TEACHING INTERNS’ LEVEL OF PROFICIENCY OF THE MOSTEP QUALITY INDICATORS AT THE BEGINNING AND COMPLETION OF THE TEACHING INTERNSHIP

A Thesis presented to the Faculty of the Graduate School
University of Missouri-Columbia

In Partial Fulfillment
Of the Requirements for the Degree

Master of Science

by

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JULY 2005
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TEACHING INTERNS’ LEVEL OF PROFICIENCY OF THE 
MOSTEP QUALITY INDICATORS AT THE BEGINNING AND 
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Robert J. Scholes, Ph.D.
Dedicated to my parents, Dennis and Betty:
Thank you for all your encouragement!
ACKNOWLEDGEMENTS

Throughout my educational career I have had many influences that have supported and encouraged me to achieve my personal and professional goals. During my undergraduate and graduate years at MU, many people provided me with their friendship, guidance, and dedication. It is with great honor that I am able to thank some of those individuals. There are people that have helped me along the way that I am probably forgetting, but please know that I am grateful for everything you all have done!

Dr. Bryan Garton, thank you for your support and guidance throughout my years as an undergraduate and graduate student in Agricultural Education. I appreciate you serving as my advisor for the past five years. You have provided me with opportunities to learn and motivation to push me forward in achieving my goals.

Dr Robert Torres, thank you for your guidance and sense of humor. You have been available to answer my questions, especially dealing with research. You always seem to make me laugh, even with a “wipe out.” I will miss your daily appearances and words of wisdom in the graduate student office.

Dr. Roberta Scholes, thank you for taking time out of your schedule to guide me in the teacher development program as an undergraduate, as well as serving on my graduate thesis committee.

To the 2004-2005 Agricultural Education graduate students of 110 and 124 Gentry Hall, thank you for the memories. I have enjoyed being a member of the office, and have experienced many learning opportunities in the agricultural education profession. Thanks for listening and all of your support!
To Sandra Kaiser and Jim Riley, thank you for taking me under your wings as a freshman at MU. I have truly valued your friendship over the years. Thank you for allowing me the opportunity to work with you both. The learning experiences I have gained from working in the office have been invaluable, especially as I begin my teaching career.

To Mike McCrory, thank you for serving as my cooperating teacher during my student teaching internship. I learned a great deal from you about the agricultural education profession. Thank you for your guidance and most of all, your friendship.

To Jeremy Lacy, thank you for your love and patience in dealing with me throughout graduate school. I appreciate your support and motivation in completing my graduate studies.

To my grandparents, Jack and Dixie Burks, thank you for your love throughout the years. You have inspired me in many ways that I cannot explain. Also, thank you to my late grandmother, Estella Campbell, I know you would be proud and are looking down on me from heaven.

Most importantly, thank you to my family. A special thank you goes to my parents, Dennis and Betty Campbell, and brother, Brandon. You always support and believe in me no matter what I set out to accomplish. Your love and encouragement has motivated me to set goals and work hard to achieve those goals. You have made me the individual that I am today, and words really cannot convey my gratitude.
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ABSTRACT

The amount of growth and development by teaching interns on the MoSTEP quality indicators during the student teaching internship has not been studied intently. In addition, the use of teacher certification measures as predictors of performance related to the MoSTEP quality indicators has not been adequately studied. The purpose of the study was to assess student teaching interns’ level of proficiency of the MoSTEP quality indicators at the beginning and at the completion of the student teaching internship. The study further sought to compare the self-perceived proficiency levels of the teaching interns to their cooperating teachers’ evaluations of the interns’ level of proficiency on the MoSTEP quality indicators. The purposeful sample (n = 16) consisted of agricultural education student teaching interns, and their respective cooperating teachers, who were certifying to teach through the University of Missouri-Columbia during the 2005 winter semester.

The study was descriptive correlational research. To measure the level of proficiency of teaching interns’, the Student Teaching Internship Self-Assessment (teaching interns) and the Performance Based Student Teaching Internship Evaluation (cooperating teachers) was completed. Findings suggest the student teaching internship strengthens teaching interns’ level of proficiency on all 11 MoSTEP quality indicators, as self-perceived by the teaching interns and assessed by their respective cooperating
teachers. In addition, no single teacher certification measure, or combination of measures, was predictive of the teaching interns’ performance of the MoSTEP quality indicators.
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The student teaching internship is one of the most critical components of a teacher preparation program (Byler & Byler, 1984). According to the “Teaching Internship Handbook” from the Department of Agricultural Education at the University of Missouri-Columbia (2005), “The teaching internship is the culminating experience in the teacher preparation program” (p. 1). The quality of the student teaching internship, coupled with preparation and practice, affects teaching interns in regard to their perceptions of being a secondary agriculture teacher (Deeds, Flowers, & Arrington, 1991).

Teaching interns must be prepared to handle responsibilities similar to those of their cooperating teachers, ranging from the classroom environment to learning laboratories. Teaching interns should feel competent for their intended profession, as this preparation adds to the professionalism and motivation exhibited by the teaching intern. The experiences of teaching interns during the student teaching internship are imperative in gaining insight into the roles and responsibilities of a secondary agriculture teacher (Harlin, Edwards, & Briers, 2002). Based upon established standards, teacher preparation programs are responsible for preparing teaching interns for the roles and responsibilities of a secondary agriculture teacher.

Teacher preparation programs are designed and based on established standards. In focusing on standards for teacher preparation and certification, teacher preparation programs strive toward their ultimate goal of producing quality teachers for schools (Graham & Garton, 2003). Due to the added emphasis on preparing qualified teachers,
teacher certification measures are established to serve as documentation of the teaching interns’ level of proficiency in relation to specific certification areas. At the University of Missouri-Columbia, teacher certification measures include American College Testing Examination (ACT), College Basic Academic Skills Examination (C-BASE), grade point average, and the National Teachers Examination (NTE) PRAXIS specialty area tests. Factors, such as grade point average, may be further examined in specific areas of teacher preparation to evaluate the level of proficiency of the prospective teacher.

**Theoretical Framework**

In agricultural education, the American Association for Agricultural Education (AAAE) has developed a conceptual framework of standards for agricultural education teacher preparation programs, titled “National Standards for Teacher Education in Agriculture” (2001). While these are standards for teacher preparation programs to implement in developing quality agricultural education teachers, there are more specific standards that teaching interns must complete to meet certification criteria. In the state of Missouri, teacher certification standards are known as the Missouri Standards for Teacher Education Programs (MoSTEP). The MoSTEP Standards are divided into and referred to as 11 quality indicators (Table 1) in which teaching interns must demonstrate and document competence prior to being recommended for teacher certification to the Missouri Department of Elementary and Secondary Education (DESE). Each of the 11 quality indicators have specific performance indicators that must be achieved for the quality indicator to be met. The MoSTEP quality indicators are addressed in a variety of courses in the teacher preparation program. All 11 standards are met, or should be met,
and strengthened upon completion of the internship (Department of Agricultural Education, 2005).

Table 1

MoSTEP Quality Indicators

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A model may be developed to reflect where teacher preparation programs evaluate candidates for certification. Figure 1 exhibits the hypothesized relationships between selected teacher certification measures and assessment of the MoSTEP quality indicators, based upon existing work by McDonald and Elias (1976). The teacher certification measure of knowledge, as measured by cumulative grade point average can be further divided into three areas: education coursework GPA, agricultural education coursework GPA, and content area (agriculture) GPA. Content area (agriculture) GPA may be correlated with the NTE PRAXIS in agriculture score, which are both teacher certification measures, as well as the evaluation of MoSTEP quality indicator 1, content knowledge.
Need for the Study

As stated by Dormody and Torres (2002), research should be conducted regarding teacher preparation “…to determine factors related to or explaining at-graduation and current levels of teaching competency abilities” (p. 44). Assessment of the teaching interns’ ability to perform the MoSTEP quality indicators at the beginning and the completion of the student teaching internship will assist the teacher education program in complying with the National Council for Accreditation of Teacher Education (NCATE) and the MoSTEP Standards. Assessment provides documentation of the teaching interns’ ability to perform the MoSTEP quality indicators, needed when the teacher education
program is reviewed for accreditation. The assessment instruments utilized throughout the student teaching internship by the cooperating teacher and university supervisor are based upon the MoSTEP Standards, more specifically the MoSTEP quality indicators. These assessments serve as documentation of teaching interns’ knowledge, skills and abilities, and are reflective of the development and growth over the student teaching internship.

Knowledge about the teaching interns’ level of proficiency, as related to the MoSTEP quality indicators, will also assist the teacher education program in adjusting the curriculum to meet the development needs of future interns planning to enter the teaching profession. Most teacher education programs require teaching interns to reflect upon their internship experiences through written journals that provide evidence of their growth and development in the teacher education program. Faculty in teacher education programs may examine various certification measures to determine if they are reflective of the level of proficiency desired of teaching interns in regards to the MoSTEP quality indicators. Information can also be attained about the influences cooperating teachers have on the teaching interns’ level of proficiency related to teaching competencies during the student teaching internship. It is imperative for teacher education programs to evaluate the growth and development of the teaching interns’ level of proficiency throughout the course of the student teaching internship to gain knowledge about how to better prepare teaching interns’ for the field. Knowledge of teaching interns’ level of proficiency is also important for designing induction programs for first year teachers.
Statement of the Problem

At the beginning of the student teaching internship, teaching interns are often concerned about their knowledge and skills of agriculture and ability to effectively teach. Throughout the student teaching internship, teaching interns are provided with many responsibilities, much like those of their cooperating teachers. By providing teaching interns responsibilities similar to those of their cooperating teachers, teacher education programs hope to increase the teaching interns’ proficiency levels as related to the MoSTEP quality indicators throughout the duration of the student teaching internship. Providing teaching interns with opportunities to take on responsibilities similar to those of their cooperating teachers is excellent preparation to apply and develop skills, as related to their future profession. The student teaching internship may not always be as effective in enhancing teaching interns’ proficiency levels as teacher education programs intend. Teaching interns may or may not develop as expected throughout the student teaching internship experience based upon the overall internship environment.

While reflection of proficiency levels are imperative for teaching interns to self-assess, evaluation of the level of proficiency possessed by teaching interns by their cooperating teachers is also important. Cooperating teachers are typically viewed as being “extremely proficient” in their teaching and management abilities, and observe the teaching interns in the school environment on a daily basis. Therefore, cooperating teachers’ evaluations of teaching interns’ competencies throughout the student teaching internship are highly valued by the teacher education program. However, teaching interns may rate themselves differently on their level of proficiency on teacher competencies from that of their cooperating teachers.
Even though teaching interns strive to complete the certification measures and become recommended for certification by the respective teacher education program, completing certification measures does not indicate that teaching interns feel proficient in terms of teacher competencies, as defined by the MoSTEP quality indicators. This becomes problematic as teaching interns perceive themselves not being as prepared for the profession as they believe they should. Certification measures, such as grade point average and certification exam scores, may or may not correlate with the perceived level of proficiency possessed by the teaching interns.

Since the main goal of teacher education programs is to produce proficient teachers, teaching interns’ level of proficiency must be identified. This leads to two potential issues that must be addressed, especially by teacher education programs. How much growth and development, related to the MoSTEP quality indicators, do teaching interns experience as a result of the student teaching internship? Are teacher certification measures, such as grade point averages and certification exam scores, reflective of the teaching interns’ perceived level of proficiency related to the MoSTEP quality indicators?

**Purpose and Research Objectives of the Study**

The purpose of the study was to assess student teaching interns’ level of proficiency of the MoSTEP quality indicators at the beginning and at the completion of the student teaching internship. The study further sought to compare the self-perceived proficiency levels of the teaching interns to their cooperating teachers’ evaluations of the
interns’ level of proficiency on the MoSTEP quality indicators. The following research objectives were constructed to guide the study:

1. Describe teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicators at the beginning and completion of the student teaching internship.

2. Describe teaching interns’ level of proficiency on the MoSTEP quality indicators, as assessed by their cooperating teachers, at the mid-point and completion of the teaching internship.

3. Compare the teaching interns’ self-perceived level of proficiency to their respective cooperating teachers’ assessment of the MoSTEP quality indicators at the completion of the 16-week student teaching internship.

4. Describe the teacher certification measures, or combination of measures, that were predictive of the teaching interns’ performance of the MoSTEP quality indicators, as assessed by their respective cooperating teachers.

5. Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content knowledge, as perceived by the teaching interns at the completion of the student teaching internship.

6. Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content knowledge, as assessed by the cooperating teachers at the completion of the student teaching internship.
Definitions

For the purpose of this study, the following terms were defined:

**Teacher Certification Measures**: Standards established and used by the College of Education at the University of Missouri-Columbia in recommending candidates for teacher certification. Teacher certification measures utilized in this study were:
- American College Testing Examination (ACT) score;
- Cumulative university grade point average (GPA), which was further broken down for the study into education coursework GPA, agricultural education coursework GPA, and content area (agriculture) GPA;
- College Basic Academic Skills Examination (C-BASE) English, writing, math, science and social studies;
- and the National Teachers Examination (NTE) PRAXIS specialty area test in agriculture.

**Performance Indicators**: Components of the 11 MoSTEP quality indicators which candidates must demonstrate before completing the requirements for teacher certification. The 11 standards each cite specific teaching competencies that must be met for the “quality indicator” to be met, which was where the instrument for the study was derived.

**Teaching Intern**: Preservice teacher involved in a 16-week student teaching internship at a cooperating school appointed by the supervising institution.

