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Students' Perceptions of a Teacher Leader Master's Program

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STUDENTS’ PERCEPTIONS OF A TEACHER LEADER MASTER’S PROGRAM

A Dissertation
Presented to
The Faculty of the Educational Leadership Doctoral Program
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

By
Evgenia Mauzy

May 2016
I dedicate my dissertation to my family. I am grateful for my husband Lee Mauzy, who believes in me. I am also grateful for my sons Bogdan and Stanislav Mauzy, who are a big inspiration for me. I love you, Mom and Dad.
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Teacher leadership is one of the key components of school success. However, teacher leader education has not been the focus of research. This quantitative study explores the central research question: What are the perceptions of teachers completing the Western Kentucky University Masters of Art in Education (MAE) Teacher Leader Program regarding their level of professional preparation?

A Likert-type double matrix descriptive survey with correlational design covered students’ perceptions of level of professional preparation on a 5-point scale at the beginning and the end of the program for the ten MAE Program Standards. All data were gathered from students in the MAE Teacher Leader Program via e-mail using Qualtrics software. The population encompassed the first two cohorts to complete the program, 107 students; the sample consisted of 46 students (43%) who responded to the survey with usable data. Descriptive statistics and psychometric analyses (Cronbach’s alpha computed on the respective sets of substandards for each Program Standard) were calculated. The research questions examined (a) student perceptions of their professional preparation at the end of the program, (b) differences from beginning to end of the program, and (c) relationships between socio-demographic factors and students' current preparation for the standards.

Students reported that they are prepared to teach the 10 MAE Program Standards after program completion with means ranging from 4.07 to 4.47 on the 5-point scale.
felt best prepared, while students in the MAE Special Education Programs showed the least confidence in their professional preparation. There was a significant improvement in students’ self-perception about their professional preparation from the beginning to the end of the program for all students based on paired \( t \) tests. Similar mean comparisons on the difference between beginning and current value on the 10 standard showed that the improvements are significant for all strands except MAE in Special Education. Regarding socio-demographic factors, age and teacher experience were significantly related to students’ perceptions of their educational preparation for six and seven of the ten standards, respectively. The study highlighted the program's strengths and provided insights toward program improvement.
CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Children are the future. By investing in their education, the nation prepares them for success. On a large scale, schooling plays an important role in the political, social, and economic development of the country. However, the U.S. school education system has chronic problems with student achievement, retention, and college dropouts. *A Nation at Risk*, the report issued by the Reagan administration (National Commission on Excellence in Education, 1983) pointed out that American students fall behind their counterparts in other countries. Since that time, U.S. policymakers have tried to address this critical issue.

Numerous attempts were made to improve the quality of education since the 1980s. The goal of the reforms was to address the problems in education. In the past, the efforts were concentrated on improving education by preparing students to pass multiple standardized tests by memorizing the facts. The students were pushed into the compliance-based educational accountability system. However, these attempts did not solve the problem with student achievement.

More recently, educators have been working on developing critical thinking and real life skills in students in order to help them improve their academic achievement and prepare for successful careers upon school graduation. Children are naturally active; accordingly classroom knowledge and skills have to be connected with real life experiences in order to help students become adaptive learners. There is considerable evidence that teacher leaders
can be effective through their impact on students inside and outside the classrooms (Cohron, 2009). They help students become active citizens and patriots by serving as role models to them. Teacher leaders also foster leadership qualities, as well as a sense of responsibility and belonging in students (Henning, 2006).

Another trend in education is standardization. Since the American school population is quite diverse, it is important to standardize both content and assessment. The implementation of common core standards in schools was an important step in that direction. The common core provides students across America with clearly defined expectations and benchmarks, bringing unity to education. These tasks require teachers to work in teams and become better leaders in schools and in the community. Teacher leaders are assuming new roles as standardization requires them to collaborate on content mapping, manage workloads, and build mutual trust. Teacher leaders increasingly serve as change catalysts, inspiring and motivating others. Their role in developing a healthy professional school climate is vital. Among other leadership activities, they demonstrate progressive pedagogical practices to their coworkers, motivating others to become better professionals. Teacher leaders also support and implement innovative programs, answering the national call for reforms in education (Barth, 2001; Danielson, 2006).

The preparation of teacher leaders has been overlooked in the past. While numerous researchers have documented the effectiveness of teacher leaders (see Beattie, 2002; Cohron, 2009), there has been no systematic approach to the preparation of these professionals. While teacher leaders are supposed to help their coworkers reach excellence in teaching, they themselves did not typically have any professional preparation on leadership skills and knowledge. These needs have not gone unnoticed by the educational establishment. U.S. policymakers are working to close the gap on teacher leader education.
The role of the teacher as a leader and role model was reinforced by one of the latest educational initiatives from the Obama administration, *Our Teacher, Our Future* (U.S. Department of Education, 2011), designed to improve teacher professional preparation in American colleges. Supporting a strong teaching force and school leadership is a top priority for the Obama administration. Making improvements in teacher and leader effectiveness is on the Administration’s education reform agenda.

