004?

\_\_\_\_\_ STUDENT TEACHERS

Please estimate the number of times per week you did the following during the time you had a student other to supervise?

Observe and record your observations of the student teacher teaching:

\_\_\_\_\_ TIMES/WEEK.

Hold pre-observation conference with the student teacher:

\_\_\_\_\_ TIMES/WEEK.

Hold post-observation conference with the student teacher:

\_\_\_\_\_ TIMES/WEEK.

How many years you have been teaching Agricultural Education?

\_\_\_\_\_ YEARS

Estimate how many times per week the student teacher

Observed you teaching

\_\_\_\_\_ TIMES/WEEK.

Gave you feedback on the lesson he/she observed you teaching

\_\_\_\_\_ TIMES/WEEK

What is your gender? (please check next to your response)

\_\_\_\_\_ FEMALE

\_\_\_\_\_ MALE

What is your age?

\_\_\_\_\_ YEARS

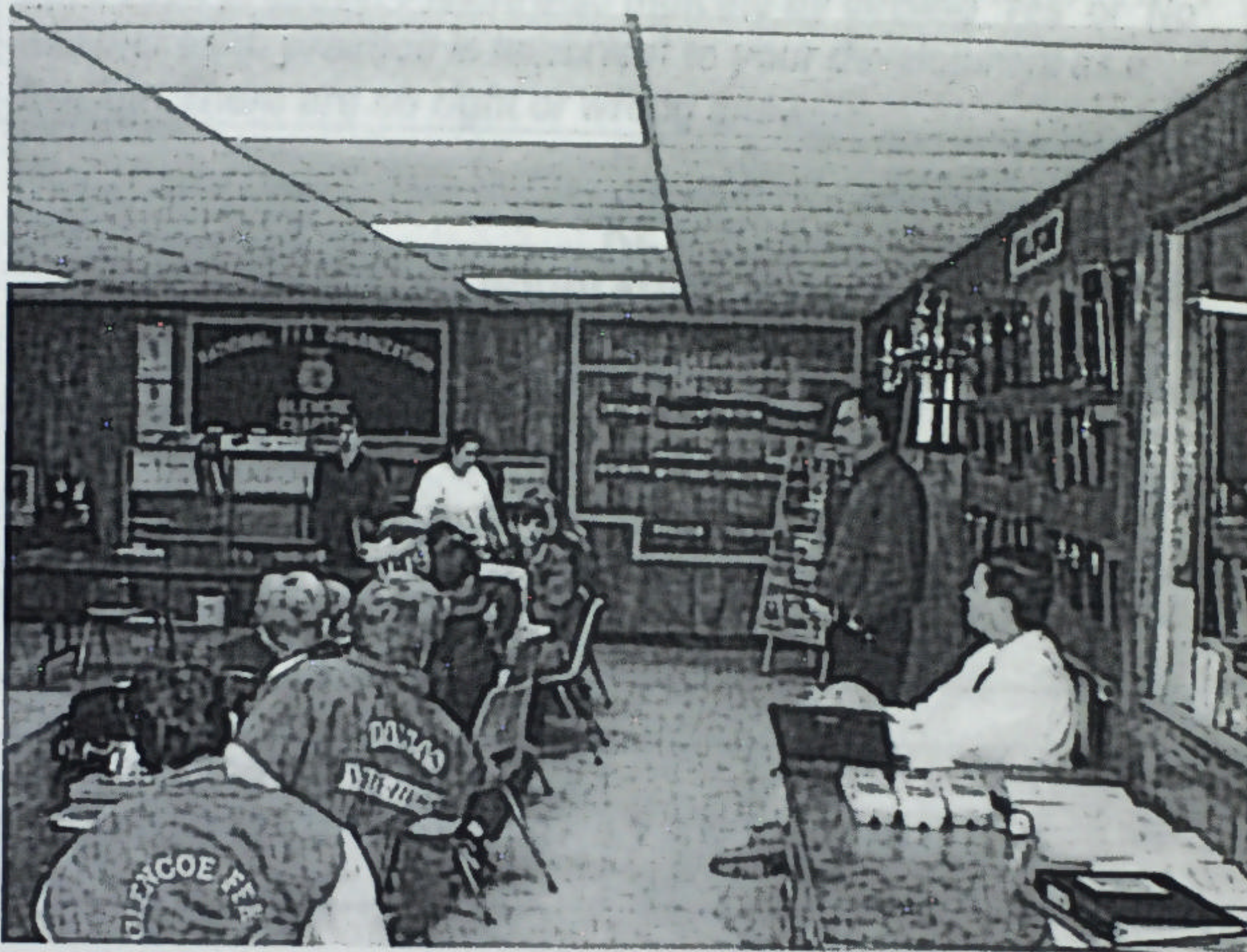
Please feel free to use this space to share any thoughts you have concerning student teacher supervision.

Thank you for participating in this survey. Please send the completed questionnaire back using the self addressed stamped envelope enclosed.