**Perceptions**: Recognition of knowledge, abilities or skills by an individual related to a given topic or area.
Assumptions

For the purpose of this study, it was assumed that:

1. Teaching interns objectively reported their self-perceived level of proficiency regarding the MoSTEP quality indicators without bias.
2. Cooperating teachers assessed the teaching interns’ level of proficiency related to teaching competencies without bias.
3. A performance based evaluation form of the MoSTEP quality indicators is able to adequately assess and measure the level of proficiency possessed by teaching interns.

Limitations

1. Data collection was limited to agricultural education teaching interns completing teacher certification at the University of Missouri-Columbia in 2005.
2. Results of this study should be used with caution in regards to other groups of teaching interns, as in results should only be applied to agricultural education teaching interns with similar characteristics to the population in the study.
CHAPTER II
REVIEW OF LITERATURE

Purpose of the Study

The purpose of the study was to assess student teaching interns’ level of proficiency of the MoSTEP quality indicators at the beginning and at the completion of the student teaching internship. The study further sought to compare the self-perceived proficiency levels of the teaching interns to their cooperating teachers’ evaluations of the interns’ level of proficiency on the MoSTEP quality indicators.

Missouri Standards for Teacher Education Programs (MoSTEP) Standards and Quality Indicators

The “Missouri Standards for Teacher Education Programs (MoSTEP) Institutional Handbook” (2004), stated that representatives from all Missouri teacher education programs and two-year colleges, K-12 educators, administrators, and the Department of Higher Education created the MoSTEP Standards. The Missouri State Board of Education (MSBE) enacted the MoSTEP Standards and Procedures in May 1999 (Missouri Department of Elementary and Secondary Education, 2004). The MoSTEP Standards are designed for the MSBE to evaluate teacher education programs in preparing students to meet the requirements for a license to teach in the state of Missouri. The MSBE specifies certain requirements that must be addressed before a teaching license is issued. With the emphasis on performance-based competencies and experiences, there was a need for the standards to be further divided into quality
According to the “Missouri Standards for Teacher Education Programs (MoSTEP) Institutional Handbook” (2004), the performance indicators are for the MSBE “…to verify its capacity to prepare professional educators ready to assume their professional roles in Missouri’s public schools” (p. 2). The term “its” in the above quote refers to teacher education programs that wish to recommend candidates to the MSBE for teacher certification. By January 2000, the Missouri Department of Elementary and Secondary Education placed the MoSTEP Standards, quality and performance indicators into full action (Missouri Department of Elementary and Secondary Education, 2004).

Performance-based competencies and experiences are documented throughout a pre-service teacher’s preparation. This may also be termed as standards-based integrated curriculum (Kim, Andrews, & Carr, 2004). Standards-based integrated curriculum has been found to successfully prepare teaching interns for the student teaching internship and the teaching profession (Kim, Andrews, & Carr, 2004). During the student teaching internship, teaching interns are assessed by their respective cooperating teachers using the MoSTEP Standards, quality and performance indicators (Department of Agricultural Education, 2005). The Teacher Development Program at the University of Missouri-Columbia created the Performance Based Student Teaching Internship Evaluation. The eleven quality indicators are identified on the evaluation form with corresponding performance indicators listed below each respective quality indicator (Department of Agricultural Education, 2005).

The agricultural education profession encompasses a variety of agriculture disciplines that are taught in secondary agriculture programs. This is reflected not only in
the MoSTEP Standards and quality indicators, but further addressed by the Division of Teacher Quality and Urban Education of the Missouri Department of Elementary and Secondary Education in “The preservice teacher knows the discipline…Agriculture Education” (1997). Agricultural education content areas are divided into specific competencies that the teaching intern should have knowledge in as a beginning teacher. Specific competencies are outlined to ensure that the agricultural education profession stays true to the content area. The 10 content areas include: 1) agricultural business management, 2) animal science, 3) plants and soils, 4) natural resources, 5) agricultural mechanics, 6) careers, 7) program management, 8) Supervised Agricultural Experience (SAE), 9) development and implementation of vocational curriculum, and 10) vocational student organizations (Missouri Department of Elementary and Secondary Education, 1997). Content knowledge falls under the first MoSTEP quality indicator, indicating the teaching intern understands the disciplines within the content area and is able to create meaningful learning experiences for students (Department of Agricultural Education, 2005).

The second MoSTEP quality indicator, learners and learning, examines teaching interns’ understanding of how students learn and develop based upon learning theories. Diversity, the third quality indicator, involves the teaching interns’ understanding of how students differ in learning based upon learning styles, prior experiences, and students’ needs to better design and implement teaching methods and curriculum where learning can be fostered. The fourth quality indicator, curriculum, emphasizes teaching interns planning curriculum based upon performance standards of the students, district, and state. Instruction, quality indicator five, involves the utilization of different instructional
strategies by teaching interns to increase critical thinking, problem solving, and performance of students. The sixth quality indicator, classroom management, consists of teaching interns creating a learning environment where a community of learners is fostered, increasing student motivation on an individual and group basis. Communication, quality indicator seven, encompasses the use of communication tools by the teaching intern to promote interaction and clarity in the classroom. Quality indicator eight, assessment, is the use of formal and nonformal assessment strategies to monitor student learning. Reflection and professional growth, the ninth quality indicator, employs the use of self-assessment and the reflection process to enhance professional development. Quality indicator ten, professional responsibility, is the teaching interns’ responsibility to form relationships with school and community members to encourage student learning. Technology in teaching and learning, quality indicator eleven, is the teaching interns’ use of technology to create meaningful learning opportunities for students (Department of Agricultural Education, 2005).

**Teacher Education Program**

The teacher education program must prepare teaching interns for success prior to entering the student teaching internship. Teacher education programs have the responsibility of not only coordinating professional development opportunities for teachers, but are viewed as having the primary responsibility of preparing future secondary agriculture teachers (Myers & Dyer, 2004). The level of proficiency of the student teaching interns reflect upon the effectiveness of the teacher education program (Dormody & Torres, 2002), and can be evaluated based upon the MoSTEP Standards and
quality indicators. The proposition that teacher education programs are not keeping less qualified candidates from becoming certified exists (Raths & Lyman, 2003). As claimed by Myers and Dyer (2004), the issue arises that teacher education programs are not producing highly prepared teachers for certification.

The Missouri State Board of Education, in part two of “Meeting the Challenge” (2001b), stated that preparation for the teaching profession should be intensive “…to work with students with diverse abilities and from diverse backgrounds” (p. 2). To prepare teaching interns for the profession, teacher education programs should provide adequate instruction related to the MoSTEP quality indicators for teaching interns to practice in the school environment (Missouri State Board of Education, 2001b). These competencies should be learned at a high proficiency level so the teaching interns are labeled as being effective with students in the teaching and learning environment. In the introduction of “Meeting the Challenge” (2001a), adequate preparation of teaching interns for the field fulfills the goal of Missouri to keep moving forward in education, ranking as one of the top five states in public education by 2010. The effectiveness of standards-based teacher education programs in preparing students for the teaching profession is reflected in their implementation and assessment of the standards (Kim, Andrews, & Carr, 2004).

Rosenshine and Furst (1971) summarized the top five effective instructional characteristics, ranked in order of importance, starting with clarity, then variability, enthusiasm, task-oriented behavior, and student opportunity to learn material. The top five effective instructional characteristics complement the competencies and standards set by the Department of Elementary and Secondary Education and teacher education
programs to prepare teaching interns for experiences in the classroom. The five effective
instructional characteristics are also reflected in what the National Council for
Accreditation of Teacher Education (NCATE) looks for in a performance-based teacher
education program. The teacher education faculty should model the five effective
instructional characteristics in addition to modeling the standards that NCATE expects
teacher certification candidates to perform as a successful teacher (Wise & Leibbrand,
2001). The results NCATE are ultimately looking for in candidates for teacher
certification are that candidates know “…the subject matter and can teach effectively so
that students learn” (Wise & Leibbrand, 2001, p. 249).

The MoSTEP Standards were established by the Missouri State Board of
Education (MSBE) to evaluate teacher education programs. In addition, the standards
were created to ensure teacher education programs were meeting the requirements for
preparing qualified teachers for the profession (Missouri Department of Elementary and
Secondary Education, 2004). Teacher education programs are reviewed for approval by
the state to be sure that programs are following the standards in preparing candidates for
their teaching licenses. Periodically, examining teams are sent to the teacher education
programs to view and observe the level which teacher education programs prepare their
candidates. Performance of the teacher education program is rated by the examining
team, and determines if the teacher education program is preparing qualified, professional
candidates for teacher certification (Missouri Department of Elementary and Secondary
Education, 2004).

The National Council for Accreditation of Teacher Education (NCATE) set forth
standards for teacher education programs to follow in preparing candidates for
certification (Wise & Leibbrand, 2001). In *A Nation at Risk* (National Commission on Excellence in Education, 1983, as stated in Wise & Leibbrand, 2001), standards were written by subject over 20 years ago for teacher education programs to follow in an effort to produce highly qualified teachers. When *A Nation at Risk* was written, the lack of preparation that candidates for certification were receiving was exposed. The publication did show that there was light at the end of the tunnel with the established standards to assess teacher education programs and candidates for certification (Graham, 2000). As stated in *No Child Left Behind: A Parent’s Guide* (2003), the quality of teachers produced by teacher education programs correlates to the success level of students’ education (United States Department of Education, 2003).

Since *A Nation at Risk* was published in 1983, NCATE has taken steps to maintain the level of expectation in regards to developing highly qualified teachers for certification (Wise & Leibbrand, 2001). It is sometimes difficult for cooperating teachers to complete summative and formative assessments on their respective teaching interns. At times cooperating teachers may not be trained to adequately assess the teaching interns, or not agree with the teacher education program assessments (Raths & Lyman, 2003). Uniformity in standards and assessment among professional organizations, states, and teacher education programs are imperative in establishing the norm (Wise & Leibbrand, 2001). Institutions with teacher education programs must meet the expectations set forth by NCATE to remain an accredited institution that can recommend candidates for licensure (Wise & Leibbrand, 2001).

The American Association for Agricultural Education (AAAE) also recognized the importance of the teacher preparation program by creating the “National Standards
for Teacher Education in Agriculture” (2001). There are nine standards (Table 2) within the conceptual framework that help ensure the teacher preparation program is producing high quality, highly prepared teachers (American Association for Agricultural Education, 2001).
Table 2

National Standards for Teacher Education in Agriculture

Standard 1. The design, implementation, and evaluation of an agricultural education teacher preparation program reflect a dynamic conceptual framework, grounded in experience-based knowledge developed with input valued by all stakeholders. The conceptual framework establishes the vision for the agricultural education teacher preparation program to prepare teachers to work effectively in schools.

Standard 2. The design of the agricultural education teacher preparation program ensures that students complete a balanced program of general education, technical content, and pedagogical and professional studies.

Standard 3. The agricultural education teacher preparation program recruits, admits, and retains an adequate supply of quality students who demonstrate potential for professional success in the agricultural education community.

Standard 4. Teaching in the agricultural education teacher preparation program is of high quality, consistent with the program’s conceptual framework, and reflects knowledge derived from research and sound educational practice.

Standard 5. The agricultural education teacher preparation program ensures that field experiences are of high quality, consistent with the program’s conceptual framework, and are well planned and sequential.

Standard 6. The agricultural education teacher preparation program collaborates with stakeholders to provide an effective and dynamic preservice teacher education program for preparing agricultural educators.

Standard 7. The agricultural education teacher preparation program demonstrates and promotes an ongoing commitment to diversity.

Standard 8. Agricultural education teacher preparation faculty demonstrate scholarship in their teaching, inquiry, and outreach roles.

Standard 9. The agricultural education teacher preparation program has sufficient resources to prepare successful teachers of agriculture.

Student Teaching Internship

Prior to beginning the student teaching internship, teaching interns have had little teaching experiences in “real” classroom environments. The student teaching internship is the first real opportunity to transfer concepts from coursework, such as teaching and learning methods, into an actual classroom environment (Borne & Moss, 1990). Teaching interns rely on the guidance of their cooperating teachers to gain new knowledge and experience in the profession. Teaching interns tend to strengthen their level of proficiency related to teaching competencies from the student teaching experience, especially those learned from the cooperating teacher (Haberman & Harris, 1982, as stated in Grimmett & Ratzlaff, 1986). As stated in Schumacher and Johnson (1990), “…the influence of the cooperating teacher in the preparation of new teachers is profound” (p. 2). This was also found in results gathered by Borne and Moss (1990), in which the first year teachers strongly disagreed that they learned little from the student teaching internship.

Perceptions and attitudes of the agricultural education profession are primarily constructed during the student teaching internship (Harlin, Edwards, & Briers, 2002). Teaching interns and their respective cooperating teachers must develop a professional relationship for learning opportunities to be enhanced. This relationship should be established at the beginning of the student teaching internship and last well beyond the completion of the internship (Harlin, Edwards, & Briers, 2002). Establishing a positive relationship between teaching interns and their respective cooperating teachers is reflected in the findings of Norris, Larke, and Briers (1990). In their study, it was reported that the cooperating teacher meeting with the teaching intern prior to the
beginning of the student teaching internship was the most important task of the cooperating teacher (Norris, Larke, & Briers, 1990). The importance of the teaching intern-cooperating teacher relationship plays an important role in developing a positive attitude about the student teaching internship and the agricultural education profession (Edwards & Briers, 2001). It was even reported that teaching interns who participated in field experiences early in the teacher education program displayed a more positive attitude, as observed by the cooperating teacher (Deeds & Barrick, 1986). Use of early field experiences prior to the student teaching internship have been thought to be extremely important by most teacher education programs (Norris, Larke, & Briers, 1990). The role of teaching interns and their respective cooperating teachers should be the main focus of the student teaching internship (Wise & Leibbrand, 2001). This being said, cooperating teachers and teaching interns should be matched as closely as possible in personality types and personal attributes to maximize learning during the student teaching internship (Norris, Larke, & Briers, 1990).