America’s future depends on its teachers. That is why we are taking steps to prepare teachers for their difficult responsibilities and encouraging them to stay in the profession. That is why we are creating new pathways to teaching and new incentives to bring teachers to schools where they are needed most. (U.S. Department of Education, 2011, p. 1)

Teacher quality and the process of teacher education have become the center of the new education reform. America needs teacher leaders in order to improve student achievement, help other teachers acquire new knowledge and skills, and promote team work. Colleges have responded to the call by modifying their professional preparation programs for teachers.

**Teacher Preparation**

Teacher education became a focus of nation's attention in the past decade because of the growing demand for quality of teacher preparation and the shortage in the teacher workforce.

Quantitatively, estimates are that the United States is facing nearly 200,000 teacher vacancies a year at a cost to the nation of $4.9 billion annually, owing to high attrition rates among new teachers and the retirement of baby boomer teachers, as well as increases in student numbers due to immigration, population
Among other problems, researchers found weakness with teachers’ professional preparation programs, which fail to address the current trends in student diversity and growth. “The students’ population changed economically, racially, geographically, linguistically, and academically. Current teacher education programs are largely ill equipped to prepare current and future teachers for these new realities” (Levine, 2006, p. 12). Teacher education faces the task of redesign in order for future educators to be agents of change in schools.

**Traditional Teacher Education Programs**

The goal of traditional teacher preparation is to provide future specialists with necessary preparation and credentials for selected areas of teaching. Traditional teacher preparation programs include core content education classes in a chosen area of specialization, such as elementary, middle school, secondary, or special education; general education classes in the arts and sciences; elective courses; and extensive field placements, culminating in student teaching. Teacher leadership was not included in pedagogical practices; rather, this facet of teaching was considered intuitive knowledge, which was presumed to evolve during professional practice.

There are both undergraduate and graduate programs available for students. Upon high school completion, prospective teachers may choose between community college, public, or private university in order to earn an undergraduate degree. Community colleges and public universities are partially funded by government and operate under state policies, while non-public colleges are privately sponsored. Community colleges offer the associate degree. The U.S. Department of Education (2013, para. 41) defines an associate degree as “an award that normally requires at least 2 but less than 4 years of full-time equivalent
college work.” Typically, an associate degree is awarded to prospective teachers upon completion of 60 credit hours of the approved coursework. The number of core content courses usually equals the number of electives, but may vary by college. Electives should serve the purpose of broadening students’ knowledge in the chosen major and are subject to the advisor’s approval. Students with an associate degree must transfer to a four year college or university to complete their bachelor’s degree and meet certification requirements (U.S. Department of Education, 2013).

A bachelor’s degree requires around 120 credit hours, where 80 hours will include core content classes and 40 credit hours will be electives, with 40 credit hours in upper division courses. The following are common specializations in the bachelor’s degree for prospective teachers. Prospective BS education students typically choose their specialization with a major in General Science or in Mathematics. Full time students typically carry from 12-17 credit hours per semester, or approximately 30 a year (U.S. Department of Education, 2008, p. 2). According to the U.S. Department of Education (2013, para. 2), a bachelor’s degree is

[a]n award (baccalaureate or equivalent degree, as determined by the Secretary, U.S. Department of Education) that normally requires at least 4 but not more than 5 years of full-time equivalent college-level work. This includes all bachelor's degrees conferred in a 5-year cooperative (work-study) program. A cooperative plan provides for alternate class attendance and employment in business, industry, or government; thus, it allows students to combine actual work experience with their college studies. [This also] includes bachelor's degrees in which the normal 4 years of work are completed in 3 years.

**Graduate Teacher Education Programs**
Graduate degrees include master’s, specialist, and doctorate degrees. The prerequisite to the graduate program in education is a bachelor's degree in a selected area of teaching. The coursework consists of mandatory and elective courses. The curriculum varies by college, but in general requires up to 30 credit hours of approved graduate core content classes and from 10-20 credit hours in electives. The determination of the number of hours is made by the program faculty, consistent with requirements from various accreditation agencies. The number of hours required for a given student can vary depending on prerequisites that may or may not have been taken during the bachelor's program. The students have to meet program graduate requirements, which include satisfactory grades, and in some programs, demonstrate that they have met certain field experiences and exhibit appropriate dispositional traits. Most colleges do not accept C and D grades toward fulfillment of the course program requirements, but count these grades in students' grade point average (GPA) score. “A master’s degree program requires at least 33 credit hours and including a research thesis or project represents over 4,000 actual hours of supervised and unsupervised (independent research) study” (U.S. Department of Education, 2008, para. 6). Specialist and doctoral degrees typically require a Master’s degree as a prerequisite. Course requirements include core content classes and electives. The total number of credit hours usually equals an additional 30 or 60 hours, respectively.