*If you have any questions about the rights of research subjects or research-related inquiry, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294 4566; [austingr@iastate.edu](mailto:austingr@iastate.edu) or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294 3115; [clarent@iastate.edu](mailto:clarent@iastate.edu).*

**APPENDIX C. STUDENT TEACHER SUPERVISION SURVEY**

# STUDENT TEACHER SUPERVISION SURVEY



Department of Agricultural Education and Studies  
 College of Agriculture  
 Iowa State University

April 2006

Code \_\_\_\_\_

	CT	U	Important
1. Established benchmarks to be achieved by specific dates that were based on your needs.	Y N	Y N	Y N
2. Asked you about your teaching experience prior to student teaching.	Y N	Y N	Y N

**SECTION I:** Listed below are several instructional supervision practices. Please indicate by circling 'Yes' or 'No' whether your cooperating teacher (CT) and university supervisor (US) have used each practice. Please also indicate by circling 'Yes' or 'No' whether each practice is important to your development as a teacher. There are no right or wrong answers.

**KEY.**

CT = Cooperating Teacher  
 US = University Supervisor  
 Y = Yes  
 N = No

Practice		CT		US		Important	
1.	Conducted a meeting with you to discuss the lesson before observing you teach.	Y	N	Y	N	Y	N
2.	Met with you to discuss the lesson that they observed.	Y	N	Y	N	Y	N
3.	Took notes while they observed you teaching.	Y	N	Y	N	Y	N
4.	Shared with you their analysis of your teaching.	Y	N	Y	N	Y	N
5.	Asked you to respond to their critique of the lesson.	Y	N	Y	N	Y	N

Key: CT=Cooperating Teacher; US=University Supervisor; Y = Yes; N = No

Practice		CT		US		Important	
6.	Established benchmarks to be achieved by specific dates that were based on your needs.	Y	N	Y	N	Y	N
7.	Asked you about your teaching experience prior to student teaching.	Y	N	Y	N	Y	N





	school.	Y	N	Y	N	Y	N
21.	Had you provide feedback to other teachers about their teaching.	Y	N	Y	N	Y	N
22.	Had you evaluate your teaching either by video tape, journaling, inventories, or portfolio.	Y	N	Y	N	Y	N

**SECTION II:** *The following are descriptions of supervision approaches that supervisors might use when supervising student teachers. Please read each description and answer the questions that follow.*

---

- A** My supervisor presented what they saw in the classroom and then asked for my perceptions. We listened to each other's responses. After clarifying the position, each one of us proposed ideas. Finally we agreed on what was to be done in the classroom. We mutually identified an objective and agreed to an action plan that both of us would work together to carry out. We both made the supervisory plan.
- B** My supervisor listened to me as I discussed what was going on in the classroom. If I asked, they offered opinions regarding what they observed. They encouraged me to analyze their opinions further, and they asked questions to make sure that I was clear about their views. If I requested their views on how to proceed they responded, but only if I asked. Finally, they asked me to determine and detail the action I would take. They helped if I needed help. I developed the supervisory plan.
- C** My supervisor shared their observations with me and they told me what they believed should be the major focus for improvement. They asked for my input into their observations and interpretations. Based on their experience and knowledge, they carefully delineated what they believed were alternative actions to improve the classroom and they asked me to consider and select from the options. I chose the plan to follow from my supervisor's suggestions.
- D** My supervisor presented their beliefs about the situation and asked me to confirm or revise their interpretation. After

identifying any discrepancy, they offered me directions on what should be done and how to proceed. They went into the classroom to demonstrate what they were telling me to do, or they asked me to observe another teacher who performed well in that particular area. They praised me for following the given assignment. My supervisor developed the supervisory plan.

Question 1. My cooperating teacher's supervision approach was most like

A B C D (circle one).

Question 2. My university supervisor's supervision approach was most like

A B C D (circle one).

Question 3 Which of the four approaches do you prefer?

A B C D (circle one).

<b>SECTION III: Information about you</b>
---

1. How long was your student teaching?

\_\_\_\_\_ WEEKS

2. How many class sessions during student teaching did your cooperating teacher formally observe you teaching?

\_\_\_\_\_ CLASS SESSIONS

3. How many class sessions during student teaching did your university supervisor formally observe you teaching?

\_\_\_\_\_ CLASS SESSIONS

4. What is your gender?

\_\_\_\_\_ MALE

\_\_\_\_\_ FEMALE

5. What is your age?

\_\_\_\_\_ YEARS

Thank you for participating in this survey.

*If you have any questions about the rights of research subjects or research-related inquiry, please contact the Office of Research Assurances, 1138 Pearson Hall, (515) 294 4566; [austingr@iastate.edu](mailto:austingr@iastate.edu) or the Director, Office of Research Assurances, 1138 Pearson Hall, (515) 294 3115; [dament@iastate.edu](mailto:dament@iastate.edu)*