During the student teaching internship, teaching interns are evaluated by their respective cooperating teachers based upon teaching competencies, as well as completing self-assessments (Dormody & Torres, 2002). In Missouri, teaching interns and their respective cooperating teachers complete similar assessments that are based upon the MoSTEP Standards and quality indicators (Department of Agricultural Education, 2005). The handbook, developed by the university, is helpful to cooperating teachers in properly assessing teaching interns and providing an internship that is filled with experiences similar to those of a secondary agriculture teacher (Deeds, Flowers, & Arrington, 1991). Information gained from the assessments of the cooperating teachers and self-
assessments of their respective teaching interns should be used by teacher education programs to evaluate the effectiveness of the teacher education program and the student teaching internship (Findlay & Drake, 1989). This is especially important because teacher education programs tend to have higher expectations than what may be met for the student teaching internship (Norris, Larke, & Briers, 1990).

**Teacher Certification Measures**

There are a number of teacher certification measures that must be met for an individual to be recommended for teaching licensure. Determining what is a “highly qualified teacher” becomes troublesome, as the use of standardized test scores and grade point averages are components of attaining a teaching license (Berliner, 2005). The issue however is, are the teacher certification measures predictive of the level of proficiency specified by the MoSTEP quality indicators? As stated in Myers and Dyer (2004), “No teacher certification measure was found to be predictive of agriculture teacher classroom performance” (p. 46). Teacher certification measures included in Myers and Dyer (2004) were the same as those used in Graham and Garton (2003). In many teacher education programs, grade point average is utilized to be admitted and stay in the teacher education program (Graham & Garton, 2003). As Graham and Garton (2003) found, agricultural education coursework grade point average was a good predictor of performance in the classroom during the student teaching internship, but certain teacher certification measures may keep potential teacher candidates out of the program. The literature, however, is not consistent in regards to grade point average and its relationship to teaching performance (Graham & Garton, 2003).
In *A Nation at Risk* (National Commission on Excellence in Education, 1983, as stated in Wise & Leibbrand, 2001), standards were written for teacher education programs to follow in an effort to produce highly qualified teachers. The lack of preparation, and evidence of preparation, that candidates for teacher certification were receiving was exposed (Graham, 2000). In *A Nation Still at Risk* (1999), some schools still had difficulty in finding highly qualified teachers for positions. Since *A Nation at Risk* and *A Nation Still at Risk* were published, measures have been taken to help ensure the certification of highly qualified teachers (Wise & Leibbrand, 2001). In 2001, President George W. Bush pushed for education reform with the *No Child Left Behind Act* (United States Department of Education, 2003). Under the *No Child Left Behind Act*, highly qualified teachers are defined and accountability of teacher quality is addressed. *No Child Left Behind* defines a highly qualified teacher as “…one with full certification, a bachelor’s degree and demonstrated competence in subject knowledge and teaching” (United States Department of Education, 2003, p. 20). Further, school districts must maintain highly qualified teachers by meeting objectives set forth by the school district and state board of education (United States Department of Education, 2003).

States are at their own discretion as to whether or not to use licensure tests in providing evidence that candidates meet the standards of being qualified (Berliner, 2005). Standardized test scores and grade point averages are hard numbers that can be used as evidence for teacher education programs in preparing quality teachers (Cochran-Smith, 2003). However, the use of standardized test scores does not necessarily reflect the actual teaching performance of the teaching intern (Berliner, 2005). Standardized test scores and grade point averages may also be used as evidence for schools in hiring
teachers to meet the No Child Left Behind Act (United States Department of Education, 2003).

Summary

To ensure teaching interns are prepared for the profession and to evaluate internship experiences, teaching interns’ level of proficiency of the MoSTEP quality indicators are important to know at the beginning of the student teaching internship, as well as at the completion of the internship. Using MoSTEP Standards and quality indicators to evaluate the level of proficiency of teaching interns in a variety of teacher competency areas at the beginning and completion of the student teaching internship is valuable information for teacher education programs. The main reason the MoSTEP Standards and quality indicators were created were to serve as criteria for teacher education programs to prepare candidates for a teaching license. Candidates must meet the MoSTEP Standards and quality indicators in order to be recommended for a teaching license by the teacher education program they completed. Performance indicators within each quality indicator further explain the MoSTEP quality indicators.

Teacher education programs assume the responsibility of preparing high quality teachers for the profession. Teacher education programs, while preparing future teachers, must comply with standards set forth by the state and federal government, as well as the standards of the teacher education program at the institution. Meeting the standards requires teacher education programs to undergo reviews by the National Council for Accreditation of Teacher Education (NCATE), and the State Board of Education. Teacher education programs are also taxed with the responsibilities of providing quality
field experiences and classroom instruction, selecting student teaching internship placements (cooperating teachers matched up with student teachers), and supervising the overall student teaching internship. The teacher education program should also model what effective teaching and learning is, in addition to providing professional development opportunities.

Influences of cooperating teachers during the student teaching internship potentially increase the level of proficiency of teaching interns in relation to the MoSTEP quality indicators. The most important relationship prior to, during, and after the student teaching internship is that of the teaching intern and the cooperating teacher. These relationships can help teaching interns in creating positive attitudes about the profession. The cooperating teachers are responsible for providing learning experiences for the teaching interns about the actual field of teaching secondary agriculture. Teaching interns assume duties similar to those of a secondary agriculture teacher during the student teaching internship. The use of formative and summative assessments during the student teaching internship provides information about the teaching interns’ ability to perform in the classroom environment. Teacher education programs are able to use the information gained from the assessments to evaluate the effectiveness of the teacher education program.

Teacher certification measures may vary from state to state. With the lack of uniformity, it is difficult to adequately determine if any one teacher certification measure is more important than another. There is no consistent evidence that shows whether or not standardized test scores or grade point averages are predictive of performance in the classroom. The use of standardized test scores and grade point averages, while also used
as admission and certification measures by teacher education programs, serve as evidence for teacher education programs that they are producing qualified teachers. Evidence used by teacher education programs in certifying teacher candidates can also serve as evidence for school districts in hiring highly qualified teachers when addressing the *No Child Left Behind Act*.

The combination of all the factors addressed in the review of literature: the MoSTEP Standards and quality indicators, teacher education program, student teaching internship, and teacher certification measures, all play very important roles in preparing highly qualified teachers. More importantly, the student teaching internship as a whole affects teaching interns in regards to their perceptions of being a secondary agriculture teacher (Deeds, Flowers, & Arrington, 1991). Experiences of the teaching interns during the student teaching internship are imperative in gaining insight into the roles and responsibilities of a secondary agriculture teacher (Harlin, Edwards, & Briers, 2002). Therefore, the student teaching internship is a time for teaching interns to determine their level of proficiency related to the MoSTEP quality indicators and if teaching secondary agriculture is the career they wish to continue.
CHAPTER III

METHODOLOGY

Purpose and Research Objectives of the Study

The purpose of the study was to assess student teaching interns’ level of proficiency of the MoSTEP quality indicators at the beginning and at the completion of the student teaching internship. The study further sought to compare the self-perceived proficiency levels of the teaching interns to their cooperating teachers’ evaluations of the interns’ level of proficiency on the MoSTEP quality indicators. The following research objectives were constructed to guide the study:

1. Describe teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicators at the beginning and completion of the student teaching internship.

2. Describe teaching interns’ level of proficiency on the MoSTEP quality indicators, as assessed by their cooperating teachers, at the mid-point and completion of the teaching internship.

3. Compare teaching interns’ self-perceived level of proficiency to their respective cooperating teachers’ assessment of the MoSTEP quality indicators at the completion of the 16-week student teaching internship.

4. Describe the teacher certification measures, or combination of measures, that were predictive of the teaching interns’ performance of the MoSTEP quality indicators, as assessed by their respective cooperating teachers.

5. Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content
knowledge, as perceived by the teaching interns at the completion of the student teaching internship.

6. Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content knowledge, as assessed by the cooperating teachers at the completion of the student teaching internship.

**Research Design**

Descriptive correlational research was the research design used for the study. Ex post facto research examines data after the fact. Descriptive correlational research explores the relationships among certain variables. Variables are not manipulated in this type of research due to the end-sought purpose to explore and describe (Ary, Jacobs, & Razavieh, 2002). Descriptive correlational research was also utilized to describe the relationship between teacher certification measures and the data collected from the teaching interns and their respective cooperating teachers on the teaching interns’ level of proficiency of the MoSTEP quality indicators. Cooperating teachers’ responses on teaching interns’ level of proficiency were evaluated from the mid-point and final assessment of the MoSTEP quality indicators.

**Population**

The target population consisted of agricultural education student teaching interns who were certifying to teach through the University of Missouri-Columbia. The purposeful sample consisted of 7 male and 9 female teaching interns ($n = 16$). The
purposeful sample also consisted of the teaching interns’ respective cooperating teachers 
\((n = 16)\), which included 15 male and 1 female. Teaching interns were located at a 
variety of field placement sites across the state, all with licensed secondary agriculture 
teachers. Oliver and Hinkle (1982) contested that teaching interns of a given year could 
be representative of other groups of student teaching interns. This argument allows the 
sample \((n = 16)\) in the study to be classified as a time and place sample, with inferential 
statistics applied to teaching interns’ over time (Oliver & Hinkle, 1982). The student 
teaching internship was completed during the 2005 winter semester. Teaching interns 
and their respective cooperating teachers were enrolled in an intact internship experience 
through the Department of Agricultural Education at the University of Missouri-
Columbia. Subjects were easily available, as the interns met five times in an on-campus 
seminar during the 16-week student teaching internship, and had direct contact with their 
cooperating teachers.

**Description of Variables**

In conducting the study, six variables were used to evaluate the objectives of the 
study (Table 3).
### Table 3

**Variables by Category**

<table>
<thead>
<tr>
<th>Teacher Certification Measures</th>
<th>MoSTEP Quality Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACT Examination</td>
<td>1. Performance Based Student Teaching Internship Evaluation (Mid-Point and Final): Cooperating Teachers</td>
</tr>
<tr>
<td>2. C-BASE Scores</td>
<td>2. Student Teaching Internship Self-Assessment (Beginning and Completion)</td>
</tr>
<tr>
<td>3. Cumulative Grade Point Average:</td>
<td></td>
</tr>
<tr>
<td>• Education GPA</td>
<td></td>
</tr>
<tr>
<td>• Agricultural Education GPA</td>
<td></td>
</tr>
<tr>
<td>• Content Area (Agriculture) GPA</td>
<td></td>
</tr>
<tr>
<td>4. NTE PRAXIS – Agriculture</td>
<td></td>
</tr>
</tbody>
</table>

Four variables were categorized as teacher certification measures with the variable of cumulative grade point average being subdivided into education GPA, agricultural education GPA, and content area (agriculture) GPA. Composite scores were used for ACT examination and NTE PRAXIS in agriculture. C-BASE scores were reported in the areas of English, writing, math, science, and social studies. Variables associated with the evaluation of the MoSTEP quality indicators include the Performance Based Student Teaching Internship Evaluation and the Student Teaching Internship Self-Assessment. The Performance Based Student Teaching Internship Evaluation was completed by the cooperating teachers on their respective teaching interns at the midpoint and completion of the student teaching internship. Teaching interns completed the Student Teaching Internship Self-Assessment at the beginning and completion of the student teaching internship. All variables were measured by numerical intervals.
Instrumentation

Two data collection instruments were used to address the research objectives of the study. The first instrument, Performance Based Student Teaching Internship Evaluation (Department of Agricultural Education, 2005), was a pre-established assessment designed and utilized by the Teacher Development Program and the Department of Agricultural Education at the University of Missouri-Columbia (Appendix A). The assessment instrument was designed for cooperating teachers to assess the performance of teaching interns during the 16-week student teaching internship. The assessment instrument’s content was derived from the Missouri Standards for Teacher Education Programs (MoSTEP). Cooperating teachers were required to use the instrument to assess their respective teaching interns at the mid-point and completion of the teaching internship. The cooperating teachers’ ratings of their respective teaching interns on the MoSTEP quality indicators were not used in assigning grades for the student teaching internship. The instrument is scored on a 6-point scale with assigned anchor description developed by the Teacher Development Program at the University of Missouri-Columbia, and is as follows:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Meeting the Standard</td>
<td>Meets the Standard</td>
<td>Exceeds the Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Validity of the Performance Based Student Teaching Internship Evaluation was previously determined by the Teacher Development Program at the University of Missouri-Columbia. Reliability was addressed, post-hoc, reporting Cronbach’s alpha reliability estimates. Internal consistency for each of the 11 MoSTEP quality indicators was completed on the instrument administered to the teaching interns at the beginning of
the student teaching internship \((n = 16)\). Reliability estimates for each of the 11 MoSTEP quality indicators ranged from a Cronbach’s alpha value of 0.54 on content knowledge to 0.89 on assessment and technology in teaching and learning (Table 4).

Table 4

<table>
<thead>
<tr>
<th>MoSTEP Quality Indicators</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Knowledge</td>
<td>0.54</td>
</tr>
<tr>
<td>Learners and Learning</td>
<td>0.69</td>
</tr>
<tr>
<td>Diversity</td>
<td>0.59</td>
</tr>
<tr>
<td>Curriculum</td>
<td>0.72</td>
</tr>
<tr>
<td>Instruction</td>
<td>0.63</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>0.74</td>
</tr>
<tr>
<td>Communication</td>
<td>0.83</td>
</tr>
<tr>
<td>Assessment</td>
<td>0.89</td>
</tr>
<tr>
<td>Reflection and Professional Growth</td>
<td>0.86</td>
</tr>
<tr>
<td>Professional Responsibility</td>
<td>0.86</td>
</tr>
<tr>
<td>Technology in Teaching and Learning</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Inter-rater reliability, between the cooperating teachers, was a potential threat to the study. Therefore, a day-long workshop for cooperating teachers was conducted prior to the student teaching internship (in November, 2004) at the University of Missouri-Columbia to normalize the teachers’ use of the Performance Based Student Teaching Internship Evaluation. Faculty in the Department of Agricultural Education at the University of Missouri-Columbia lead the workshop, which informed cooperating teachers on supervision of teaching interns.

A second data collection instrument was constructed by the researcher, the Student Teaching Internship Self-Assessment (Appendix B). The instrument was
adapted from the Performance Based Student Teaching Internship Evaluation and was used by teaching interns to rate their self-perceived ability on the MoSTEP quality indicators. The items on the instrument were based on the MoSTEP performance indicators, sub-components of meeting each of the MoSTEP quality indicators. Items were rated on a 6-point scale. The stem to the anchors was “I feel…” with the anchors of

1 = “not proficient in my…”, 2 = “slightly proficient, but need considerable improvement in my…”, 3 = “somewhat proficient, but need improvement in my…”, 4 = “adequately proficient, at an average level in my…”, 5 = “very proficient, exceeding the norm in my…”, and 6 = “extremely proficient, well above and beyond the norm in my…”. The end of each stem was the component of the MoSTEP performance indicator that addressed the quality indicator.

Validity was addressed using a panel of experts ($n = 5$) of agricultural education faculty from the University of Missouri-Columbia to address content, instrumentation, and insight on the teaching interns. Content reflected the MoSTEP quality indicators.

**Data Collection**

The Student Teaching Internship Self-Assessment was administered to the teaching interns at the beginning of the student teaching internship and at the completion of the student teaching internship. The data were gathered as part of the coursework for an intact seminar during the student teaching internship. Directly administering the instrument to the teaching interns ensured a high response rate, as the interns met for seminar five times throughout the 16-week student teaching internship. The dates of the student teaching internship were January 3, 2005 – April 26, 2005. To assess the
teaching interns’ self-perceived level of proficiency of the MoSTEP quality indicators at
the beginning of the internship, the instrument was administered during the first seminar
on January 14, 2005. The instrument was again administered to evaluate teaching
interns’ self-perceived level of proficiency of the MoSTEP quality indicators at the
conclusion of the student teaching internship, which was during the final seminar held on
May 4, 2005.

Cooperating teachers’ perceptions of their respective teaching interns’ level of
proficiency regarding the MoSTEP quality indicators was gathered at the mid-point and
completion of the student teaching internship. The mid-point of the student teaching
internship was used to collect data from the cooperating teachers on teaching interns’
level of proficiency rather than the beginning because cooperating teachers would not
have been able to adequately assess teaching interns at the beginning. The Performance
Based Student Teaching Internship Evaluation was gathered as required coursework for
the teaching interns to successfully complete the student teaching internship. University
internship supervisors collected evaluations of the teaching interns by their respective
cooperating teachers. The perceptions were based on the Performance Based Student
Evaluations were submitted to the university supervisors on March 4, 2005 (mid-point),
and April 29, 2005 (final).

After the data from teaching interns and cooperating teachers were collected, the
teacher certification measures were collected. Teaching interns’ transcripts were used in
gathering certification data. ACT examination, C-BASE scores, NTE PRAXIS in
agriculture, and cumulative university grade point average data were secured directly
from transcripts. The education coursework grade point average, agricultural education grade point average, and content area (agriculture) grade point average were calculated using information provided by the teaching interns’ transcripts. Courses taken by the teaching interns were divided into the corresponding grade point average and calculated.

**Data Analysis**

Data were analyzed using SPSS/Windows version 12.0 computer program. The alpha level was set at .05 *a priori*. Davis’ (1971) descriptions were used to describe magnitude of the relationships.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Description of Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>.70 or greater</td>
<td>Very Strong</td>
</tr>
<tr>
<td>.50 to .69</td>
<td>Substantial</td>
</tr>
<tr>
<td>.30 to .49</td>
<td>Moderate</td>
</tr>
<tr>
<td>.10 to .29</td>
<td>Low</td>
</tr>
<tr>
<td>.01 to .09</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

To describe the summated mean scores for the 11 MoSTEP quality indicators, the “Teaching Internship Handbook” from the Department of Agricultural Education at the University of Missouri-Columbia (2005) provided descriptions based upon the 6-point scale that was used in the instrumentation (Table 5).
**Table 5**

*Descriptions for the Performance Based Student Teaching Internship Evaluation*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Meeting the Standard</td>
<td>Meets the Standard</td>
<td>Exceeds the Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6 = Intern consistently functions at a superior level of performance and constantly strives to expand scope and ability. Intern ranks in the upper 10% of his/her peers.

5 = Intern frequently functions at an outstanding level of performance and frequently strives to expand scope and ability. Intern ranks in the upper 25% of his/her peers.

4 = Intern demonstrates adequate/acceptable levels of performance, occasionally demonstrating a high level of performance. Intern often strives to expand scope and ability. Intern ranks in the upper 50% of his/her peers.

3 = Intern functions at an adequate/acceptable level of performance. Intern demonstrates consistent practice expected at an acceptable level. Intern maintains scope and ability. Intern ranks in the upper 75% of his/her peers.

2 = Intern sometimes functions at an inadequate/unacceptable level of performance and needs improvement. Intern requires assistance to maintain scope and ability. Intern ranks in the lower 25% of his/her peers.

1 = Intern consistently functions at an inadequate/unacceptable level of performance. Intern requires improvement to meet minimum expectations. Intern ranks in the lower 10% of his/her peers.

* Scores are an indication of performance toward an established standard and should not be interpreted as letter grades.

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Descriptive statistics (mean, standard deviation and range) were used to report interval data for research objectives one, two and three. Stepwise multiple regression was used to investigate objective four. Stepwise multiple regression determines the influence of independent variables on the dependent variable. For research objective
four, the independent variables were the teacher certification measures: ACT
Examination score, cumulative university GPA which was broken down into education
coursework GPA, agricultural education GPA and content area (agriculture) GPA, C-
BASE scores in English, writing, science, math and social studies, and NTE PRAXIS in
agriculture score. The dependent variable was the teaching interns’ performance of the
MoSTEP quality indicators as assessed by their respective cooperating teachers.
Research objectives five and six were correlated using the Pearson Product moment
correlation ($r$), due to the data being interval in nature (Waigandt, 2003). Pearson
Product moment correlation assumes that data follows a normal distribution and the
relationship between variables is linear (Waigandt, 2003).

**Summary**

The end-sought purpose of this study was to explore and describe using
descriptive correlational research. Sixteen teaching interns from the University of
Missouri-Columbia and their 16 respective cooperating teachers made up the population
for the study during the 2005 winter semester. Six variables were utilized in the study,
being further divided based upon the variable. The Performance Based Student Teaching
Internship Evaluation was completed by the cooperating teachers at the mid-point and
completion of the student teaching internship. Teaching interns completed a slightly
modified version of the evaluation the cooperating teachers completed, the Student
Teaching Internship Self-Assessment. Teaching interns completed the self-assessment at
the beginning and completion of the student teaching internship. Teacher certification
measures were collected by using the teaching interns’ transcripts. Interval data were
collected with mean, standard deviation, and range calculated. Stepwise multiple regression was used to determine if the teacher certification measures were predictive of teaching interns’ performance. Pearson Product moment correlation was used in determining relationships between variables.
CHAPTER IV

FINDINGS

Purpose of the Study

The purpose of the study was to assess student teaching interns’ level of proficiency of the MoSTEP quality indicators at the beginning and at the completion of the student teaching internship. The study further sought to compare the self-perceived proficiency levels of the teaching interns to their cooperating teachers’ evaluations of the interns’ level of proficiency on the MoSTEP quality indicators.

Research Objective One

Describe teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicators at the beginning and completion of the student teaching internship.

To address research objective one, descriptive statistics of the teaching interns’ self-perceived level of proficiency in relation to the MoSTEP quality indicators at the beginning and completion of the student teaching internship were calculated. Mean, standard deviation, and range were reported for each of the 11 MoSTEP quality indicators along with a summated score of the quality indicators (Table 6).
Table 6

Teaching Interns’ Self-Perceived Level of Proficiency on MoSTEP Quality Indicators
(n = 16)

<table>
<thead>
<tr>
<th>MoSTEP Quality Indicator</th>
<th>Beginning</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Technology in Teaching and Learning</td>
<td>3.86</td>
<td>0.83</td>
</tr>
<tr>
<td>Professional Responsibility</td>
<td>3.77</td>
<td>0.68</td>
</tr>
<tr>
<td>Communication</td>
<td>3.75</td>
<td>0.66</td>
</tr>
<tr>
<td>Reflection and Professional Growth</td>
<td>3.71</td>
<td>0.87</td>
</tr>
<tr>
<td>Curriculum</td>
<td>3.53</td>
<td>0.56</td>
</tr>
<tr>
<td>Learners and Learning</td>
<td>3.52</td>
<td>0.50</td>
</tr>
<tr>
<td>Instruction</td>
<td>3.38</td>
<td>0.67</td>
</tr>
<tr>
<td>Content</td>
<td>3.31</td>
<td>0.39</td>
</tr>
<tr>
<td>Assessment</td>
<td>3.28</td>
<td>0.71</td>
</tr>
<tr>
<td>Diversity</td>
<td>3.09</td>
<td>0.54</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>3.07</td>
<td>0.53</td>
</tr>
<tr>
<td>Summated Mean</td>
<td>3.48</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Note. Self-assessments scored on a 6-point scale (1 = not proficient in my..., 2 = slightly proficient, but need considerable improvement in my..., 3 = somewhat proficient, but need improvement in my..., 4 = adequately proficient, at an average level in my..., 5 = very proficient, exceeding the norm in my..., 6 = extremely proficient, well above and beyond the norm in my...).

Teaching interns reported lower scores at the beginning of the student teaching internship on each of the 11 MoSTEP quality indicators than at the completion of the student teaching internship. Teaching interns’ mean scores on the 11 MoSTEP quality indicators at the beginning of the student teaching internship ranged from lows of 3.07 in...
classroom management and 3.09 in diversity to a high of 3.86 in technology in teaching and learning. Following the high in technology in teaching and learning ($M = 3.86$), there were five quality indicators that were also rated high, meaning adequate proficiency: professional responsibility ($M = 3.77$), communication ($M = 3.75$), reflection and professional growth ($M = 3.71$), curriculum ($M = 3.53$), and learners and learning ($M = 3.52$). Three of the quality indicators were rated in the somewhat proficient, but in need of improvement category: instruction ($M = 3.38$), content ($M = 3.31$), and assessment ($M = 3.28$). The summated mean score for the 11 MoSTEP quality indicators for the teaching interns at the beginning of the student teaching internship was: 3.48 ($SD = 0.51$). With a summated mean of 3.48 the teaching interns felt somewhat proficient, but needed improvement in their scope and ability to perform the quality indicators.

Teaching interns’ mean scores of the MoSTEP quality indicators at the completion of the student teaching internship ranged from 4.28 in diversity to 4.98 in communication and technology in teaching and learning. The summated mean score was a 4.64 ($SD = 0.55$). Teaching interns perceived they had performed adequately, with some high levels of performance, by the completion of the student teaching internship. Teaching interns’ perceived a growth of at least one point, on a 6-point scale, on all 11 MoSTEP quality indicators from the beginning of the internship to the completion. Standard deviations were consistent, all below 1.00.
Research Objective Two

Describe teaching interns’ level of proficiency on the MoSTEP quality indicators, as assessed by their cooperating teachers, at the mid-point and completion of the teaching internship.

To address research objective two, descriptive statistics of the teaching interns’ level of proficiency, as assessed by their respective cooperating teachers, on the MoSTEP quality indicators at the mid-point and completion of the student teaching internship was calculated. Mean, standard deviation, and range were reported for each of the 11 MoSTEP quality indicators as well as a summated score (Table 7).

Coopering teachers reported lower scores for their respective teaching interns at the mid-point of the student teaching internship on each of the 11 MoSTEP quality indicators than at the completion of the student teaching internship. The means of the MoSTEP quality indicators at the mid-point of the student teaching internship ranged from 4.25 in classroom management to 5.19 in professional responsibility and technology in teaching and learning. The summated mean score reported by the cooperating teachers for the teaching interns on the MoSTEP quality indicators at the mid-point of the student teaching internship was 4.68 (SD = 0.49), an indication that the cooperating teachers perceived the teaching interns were performing at an adequate level with some high levels of performance by the mid-point of the student teaching internship.

The means of the MoSTEP quality indicators at the completion of the student teaching internship ranged from 4.97 for classroom management to 5.75 for technology in teaching and learning. The summed mean score was 5.24 (SD = 0.59), an indication
that the cooperating teachers perceived the teaching interns frequently performed at a level “exceeding the standard” and strived to expand their abilities.

Table 7

Cooperating Teachers’ Assessment of Teaching Interns’ Level of Proficiency on MoSTEP Quality Indicators (n = 16)

<table>
<thead>
<tr>
<th>MoSTEP Quality Indicator</th>
<th>Mid-Point</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Technology in Teaching and Learning</td>
<td>5.19</td>
<td>0.75</td>
</tr>
<tr>
<td>Professional Responsibility</td>
<td>5.19</td>
<td>0.75</td>
</tr>
<tr>
<td>Communication</td>
<td>4.75</td>
<td>0.86</td>
</tr>
<tr>
<td>Reflection and Professional Growth</td>
<td>4.75</td>
<td>0.68</td>
</tr>
<tr>
<td>Content</td>
<td>4.75</td>
<td>0.77</td>
</tr>
<tr>
<td>Instruction</td>
<td>4.69</td>
<td>0.70</td>
</tr>
<tr>
<td>Diversity</td>
<td>4.59</td>
<td>0.92</td>
</tr>
<tr>
<td>Curriculum</td>
<td>4.50</td>
<td>0.82</td>
</tr>
<tr>
<td>Assessment</td>
<td>4.50</td>
<td>0.63</td>
</tr>
<tr>
<td>Learners and Learning</td>
<td>4.38</td>
<td>0.81</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>4.25</td>
<td>0.68</td>
</tr>
<tr>
<td>Summated Mean</td>
<td>4.68</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Note. Assessments scored on a 6-point scale (1 – 2 = not yet meeting the standard, 3 – 4 = meets the standard, 5 – 6 = exceeds the standard).
**Research Objective Three**

Compare teaching interns’ self-perceived level of proficiency to their respective cooperating teachers’ assessment of the MoSTEP quality indicators at the completion of the 16-week student teaching internship.

Descriptive statistics from research objectives one and two were used to analyze research objective three (Table 8). Teaching interns’ self-perceived summated level of proficiency of the MoSTEP quality indicators at the completion of the student teaching internship ($M = 4.64, SD = 0.55$) was slightly lower than the assessment provided by their respective cooperating teachers ($M = 5.24, SD = 0.59$). Teaching interns’ means of the MoSTEP quality indicators at the completion of the student teaching internship ranged from 4.28 for diversity to 4.98 for communication and technology in teaching and learning. Cooperating teachers’ means of their respective teaching interns on the MoSTEP quality indicators at the completion of the student teaching internship ranged from 4.97 in classroom management to 5.75 in technology in teaching and learning.

Cooperating teachers rated teaching interns higher on all 11 MoSTEP quality indicators than teaching interns’ rated themselves. The greatest difference in perceived growth between the teaching interns’ self-perceptions and cooperating teachers’ assessment of the teaching interns on the 11 MoSTEP quality indicators was in diversity (0.91) and content (0.87). The least amount of difference in the perceived growth was in curriculum (0.38) and communication (0.33).
Table 8

*Comparison of Teaching Interns’ Self-Perceived Assessment to Cooperating Teachers’ Assessment on the Level of Proficiency on the MoSTEP Quality Indicators at Completion of Student Teaching Internship (n = 16)*

<table>
<thead>
<tr>
<th>MoSTEP Quality Indicator</th>
<th>Teaching Interns</th>
<th></th>
<th>Cooperating Teachers</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>Range</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Diversity</td>
<td>4.28</td>
<td>0.76</td>
<td>3.25 - 5.75</td>
<td>5.19</td>
<td>0.75</td>
</tr>
<tr>
<td>Content</td>
<td>4.32</td>
<td>0.53</td>
<td>3.40 - 5.30</td>
<td>5.19</td>
<td>0.75</td>
</tr>
<tr>
<td>Technology in Teaching and Learning</td>
<td>4.98</td>
<td>0.75</td>
<td>3.50 - 6.00</td>
<td>5.75</td>
<td>0.58</td>
</tr>
<tr>
<td>Instruction</td>
<td>4.73</td>
<td>0.77</td>
<td>3.00 - 6.00</td>
<td>5.50</td>
<td>0.63</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>4.38</td>
<td>0.72</td>
<td>2.50 - 5.67</td>
<td>4.97</td>
<td>0.94</td>
</tr>
<tr>
<td>Professional Responsibility</td>
<td>4.90</td>
<td>0.60</td>
<td>3.50 - 6.00</td>
<td>5.44</td>
<td>0.96</td>
</tr>
<tr>
<td>Assessment</td>
<td>4.48</td>
<td>0.78</td>
<td>3.20 - 5.80</td>
<td>5.00</td>
<td>0.82</td>
</tr>
<tr>
<td>Learners and Learning</td>
<td>4.51</td>
<td>0.61</td>
<td>3.50 - 5.75</td>
<td>5.00</td>
<td>0.63</td>
</tr>
<tr>
<td>Reflection and Professional Growth</td>
<td>4.79</td>
<td>0.70</td>
<td>3.67 - 6.00</td>
<td>5.25</td>
<td>0.58</td>
</tr>
<tr>
<td>Curriculum</td>
<td>4.65</td>
<td>0.65</td>
<td>3.40 - 5.80</td>
<td>5.03</td>
<td>0.90</td>
</tr>
<tr>
<td>Communication</td>
<td>4.98</td>
<td>0.49</td>
<td>4.00 - 6.00</td>
<td>5.31</td>
<td>0.95</td>
</tr>
<tr>
<td>Summated Mean</td>
<td>4.64</td>
<td>0.55</td>
<td>3.69 - 5.60</td>
<td>5.24</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Perceived growth for the teaching interns’ level of proficiency on the 11 MoSTEP quality indicators is reported in Table 9. Perceived growth for the teaching interns was reported as the difference in teaching interns’ self-perceived level of proficiency at the beginning of the student teaching internship to the completion. Perceived growth of the
teaching interns’, as assessed by their cooperating teachers, was calculated as the difference between the mid-point and final assessments.

Table 9

Perceived Growth on the MoSTEP Quality Indicators ($n = 16$)

<table>
<thead>
<tr>
<th>MoSTEP Quality Indicator</th>
<th>Perceived Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teaching Interns</td>
</tr>
<tr>
<td>Instruction</td>
<td>1.35</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>1.31</td>
</tr>
<tr>
<td>Communication</td>
<td>1.23</td>
</tr>
<tr>
<td>Assessment</td>
<td>1.20</td>
</tr>
<tr>
<td>Diversity</td>
<td>1.19</td>
</tr>
<tr>
<td>Professional Responsibility</td>
<td>1.13</td>
</tr>
<tr>
<td>Technology in Teaching and Learning</td>
<td>1.12</td>
</tr>
<tr>
<td>Curriculum</td>
<td>1.12</td>
</tr>
<tr>
<td>Reflection and Professional Growth</td>
<td>1.08</td>
</tr>
<tr>
<td>Content</td>
<td>1.01</td>
</tr>
<tr>
<td>Learners and Learning</td>
<td>0.99</td>
</tr>
<tr>
<td>Summated Mean</td>
<td>1.16</td>
</tr>
</tbody>
</table>

Teaching interns’ self-perceived level of proficiency on the 11 MoSTEP quality indicators from the beginning of the student teaching internship to the completion all increased by at least one point. The greatest amount of growth, as perceived by the teaching interns over the 16-week internship, occurred in instruction (1.35) and classroom management (1.31). The least amount of growth was reported in content
Cooperating teachers reported teaching interns’
grew by at least 0.50 on the 11 MoSTEP quality indicators from mid-point to completion,
with the exception of professional responsibility (0.25). Cooperating teachers also
reported that teaching interns’ grew the most in instruction (0.81) and classroom
management (0.72).

Research Objective Four
Describe the teacher certification measures, or combination of measures, that were
predictive of the teaching interns’ performance of the MoSTEP quality indicators, as
assessed by their respective cooperating teachers.

Data for teacher certification measures were collected from the teaching interns’
official transcripts from the University of Missouri-Columbia. Teacher certification
measures examined by the Teacher Development Program at the University of Missouri-
Columbia and collected for each teaching intern were: ACT Composite score, cumulative
GPA, content area (agriculture) GPA, C-BASE scores (English, math, social studies,
science, and writing), and NTE PRAXIS specialty area tests. Minimum scores on the
teacher certification measures are required to be accepted into and remain in the teacher
education program. Each teaching interns’ grade point average was further divided into
education coursework GPA and agricultural education coursework GPA. Descriptive
statistics were calculated for the teacher certification measures (Table 10).
Table 10

Descriptive Data of Teacher Certification Measures ($n = 16$)

<table>
<thead>
<tr>
<th>Teacher Certification Measure</th>
<th>$M$</th>
<th>$SD$</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Composite Score</td>
<td>25.88</td>
<td>3.03</td>
<td>20 - 31</td>
</tr>
<tr>
<td>Cumulative University GPA</td>
<td>3.53</td>
<td>0.29</td>
<td>3.04 - 3.96</td>
</tr>
<tr>
<td>Education Coursework GPA</td>
<td>3.72</td>
<td>0.18</td>
<td>3.20 - 3.92</td>
</tr>
<tr>
<td>Agriculture Coursework GPA</td>
<td>3.50</td>
<td>0.40</td>
<td>2.73 - 4.00</td>
</tr>
<tr>
<td>Agricultural Education Coursework GPA</td>
<td>3.91</td>
<td>0.17</td>
<td>3.39 - 4.00</td>
</tr>
<tr>
<td>C-BASE English</td>
<td>314.56</td>
<td>29.12</td>
<td>248 - 358</td>
</tr>
<tr>
<td>C-BASE Math</td>
<td>375.88</td>
<td>53.21</td>
<td>256 - 469</td>
</tr>
<tr>
<td>C-BASE Social Studies</td>
<td>325.81</td>
<td>37.88</td>
<td>250 - 378</td>
</tr>
<tr>
<td>C-BASE Science</td>
<td>335.75</td>
<td>63.65</td>
<td>208 - 417</td>
</tr>
<tr>
<td>C-BASE Writing</td>
<td>313.00</td>
<td>38.81</td>
<td>247 - 387</td>
</tr>
<tr>
<td>NTE PRAXIS (Agriculture)</td>
<td>613.33</td>
<td>53.01</td>
<td>510 - 720</td>
</tr>
</tbody>
</table>

The ACT Composite mean for the teaching interns was 25.9, compared to 22, the minimum requirement for admission into the Teacher Development Program at the University of Missouri-Columbia. Cumulative GPA mean was 3.53, compared to the cumulative GPA requirement of 2.75 for admission and retention in the Teacher Development Program. Content area (agriculture) GPA mean for the teaching interns was calculated at 3.50, compared to the minimum requirement of 2.50 for teacher licensure. C-BASE mean scores were 314.6 in English, 375.9 in math, 325.8 in social studies, 335.8 in science, and 313.0 in writing. All C-BASE mean scores well exceeded the 235 minimum score. The mean for the NTE PRAXIS in agriculture was 613.3, which exceeds the required score of 520.
Bivariate correlational statistics were used to analyze the teacher certification measures data (Table 11). The intercorrelations between the teacher certification measures, or predictor variables, were placed into a matrix to examine potential issues with multicollinearity.

Using guidelines suggested by Lewis-Beck (1980), each teacher certification measure was regressed on the remaining measures, or independent variables. Regressing the teacher certification requirements prior to removing any of the independent variables showed several high $R^2$ values. Higher $R^2$ values were most noted in agriculture GPA at 0.94 and agricultural education GPA (0.87). Adjusted $R^2$ values and initial concerns for multicollinearity were examined, which led to the removal of cumulative university GPA from the regression equation and further consideration in the study. The remaining teacher certification measures were regressed using stepwise multiple regression. Stepwise multiple regression was used as it is a good model for prediction.
Table 11

*Intercorrelations Among Teacher Certification Measures (n = 16)*

<table>
<thead>
<tr>
<th>Teacher Certification Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>R²&lt;sup&gt;a&lt;/sup&gt;</th>
<th>R²&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACT Composite Score</td>
<td>1.00</td>
<td>0.63</td>
<td>0.59</td>
<td>0.58</td>
<td>0.68</td>
<td>0.61</td>
<td>0.71</td>
<td>0.35</td>
<td>0.68</td>
<td>0.61</td>
<td>0.36</td>
<td>0.78</td>
<td>0.78</td>
</tr>
<tr>
<td>2. Cumulative University GPA</td>
<td>1.00</td>
<td>0.47</td>
<td>0.86</td>
<td>0.48</td>
<td>0.37</td>
<td>0.40</td>
<td>0.44</td>
<td>0.72</td>
<td>0.38</td>
<td>0.52</td>
<td>0.76</td>
<td>---</td>
<td>c</td>
</tr>
<tr>
<td>3. Education GPA</td>
<td>1.00</td>
<td>0.21</td>
<td>0.09</td>
<td>0.20</td>
<td>0.29</td>
<td>0.11</td>
<td>0.57</td>
<td>0.19</td>
<td>0.02</td>
<td>0.25</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Agriculture GPA</td>
<td>1.00</td>
<td>0.72</td>
<td>0.37</td>
<td>0.50</td>
<td>0.23</td>
<td>0.63</td>
<td>0.31</td>
<td>0.57</td>
<td>0.94</td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Agricultural Education GPA</td>
<td>1.00</td>
<td>0.69</td>
<td>0.56</td>
<td>-0.03</td>
<td>0.45</td>
<td>0.61</td>
<td>0.37</td>
<td>0.87</td>
<td>0.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. C-BASE English</td>
<td>1.00</td>
<td>0.15</td>
<td>0.15</td>
<td>0.42</td>
<td>0.71</td>
<td>0.22</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. C-BASE Math</td>
<td>1.00</td>
<td>0.26</td>
<td>0.54</td>
<td>0.49</td>
<td>0.64</td>
<td>0.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. C-BASE Social Studies</td>
<td>1.00</td>
<td>0.33</td>
<td>0.25</td>
<td>0.34</td>
<td>---&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c</td>
</tr>
<tr>
<td>9. C-BASE Science</td>
<td>1.00</td>
<td>0.51</td>
<td>0.52</td>
<td>0.47</td>
<td>0.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. C-BASE Writing</td>
<td>1.00</td>
<td>0.34</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. NTE PRAXIS (Agriculture)</td>
<td>1.00</td>
<td>0.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Adjusted R² value prior to removing any of the independent variables.

<sup>b</sup> Adjusted R² value after removing cumulative university GPA.

<sup>c</sup> No variables entered the regression equation.
Bivariate correlational analysis between cooperating teachers’ final assessment of the teaching interns on the MoSTEP quality indicators and the teacher certification measures is presented in Table 12.

Table 12

_Bivariate Correlations Between Cooperating Teachers’ Final Teaching Intern Assessment and Teacher Certification Measures (n = 16)_

<table>
<thead>
<tr>
<th>Teacher Certification Measure</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Composite Score</td>
<td>-0.01</td>
</tr>
<tr>
<td>Education GPA</td>
<td>0.17</td>
</tr>
<tr>
<td>Agriculture GPA</td>
<td>-0.03</td>
</tr>
<tr>
<td>Agricultural Education GPA</td>
<td>0.02</td>
</tr>
<tr>
<td>C-BASE English</td>
<td>-0.17</td>
</tr>
<tr>
<td>C-BASE Math</td>
<td>0.23</td>
</tr>
<tr>
<td>C-BASE Social Studies</td>
<td>-0.16</td>
</tr>
<tr>
<td>C-BASE Science</td>
<td>0.24</td>
</tr>
<tr>
<td>C-BASE Writing</td>
<td>-0.12</td>
</tr>
<tr>
<td>NTE PRAXIS (Agriculture)</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Pearson Product moment correlation ($r$) was reported in the bivariate correlational analysis. Teaching interns’ level of proficiency on the MoSTEP quality indicators, as assessed by their respective cooperating teachers at the completion of the student teaching internship, was found to have low positive correlations with education GPA ($r = 0.17$), C-BASE Math ($r = 0.23$), C-BASE Science ($r = 0.24$), and NTE PRAXIS in agriculture ($r = 0.26$). A negligible positive correlation was identified with agricultural education GPA ($r = 0.02$). Low negative correlations with the teaching interns’ level of proficiency on the MoSTEP quality indicators included C-BASE English ($r = -0.17$),
C-BASE social studies \( (r = -0.16) \), and C-BASE writing \( (r = -0.12) \). Negligible negative correlations with ACT Composite score \( (r = -0.01) \) and agriculture GPA \( (r = -0.03) \) were also discovered. Negative correlations indicated that as scores on C-BASE English, C-BASE writing, C-BASE social studies, ACT Composite score, and agriculture GPA decreased, teaching interns’ level of proficiency on the MoSTEP quality indicators slightly increased.

Stepwise multiple regression analysis was utilized to determine the best teacher certification measure, or combination of teacher certification measures, that were predictive of the teaching interns’ performance of the MoSTEP quality indicators, as assessed by their respective cooperating teachers. The final assessment of the MoSTEP quality indicators on the teaching interns by their respective cooperating teachers served as the dependent variable in the regression. When the teacher certification measures were regressed on the dependent variable, there was no single certification measure, or combination of measures, that were found to be significant in predicting the teaching interns’ level of proficiency on the MoSTEP quality indicators.

**Research Objective Five**

Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content knowledge, as perceived by the teaching interns at the completion of the student teaching internship.

Correlational analysis between teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicator regarding content knowledge (agriculture)
at the completion of the student teaching internship, agriculture coursework GPA, and NTE PRAXIS in agriculture were performed (Table 13). There was a substantial positive correlation between agriculture coursework GPA and NTE PRAXIS in agriculture \((r = 0.57)\). A moderate negative correlation \((r = -0.30)\) between NTE PRAXIS in agriculture and teaching interns’ self-perceived responses at the completion of the student teaching internship regarding content knowledge was discovered. A low negative correlation \((r = -0.25)\) between agriculture coursework GPA and teaching interns’ self-perceived responses at the completion of the student teaching internship regarding content knowledge was also identified.

Table 13

<table>
<thead>
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<th>Variable</th>
<th>1</th>
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<tr>
<td>1. Agriculture Coursework GPA</td>
<td>1.00</td>
<td>0.57</td>
<td>-0.25</td>
</tr>
<tr>
<td>2. NTE PRAXIS (Agriculture)</td>
<td></td>
<td>1.00</td>
<td>-0.30</td>
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<tr>
<td>3. Teaching Interns’ Self-Perceived Level of Proficiency</td>
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**Research Objective Six**

Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content knowledge, as assessed by the cooperating teachers at the completion of the student teaching internship.

Correlational analysis between cooperating teachers’ final assessment of their respective teaching interns’ level of proficiency on the MoSTEP quality indicator
regarding content knowledge, agriculture coursework GPA, and NTE PRAXIS in agriculture were performed and are presented in Table 14. A substantial positive correlation existed between agriculture coursework GPA and NTE PRAXIS in agriculture ($r = 0.57$). A moderate positive correlation also existed between NTE PRAXIS in agriculture and the cooperating teachers’ final assessment of teaching interns’ content knowledge ($r = 0.30$). A negligible negative correlation ($r = -0.05$) between agriculture coursework GPA and cooperating teachers’ final assessment of teaching interns’ content knowledge was also revealed.

Table 14

*Correlations Between Cooperating Teachers’ Final Assessment of Teaching Interns’ Level of Proficiency on MoSTEP Quality Indicator on Content Knowledge, Agriculture Coursework GPA, and NTE PRAXIS (Agriculture) (n = 16)*

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<th>Variable</th>
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<tr>
<td>1. Agriculture Coursework GPA</td>
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<td>3. Cooperating Teachers’ Final Assessment (Content Knowledge)</td>
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SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Purpose and Research Objectives of the Study

The purpose of the study was to assess student teaching interns’ level of proficiency of the MoSTEP quality indicators at the beginning and at the completion of the student teaching internship. The study further sought to compare the self-perceived proficiency levels of the teaching interns to their cooperating teachers’ evaluations of the interns’ level of proficiency on the MoSTEP quality indicators. The following research objectives were constructed to guide the study:

1. Describe teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicators at the beginning and completion of the student teaching internship.

2. Describe teaching interns’ level of proficiency on the MoSTEP quality indicators, as assessed by their cooperating teachers, at the mid-point and completion of the teaching internship.

3. Compare teaching interns’ self-perceived level of proficiency to their respective cooperating teachers’ assessment of the MoSTEP quality indicators at the completion of the 16-week student teaching internship.

4. Describe the teacher certification measures, or combination of measures, that were predictive of the teaching interns’ performance of the MoSTEP quality indicators, as assessed by their respective cooperating teachers.

5. Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content
knowledge, as perceived by the teaching interns at the completion of the student teaching internship.

6. Describe the relationship among teaching interns’ content area grade point average, PRAXIS exam score, and the MoSTEP quality indicator regarding content knowledge, as assessed by the cooperating teachers at the completion of the student teaching internship.

Limitations

The study was limited in terms of data collection. Data collection was limited to agricultural education teaching interns completing teacher certification at the University of Missouri-Columbia in 2005. Results of this study should be used with caution in regards to other groups of teaching interns, as in results should only be applied to agricultural education teaching interns with similar characteristics to the accessible population in the study.

Research Design

Descriptive correlational research was the research design used for the study. Descriptive correlational research explores the relationships among certain variables. Descriptive correlational research was also utilized to describe the relationship between teacher certification measures and the data collected from the teaching interns and their respective cooperating teachers on the teaching interns’ level of proficiency of the MoSTEP quality indicators. Cooperating teachers’ responses on teaching interns’ level
of proficiency were evaluated from the mid-point and final assessment of the MoSTEP quality indicators.

**Population**

The target population consisted of agricultural education student teaching interns who were certifying to teach through the University of Missouri-Columbia. The purposeful sample consisted of 7 male and 9 female teaching interns ($n = 16$). The purposeful sample also consisted of the teaching interns’ respective cooperating teachers ($n = 16$), which included 15 male and 1 female. Teaching interns were located at a variety of field placement sites across the state, all with licensed secondary agriculture teachers. The student teaching internship was completed during the 2005 winter semester. The teaching interns were enrolled in an intact internship experience through the Department of Agricultural Education at the University of Missouri-Columbia.

**Instrumentation**

Two data collection instruments were used to address the research objectives of the study. The Performance Based Student Teaching Internship Evaluation was a pre-established assessment designed and utilized by the Teacher Development Program and the Department of Agricultural Education at the University of Missouri-Columbia. The assessment instrument was designed for cooperating teachers to assess the performance of teaching interns during the 16-week student teaching internship. The assessment instrument’s content was derived from the Missouri Standards for Teacher Education Programs (MoSTEP). Cooperating teachers were required to use the instrument to assess
their respective teaching interns at the mid-point and completion of the teaching internship. The instrument was scored on a 6-point scale with assigned anchor descriptions, and ranged from not meeting the standard to exceeds the standard.

A second assessment instrument, the Student Teaching Internship Self-Assessment, was adapted from the Performance Based Student Teaching Internship Evaluation and was used by teaching interns to rate their self-perceived ability on the MoSTEP quality indicators. The items on the instrument were based on the MoSTEP performance indicators, sub-components of meeting each of the MoSTEP quality indicators. Items were rated on a 6-point scale with anchor descriptions. The stem to the anchors was “I feel…” with the anchors ranging from 1 = “not proficient in my…”, to 6 = “extremely proficient, well above and beyond the norm in my…”. The end of each stem was the component of the MoSTEP performance indicator that addressed the quality indicator.

Data Collection

The Student Teaching Internship Self-Assessment was administered to the teaching interns at the beginning and at the completion of the student teaching internship. The data were gathered as part of the coursework for an intact seminar during the student teaching internship. Cooperating teachers’ perceptions of their respective teaching interns’ level of proficiency regarding the MoSTEP quality indicators were gathered at the mid-point and completion of the student teaching internship by university internship supervisors.
After the data were collected from the teaching interns and cooperating teachers, the teacher certification measures were collected and calculated using the teaching interns’ transcripts. ACT examination, C-BASE scores, NTE PRAXIS in agriculture, and cumulative university grade point average data were secured directly from transcripts. The education coursework grade point average, agricultural education grade point average, and content area (agriculture) grade point average were calculated using information provided by the teaching interns’ transcripts.

**Data Analysis**

Data were analyzed using SPSS/Windows version 12.0 computer program. The alpha level was set at .05 *a priori*. Descriptive statistics (mean, standard deviation and range) were used to report interval data for research objectives one, two and three. Stepwise multiple regression was used to investigate objective four to determine the influence of independent variables (ACT Examination score, cumulative university GPA, education coursework GPA, agricultural education GPA, agriculture GPA, C-BASE scores in English, writing, science, math and social studies, and NTE PRAXIS in agriculture score) on the dependent variable (teaching interns’ performance of the MoSTEP quality indicators as assessed by their respective cooperating teachers). Research objectives five and six were correlated using the Pearson Product moment correlation (*r*), due to the data being interval in nature.
Summary of Findings

Research Objective One

Descriptive statistics of the teaching interns’ self-perceived level of proficiency in relation to the 11 MoSTEP quality indicators at the beginning and completion of the student teaching internship was calculated. Teaching interns reported lower scores at the beginning of the student teaching internship on each of the 11 MoSTEP quality indicators, which increased by at least one point by the completion of the internship. Mean scores on the 11 MoSTEP quality indicators at the beginning of the student teaching internship ranged from 3.07 in classroom management to 3.86 in technology in teaching and learning. The summated mean score for the 11 MoSTEP quality indicators for the teaching interns at the beginning of the student teaching internship \((M = 3.48, \ SD = 0.51)\) reflected that teaching interns felt somewhat proficient in their ability to perform the quality indicators.

Teaching interns’ mean scores of the MoSTEP quality indicators at the completion of the student teaching internship ranged from 4.28 in diversity to 4.98 in communication and technology in teaching and learning. The summated mean score \((M = 4.64, \ SD = 0.55)\) indicated teaching interns felt adequately proficient in the 11 MoSTEP quality indicators by the completion of the student teaching internship.

Research Objective Two

Descriptive statistics of the teaching interns’ level of proficiency, as assessed by their respective cooperating teachers, on each of the 11 MoSTEP quality indicators at the mid-point and completion of the student teaching internship was calculated. Cooperating teachers reported lower scores for their respective teaching interns at the mid-point of the
student teaching internship on each of the 11 MoSTEP quality indicators than at the
completion of the student teaching internship. The means of the MoSTEP quality
indicators at the mid-point of the student teaching internship ranged from 4.25 in
classroom management to 5.19 in professional responsibility and technology in teaching
and learning. The summated mean score reported by the cooperating teachers for the
teaching interns on the MoSTEP quality indicators at the mid-point was 4.68 (SD = 0.49).

Means of the MoSTEP quality indicators at the completion of the student teaching
internship ranged from 4.97 for classroom management to 5.75 for technology in
teaching and learning. The summated mean score (M = 5.24, SD = 0.59) indicated that
cooperating teachers perceived the teaching interns frequently performed at an
outstanding level at the completion of the internship experience.

Research Objective Three

Descriptive statistics were used to compare the teaching interns’ self-perceived
level of proficiency on the MoSTEP quality indicators at completion to their respective
cooperating teachers’ final assessment. Teaching interns’ self-perceived summated level
of proficiency of the MoSTEP quality indicators at the completion of the student teaching
internship (M = 4.64, SD = 0.55) was slightly lower than the assessment provided by their
respective cooperating teachers (M = 5.24, SD = 0.59). Teaching interns’ means of the
MoSTEP quality indicators at the completion of the student teaching internship ranged
from 4.28 for diversity to 4.98 for communication and technology in teaching and
learning. Cooperating teachers’ means of their respective teaching interns on the
MoSTEP quality indicators at the completion of the student teaching internship ranged
from 4.97 in classroom management to 5.75 in technology in teaching and learning.
Cooperating teachers rated teaching interns higher on all 11 MoSTEP quality indicators than teaching interns’ rated themselves. Both cooperating teachers and teaching interns reported that the greatest growth occurred in instruction (0.81 and 1.35, respectively) and classroom management (0.72 and 1.31, respectively). The greatest difference in perceived growth was in diversity (0.91) and content (0.87), with the least amount in curriculum (0.38) and communication (0.33).

Research Objective Four

Data for teacher certification measures were collected from the teaching interns’ official transcripts from the University of Missouri-Columbia. Descriptive statistics were calculated for the teacher certification measures. Potential multicollinearity concerns were identified between cumulative university GPA and content area (agriculture) GPA ($r = 0.86$). Using guidelines suggested by Lewis-Beck (1980), several high $R^2$ values were shown with the most noted in agriculture GPA at 0.94 and 0.87 for agricultural education GPA. Adjusted $R^2$ values and initial concerns for multicollinearity were examined, which led to the removal of cumulative university GPA from the regression equation and further consideration in the study.

Bivariate correlational analysis between cooperating teachers’ final assessment of the teaching interns on the MoSTEP quality indicators and the teacher certification measures revealed positive correlations with agricultural education GPA ($r = 0.02$), education GPA ($r = 0.17$), C-BASE Math ($r = 0.23$), C-BASE Science ($r = 0.24$), and NTE PRAXIS in agriculture ($r = 0.26$). Negative correlations with the teaching interns’ level of proficiency on the MoSTEP quality indicators included ACT Composite score.
(r = -0.01), agriculture GPA (r = -0.03), C-BASE writing (r = -0.12), C-BASE social studies (r = -0.16), and C-BASE English (r = -0.17).

Stepwise multiple regression analysis was utilized to determine the best teacher certification measure, or combination of teacher certification measures, that were predictive of the teaching interns’ performance of the MoSTEP quality indicators, as assessed by their respective cooperating teachers. Based on the teacher certification measures regressed with the final assessment of the MoSTEP quality indicators on the teaching interns by their respective cooperating teachers, there was no single certification measure, or combination of measures, that were found to be significant in predicting the teaching interns’ level of proficiency on the MoSTEP quality indicators.

Research Objective Five

Correlational analysis between teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicator regarding content knowledge (agriculture) at the completion of the student teaching internship, agriculture coursework GPA, and NTE PRAXIS in agriculture revealed a substantial positive correlation between agriculture coursework GPA and NTE PRAXIS in agriculture (r = 0.57). Negative correlations were discovered between NTE PRAXIS in agriculture and teaching interns’ self-perceived responses on content knowledge at the completion of the student teaching internship (r = -0.30), as well as agriculture coursework GPA and teaching interns’ self-perceived responses on content knowledge (r = -0.25).

Research Objective Six

Correlational analysis between cooperating teachers’ final assessment of their respective teaching interns’ level of proficiency on content knowledge, agriculture
coursework GPA, and NTE PRAXIS in agriculture identified a positive correlation between agriculture coursework GPA and NTE PRAXIS in agriculture ($r = 0.57$). In addition, a positive correlation existed between NTE PRAXIS in agriculture and the cooperating teachers’ final assessment of teaching interns’ content knowledge ($r = 0.30$). A negative correlation ($r = -0.05$) between agriculture coursework GPA and cooperating teachers’ final assessment of teaching interns’ content knowledge was also revealed.

Conclusions and Implications

Conclusions: Research Objective One

The student teaching internship made a positive difference in the teaching interns’ level of proficiency on all 11 MoSTEP quality indicators. Nearly one point of growth existed between the teaching interns’ self-perceived level of proficiency at the beginning of the student teaching internship and the completion of the internship on all 11 MoSTEP quality indicators. Teaching interns went from being somewhat proficient at the beginning of the student teaching internship, to adequately proficient at the completion. The greatest growth was in instruction and classroom management, identifying that teaching interns may have been more apprehensive regarding classroom management skills and instruction at the beginning of the student teaching internship. The findings support prior research that teaching interns’ levels of proficiency related to teaching competencies grow from the student teaching internship (Haberman & Harris, 1982, as stated in Grimmett & Ratzlaff, 1986; Borne & Moss, 1990).
Implications: Research Objective One

The student teaching internship is important in the growth and development of teaching interns for the profession. Teaching interns’ perceived growth on all 11 MoSTEP quality indicators increased by at least one point, exhibiting that a high degree of learning does occur during the student teaching internship. Teaching interns grew the most in classroom management and instruction, which are two of the most practiced MoSTEP quality indicators during the student teaching internship.

Conclusions: Research Objective Two

Teaching interns’, as assessed by their respective cooperating teachers, met the standards by the completion of the student teaching internship. Teaching interns improved on all 11 MoSTEP quality indicators. A perceived improvement of at least a half a point, on a 6-point scale, was identified on 10 of the 11 MoSTEP quality indicators from the mid-point to final assessment. Professional responsibility only improved by 0.25, but was the highest rated indicator at the mid-point. The margin between scores narrowed from the mid-point to the completion of the internship. The greatest growth displayed by the teaching interns on the MoSTEP quality indicators, as assessed by their respective cooperating teachers, was in instruction and classroom management.

Implications: Research Objective Two

Cooperating teachers’ assessments of their respective teaching interns affirmed that the student teaching internship is imperative in strengthening the interns’ level of proficiency in regards to the MoSTEP quality indicators, as well as the profession. Cooperating teachers reported teaching interns’ growth by at least one-half a point on 10 of the 11 MoSTEP quality indicators. Therefore, implying a high degree of learning does
occur during the student teaching internship. As reported by cooperating teachers, teaching interns grew the most in classroom management and instruction, which are two of the most practiced MoSTEP quality indicators during the student teaching internship.

Conclusions: Research Objective Three

Teaching interns went from meeting the standards to exceeding the standards as a result of the student teaching internship. Cooperating teachers perceived the teaching interns higher on the 11 MoSTEP quality indicators than the teaching interns perceived themselves by the completion of the student teaching internship. Teaching interns may be more critical on their level of proficiency on the MoSTEP quality indicators. Both teaching interns and cooperating teachers reported the greatest amount of growth in classroom management and instruction, which could be argued to be the most practiced quality indicators during the student teaching internship.

Implications: Research Objective Three

Teaching interns’ self-perceived level of proficiency and cooperating teachers’ assessment of the teaching interns’ level of proficiency on the MoSTEP quality indicators reflected that the student teaching internship serves as a vital learning environment for preparing teaching interns for the profession. Quality indicators that are addressed the most during the student teaching internship, instruction and classroom management, are strengthened as a result of the internship experience. Teaching interns’ may be more critical of their level of proficiency at the beginning of the student teaching internship when comparing themselves to their peers and cooperating teachers, but exceed the expected standard by the end of the student teaching internship.
Conclusions: Research Objective Four

No single teacher certification measure, or combination of measures, was found to be significant in predicting the teaching interns’ level of proficiency on the MoSTEP quality indicators. The findings from this study support findings from Graham (2000), in that no measure, or combination of measures, were predictive of performance during the student teaching internship, as measured.

Implications: Research Objective Four

The use of teacher certification measures by teacher education programs in admitting and retaining candidates for certification may be limiting quality candidates who may not meet the minimum teacher certification requirements. While teacher certification measures serve as evidence for teacher education programs that they are preparing highly qualified teachers for the profession, the measures are not reflective of the actual performance of future teachers in regard to the MoSTEP quality indicators.

Conclusions: Research Objective Five

No significant correlation existed between teaching interns’ self-perceived level of proficiency on the MoSTEP quality indicator regarding content knowledge (agriculture) at the completion of the student teaching internship, agriculture coursework GPA, and NTE PRAXIS in agriculture.

Implications: Research Objective Five

The use of teacher certification measures, such as the NTE PRAXIS and content area GPA, by teacher education programs in admitting and retaining candidates for certification may decrease the number of quality candidates who may not meet the minimum requirements, but are still qualified. Examination scores and grade point
averages serve as evidence for teacher education programs that they are preparing highly qualified teachers for the profession. However, the hard numbers may not necessarily reflect the actual performance of the future teacher in regard to the MoSTEP quality indicators.

**Conclusions: Research Objective Six**

No significant correlation existed between cooperating teachers’ final assessment of the teaching interns’ level of proficiency on the MoSTEP quality indicator regarding content knowledge (agriculture), agriculture coursework GPA, and NTE PRAXIS in agriculture.

**Implications: Research Objective Six**

The use of teacher certification measures (NTE PRAXIS and content area GPA) by teacher education programs in admitting and retaining candidates for certification may decrease the number of quality candidates who may not meet the minimum requirements of the teacher certification measures. Examination scores and grade point averages serve as evidence for teacher education programs that they are preparing highly qualified teachers for the profession. However, the hard numbers may not necessarily reflect the actual performance of the future teacher in regards to the MoSTEP quality indicators.

**Recommendations**

**Recommendation One:**

Further investigation should be conducted to identify the factors influencing teaching interns’ learning of the 11 MoSTEP quality indicators during the student teaching internship. It is recommended that areas high in perceived growth, instruction
and classroom management, during the student teaching internship should be investigated to determine the importance of the student teaching internship on the two quality indicators. The question to be investigated is: Does the cooperating teacher or the student teaching internship experience have a greater impact on teaching interns’ learning in regard to instruction and classroom management?

Recommendation Two:

Teaching interns’, and candidates for teacher certification, level of proficiency on the 11 MoSTEP quality indicators should be addressed throughout the teacher education program. Further research should be conducted to address candidates’ level of proficiency on the MoSTEP quality indicators before, during, and after the student teaching internship. Level of proficiency on the MoSTEP quality indicators should be investigated at the completion of Phase I of the University of Missouri-Columbia’s Teacher Development Program to assess the level of proficiency at that point in teacher preparation.

Recommendation Three:

Teacher certification measures should be re-examined as admission and retention criteria for teacher education programs. It is also recommended that the appropriateness of using teacher certification measures for teacher education program criteria should be explored. Potential candidates for certification may be excluded unfairly by the use of teacher certification measures into the teacher education program. Further investigation should be conducted on a larger sample and in other content areas.
**Recommendation Four:**

Findings from the study should be shared with cooperating teachers to show the importance of the student teaching internship in preparing qualified teachers for the profession. A fact sheet that summarizes data from the study should be shared with cooperating teachers via mail, workshops, etc., as evidence that a great amount of growth and development on the MoSTEP quality indicators occurs during the internship experience.
APPENDIX A

PERFORMANCE BASED STUDENT TEACHING INTERNSHIP EVALUATION
Performance Based Student Teaching Internship Evaluation
College of Education and the Department of Agricultural Education
University of Missouri - Columbia

Check One:  Mid-Session Report _____
Final Report _____

Name _____________________________________________ Student Number ________________________

School and District __________________________________ Partner Teacher ______________________

Subject and/or Grade Level ___________________________ Supervisor ____________________________

Semester and Year ________________ Assigned Letter Grade ________________

Instructions: For each quality indicator, please write an appropriate number. A "6" or "5" represents "exceeds the standard"; a "4" or "3" represents "meets the standard"; and a "2" or "1" indicates "not yet meeting the standard.”

Performance indicators help specify quality indicators and do not bear equal weight in awarding a final grade. Source of Quality Indicators and Performance Indicators: Missouri Standards for Teacher Education Programs.

Not Meeting the Standard Meets the Standard Exceeds the Standard

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Quality Indicator 1: Content

_____ Understands the central concepts, tools of inquiry, and structures of the discipline(s) within the context of a global society and creates learning experiences that make these aspects of subject matter meaningful for students.

Performance Indicators:

1.2.1.1 Knows the discipline applicable to the certification area(s)
1.2.1.2 Presents the subject matter in multiple ways
1.2.1.3 Uses students’ prior knowledge
1.2.1.4 Engages students in the methods of inquiry used in the discipline
1.2.1.5 Creates interdisciplinary learning

Comments:

Quality Indicator 2: Learners and Learning

_____ Understands how students learn and develop, and provides learning opportunities that support the intellectual, social, and personal development of all students.

Performance Indicators:

1.2.2.1 Applies knowledge of how students learn and develop to create developmentally appropriate learning opportunities
1.2.2.2 Strengthens prior knowledge with new ideas
1.2.2.3 Encourages student responsibility
1.2.2.4 Applies knowledge of theories of learning in planning, implementing and assessing student learning

Comments:

Quality Indicator 3: Diversity

_____ Understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Performance Indicators:

1.2.3.1 Identifies prior experience, learning styles, strengths, and needs
1.2.3.2 Designs and implements individualized instruction based on prior experiences, learning styles, strengths, needs, and high expectations for all students
1.2.3.3 Connects instruction to students’ prior experience and family, culture, and community
1.2.3.4 Knows when and how to access specialized services to meet students’ needs

Comments:
Quality Indicator 4: Curriculum

Recognizes the importance of long-range planning and curriculum development and develops, implements, and evaluates curriculum based upon student, district, and state performance standards.

Performance Indicators:
1.2.4.1 Selects and creates learning experiences that are appropriate for curriculum goals and MAP testing objectives, relevant to learning, and based on principles of effective instruction
1.2.4.2 Communicates learning objective(s) to students
1.2.4.3 Implements curricular activities that are consistent with objective
1.2.4.4 Creates lessons and activities that recognize individual needs of diverse learners and variations in learning styles and performance
1.2.4.5 Demonstrates flexibility by evaluating and changing long- and short-term goals and/or instruction to meet student needs and to enhance learning

Comments:

Quality Indicator 5: Instruction

Uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Performance Indicators:
1.2.5.1 Selects alternative teaching strategies, materials, and technology to achieve multiple instructional purposes and to meet students' needs
1.2.5.2 Aligns instructional strategies with curricular objectives
1.2.5.3 Engages students in active learning that promotes the development of critical thinking, problem solving, and performance capabilities

Comments:

Quality Indicator 6: Classroom Management

Uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Performance Indicators:
1.2.6.1 Knows and uses motivation theories and behavior management strategies and techniques to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation
1.2.6.2 Manages time, space, transitions, and activities effectively
1.2.6.3 Engages students in decision making
1.2.6.4 Encourages all students to set, monitor, and adjust learning goals and behaviors
1.2.6.5 Establishes and clearly communicates parameters for student classroom behavior
1.2.6.6 Manages discipline problems in accordance with the administrative regulations of the school

Comments:
Quality Indicator 7: Communication

______ Models effective verbal, non-verbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Performance Indicators:
1.2.7.1 Models effective verbal/non-verbal communication skills
1.2.7.2 Demonstrates sensitivity to cultural, gender, intellectual, and physical ability differences in classroom communication and in responses to students' communications
1.2.7.3 Gives directions that are clear, concise, and reasonable
1.2.7.4 Supports and expands learner expressions in speaking, writing, listening, and other media
1.2.7.5 Uses a variety of media communication tools

Comments:

Quality Indicator 8: Assessment

______ Understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Performance Indicators:
1.2.8.1 Employs a variety of formal and informal assessment techniques (e.g., observation, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, authentic assessments, and standardized tests) to enhance and monitor her or his knowledge of learning, to evaluate student progress and performance, and to modify instructional approaches and learning strategies
1.2.8.2 Aligns and integrates instruction and assessment, including but not limited to MAP testing objectives/performance standards and their assessment
1.2.8.3 Uses assessment strategies to involve learners in self-assessment activities, to help them become aware of their learning behaviors, strengths, needs, and progress, and to encourage them to set personal goals for learning
1.2.8.4 Evaluates the effect of class activities on both individual and the class as a whole, collecting information through observation of classroom interactions, questioning, and analysis of student work
1.2.8.5 Maintains useful records of student work and performances and can communicate student progress knowledgeably and responsibly, based on appropriate indicators, to student, parents, and other colleagues

Comments:

Quality Indicator 9: Reflection and Professional Growth

______ Is a reflective practitioner who continually assesses the effects of choices and actions on others. This reflective practitioner actively seeks opportunities to grow professionally and utilizes the assessment and professional growth to generate more learning for more students.

Performance Indicators:
1.2.9.1 Applies a variety of self-assessment and problem-solving strategies for reflecting on practice, their influence on student growth and learning, and the complex interactions between them
1.2.9.2 Applies professional ethical standards within reflection process
1.2.9.3 Seeks and uses resources available for professional development

Comments:
Quality Indicator 10: Professional Responsibility

Fosters relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well-being.

Performance Indicators:

1.2.10.1 Participates in collegial activities designed to make the entire school a productive learning environment
1.2.10.2 Talks with and listens to students, is sensitive and responsible to signs of distress, and seeks appropriate help as needed to solve students' problems
1.2.10.3 Practices professional ethical standard, including handling confidential information and difficult situations with discretion
1.2.10.4 Seeks opportunities to develop relationships with the parents and guardians of students, and seeks to develop cooperative partnerships in support of student learning and well-being
1.2.10.5 Identifies and uses the appropriate school personnel and community resources to help students reach their full potential
1.2.10.6 Demonstrates a sense of professional responsibility by completing duties promptly and accurately and being punctual

Comments:

Quality Indicator 11: Technology in Teaching and Learning

The pre-service teacher understands the theory and application of technology in educational settings and has adequate technological skills to create meaningful learning opportunities for all students.

Performance Indicators:

1.2.11.1 Demonstrates an understanding of technology operations and concepts
1.2.11.2 Plans and designs effective learning environments and experiences supported by informational and instructional technology
1.2.11.3 Implements curriculum plans that include methods and strategies for applying informational and instructional technology to maximize student learning
1.2.11.4 Applies technology to facilitate a variety of effective assessment and evaluation strategies
1.2.11.5 Uses technology to enhance personal productivity and professional practice
1.2.11.6 Demonstrates an understanding of the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and applies that understanding in practice

Comments:

Submit Original to:
Internship Coordinator
Department of Agricultural Education
121 Gentry Hall
University of Missouri
Columbia, MO 65211-7040

Copies to:
1. Teaching Intern
2. Cooperating Teacher
3. Student’s Internship file
APPENDIX B

STUDENT TEACHING INTERNSHIP SELF-ASSESSMENT
Student Teaching Internship Self-Assessment

**Instructions:** For each statement below, rate yourself on your ability to perform the statement at this point in your teacher preparation. Circle the number on the scale that corresponds to your “self-assessment.”

<table>
<thead>
<tr>
<th>I feel…</th>
<th>Circle your responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = not proficient in my…</td>
<td>2 = slightly proficient, but need considerable improvement in my…</td>
</tr>
<tr>
<td>3 = somewhat proficient, but need improvement in my…</td>
<td>4 = adequately proficient, at an average level in my…</td>
</tr>
<tr>
<td>5 = very proficient, exceeding the norm in my…</td>
<td>6 = extremely proficient, well above and beyond the norm in my…</td>
</tr>
</tbody>
</table>

**Content**

<table>
<thead>
<tr>
<th>Knowledge in the agriculture area of…</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>animal science</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>agronomy (plant science)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>agricultural business</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>agricultural economics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>agricultural mechanics</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Horticulture</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

**Ability to present agriculture subject matter in multiple ways.** 1 2 3 4 5 6

**Ability to use students’ prior knowledge in preparing content for instruction.** 1 2 3 4 5 6

**Ability to engage students in the methods of inquiry used in agriculture.** 1 2 3 4 5 6

**Ability to create interdisciplinary learning activities within the agriculture classroom.** 1 2 3 4 5 6

**Learners and Learning**

<table>
<thead>
<tr>
<th>Ability to apply my knowledge of how students learn and develop to create developmentally appropriate learning opportunities.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to strengthen students’ prior knowledge with new ideas.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to encourage student responsibility.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to apply my knowledge of learning theories in planning, implementing and assessing student learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

**Diversity**

<table>
<thead>
<tr>
<th>Ability to identify prior experience, learning styles, strengths, and needs of students.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to design and implement individualized instruction based on prior experiences, learning styles, strengths, needs, and high expectations for all students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to connect instruction to students’ prior experience and family, culture, and community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Knowledge of when and how to access specialized services to meet students’ needs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
I feel...
1 = not proficient in my...
2 = slightly proficient, but need considerable improvement in my...
3 = somewhat proficient, but need improvement in my...
4 = adequately proficient, at an average level in my...
5 = very proficient, exceeding the norm in my...
6 = extremely proficient, well above and beyond the norm in my...

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Circle your responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to select and create learning experiences that are appropriate for curriculum goals and MAP testing objectives, relevant to learning, and based on principles of effective instruction.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to communicate learning objective(s) to students.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to implement curricular activities that are consistent with objectives.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to create lessons and activities that recognize individual needs of diverse learners and variations in learning styles and performance.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to demonstrate flexibility by evaluating and changing long- and short-term goals and/or instruction to meet student needs and to enhance learning.</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instruction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to select alternative teaching strategies, materials, and technology to achieve multiple instructional purposes and to meet students' needs.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to align instructional strategies with curricular objectives.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to engage students in active learning that promotes the development of critical thinking, problem solving, and performance capabilities.</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classroom Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of and ability to use motivation theories and behavior management strategies and techniques to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to manage time, space, transitions, and activities effectively.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to engage students in decision-making.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to encourage all students to set, monitor, and adjust learning goals and behaviors.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to establish and clearly communicate parameters for student classroom behavior.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to manage discipline problems in accordance with the administrative regulations of the school.</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to model effective verbal and non-verbal communication skills.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to demonstrate sensitivity to cultural, gender, intellectual, and physical ability differences in classroom communication and in responses to students' communications.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to give directions that are clear, concise, and reasonable.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to support and expand learner expressions in speaking, writing, listening, and other media.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Ability to use a variety of media communication tools.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Assessment</td>
<td>Circle your responses</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Ability to employ a variety of formal and informal assessment techniques</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>(observation, portfolios of student work, teacher-made tests, performance</td>
<td></td>
</tr>
<tr>
<td>tasks, projects, student self-assessments, authentic assessments, and</td>
<td></td>
</tr>
<tr>
<td>standardized tests) to enhance and monitor her or his knowledge of</td>
<td></td>
</tr>
<tr>
<td>learning, to evaluate student progress and performance, and to modify</td>
<td></td>
</tr>
<tr>
<td>instructional approaches and learning strategies.</td>
<td></td>
</tr>
<tr>
<td>Ability to align and integrate instruction and assessment, including but</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>not limited to MAP testing objectives/performance standards and their</td>
<td></td>
</tr>
<tr>
<td>assessment.</td>
<td></td>
</tr>
<tr>
<td>Ability to use assessment strategies to involve learners in self-assessment</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>activities, to help them become aware of their learning behaviors,</td>
<td></td>
</tr>
<tr>
<td>strengths, needs, and progress, and to encourage them to set personal</td>
<td></td>
</tr>
<tr>
<td>goals for learning.</td>
<td></td>
</tr>
<tr>
<td>Ability to evaluate the effect of class activities on both individual</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>and the class as a whole, collecting information through observation of</td>
<td></td>
</tr>
<tr>
<td>classroom interactions, questioning, and analysis of student work.</td>
<td></td>
</tr>
<tr>
<td>Ability to maintain useful records of student work and performances and</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>can communicate student progress knowledgeably and responsibly, based on</td>
<td></td>
</tr>
<tr>
<td>appropriate indicators, to student, parents, and other colleagues.</td>
<td></td>
</tr>
<tr>
<td>Reflection and Professional Growth</td>
<td></td>
</tr>
<tr>
<td>Ability to apply a variety of self-assessment and problem-solving</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>strategies for reflecting on practice, their influence on student</td>
<td></td>
</tr>
<tr>
<td>growth and learning, and the complex interactions between them.</td>
<td></td>
</tr>
<tr>
<td>Ability to apply professional ethical standards within reflection</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>process.</td>
<td></td>
</tr>
<tr>
<td>Ability to seek and use resources available for professional development.</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Professional Responsibility</td>
<td></td>
</tr>
<tr>
<td>Ability to participate in collegial activities designed to make the</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>entire school a productive learning environment.</td>
<td></td>
</tr>
<tr>
<td>Ability to talk with and listen to students, sensitive and responsible</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>to signs of distress, and seek appropriate help as needed to solve</td>
<td></td>
</tr>
<tr>
<td>students’ problems.</td>
<td></td>
</tr>
<tr>
<td>Ability to practice professional ethical standards, including handling</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>confidential information and difficult situations with discretion.</td>
<td></td>
</tr>
<tr>
<td>Ability to seek opportunities to develop relationships with the parents</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>and guardians of students, and seek to develop cooperative partnerships</td>
<td></td>
</tr>
<tr>
<td>in support of student learning and well-being.</td>
<td></td>
</tr>
<tr>
<td>Ability to identify and use appropriate school personnel and community</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>resources to help students reach their full potential.</td>
<td></td>
</tr>
<tr>
<td>Ability to demonstrate a sense of professional responsibility by</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>completing duties promptly and accurately and being punctual.</td>
<td></td>
</tr>
</tbody>
</table>
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**Technology in Teaching and Learning**

<table>
<thead>
<tr>
<th>Ability to demonstrate an understanding of technology operations and concepts.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to plan and design effective learning environments and experiences supported by informational and instructional technology.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to implement curriculum plans that include methods and strategies for applying informational and instructional technology to maximize student learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to apply technology to facilitate a variety of effective assessment and evaluation strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to use technology to enhance personal productivity and professional practice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ability to demonstrate an understanding of the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply that understanding in practice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
References


VITA

Jacqueline Campbell was born May 24, 1982, in Leon, Iowa. Upon graduating in 2000 from East Buchanan High School in Gower, Missouri, she received the following degrees: B.S. in Agricultural Education from the University of Missouri-Columbia (2004); Master of Science in Agricultural Education from the University of Missouri-Columbia (2005). She is presently an agricultural education instructor at Northwest Technical School in the Maryville R-2 School District, Maryville, Missouri.

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