A doctor's degree that is conferred upon completion of a program providing the knowledge and skills for the recognition, credential, or license [is] required for professional practice. The degree is awarded after a period of study such that the total time to the degree, including both pre-professional and professional preparation, equals at least six full-time equivalent academic years. (U.S. Department of Education, 2013, para. 2)
Particularly for the doctorate, other requirements include passing comprehensive and final exams, completing a satisfactory dissertation project, and successful dissertation defense. According to the U.S. Department of Education (2008), a “doctoral program can represent 8,000 or more actual hours of advanced study and research beyond the master’s degree” (U.S. Department of Education, 2008, para. 6).

**Accreditation for Teacher Education**

Education in America is regulated by accrediting agencies. Southern Association of Colleges and Schools (SACS) is the regional accreditation agency for colleges in the southern states, which includes Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, and some international colleges and universities (Southern Association of Colleges and Schools, 2013, p. 1). SACS is recognized on a federal level.

The U.S. Secretary of Education recognizes accreditation by SACS Commission on Colleges in establishing the eligibility of higher education institutions to participate in programs authorized under Title IV of the *Higher Education Act*, as amended, and other federal programs. Through its periodic review of institutions of higher education, the Commission assures the public that it is a reliable authority on the quality of education provided by its member institutions. The federal statute includes mandates that the Commission review an institution in accordance with criteria outlined in the federal regulations developed by the U.S. Department of Education. As part of the review process, institutions are required to document compliance with those criteria and the Commission is obligated to consider such compliance when the institution is reviewed for initial membership or continued accreditation (Southern Association of Colleges and Schools, 2013, p. 30).
SACS sets specific requirements for all graduate programs, including teacher education: admission criteria, graduate curriculum, and instruction. Other requirements include various student services, such as academic advising and outreach programs. According to SACS criteria for college accreditation, American graduate education consists of state approved coursework. For teacher education programs, all students must complete PRAXIS exams as a requirement for obtaining teacher’s license after program completion (Southern Association of Colleges and Schools, 2008, p. 32).

Colleges offering teaching degrees also use The National Council for Accreditation of Teacher Education (NCATE) in order to make sure national standards for teaching are met in their professional preparation programs. A performance-based system is used in NCATE accreditation. The U.S. Department of Education and the Council for Higher Education Accreditation recognize NCATE as a professional accrediting body for teacher preparation. Teacher preparation programs receive accreditation according to NCATE standards.

Graduate teacher preparation programs have been criticized in recent years by researchers for inadequate teacher preparation. Plecki, Elfers, and Nakamura (2012) argue that teacher preparation programs are lacking accountability and advocate for changes in teacher preparation programs. The changes should address the following areas: establishing benchmarks for prospective teacher candidates, creating teacher education programs for effective teacher preparation, and providing instructional support and assistance with work placement for graduates.

**Teacher Leadership**

Teacher leadership is an important component of school success. Recent educational reforms put a renewed focus on teacher leader preparation in order to improve teacher
quality and enhance student learning. Researchers, such as Barth (2001) and Growther (1997), found that teacher leadership improves teaching and learning practices in schools. In the past, teacher leadership was seen as activities outside school, while recent trends show that teacher leaders play an important role in collaboration with coworkers, school administrators, and students’ parents (York-Barr & Duke, 2004). Teacher leaders provide professional development, mentoring, and coaching to new teachers, which helps prevent work burnout and increase teacher retention (Pankratz & Petrosko, 2000).

However, in the past decade teacher leadership has evolved to play a new role in the public school system. Silva, Gimbert, and Nolan (2000) identified three phases in teacher leadership development. The first phase was a managerial role of a teacher leader, when teachers were focused on personal effectiveness. Teacher leaders work as the department chairs, head teachers, and union representatives. The second phase characterizes teacher leaders as instructional leaders where collaboration with others plays an important role. They work as staff and curriculum developers. The third phase started in the 1990s. Teacher leaders blend formal and informal leadership roles, influence others, and make administrative leadership decisions, such as assisting in the hiring of new teachers, forming committees, and participating in board meetings.

Colleges and universities have answered the national call for highly qualified teachers by modifying their professional preparation programs for educators, including the teacher leader component in their core content classes. In the process, they have revisited the scope and meaning of graduate teacher education.

One recent educational reform, the Obama Administration Plan, Our Teachers, Our Future, by the U.S. Department of Education (2011), also calls for redesigning teacher educational programs. The goal of the initiative is to make colleges produce well prepared
specialists for the field of education. Inclusion of a teacher leader component in the
curriculum is increasingly recognized as a step toward excellence in education. Five states
(Alabama, Delaware, Kansas, Kentucky, and Ohio) developed standards for teacher
leadership in order to provide “guidance to state policymakers as they work to improve
education leadership preparation, licensure, evaluation, and professional development”
(Southern Association of Colleges and Schools, 2013, p. 1).

**Graduate Teacher Education at Western Kentucky University**

The mission of Western Kentucky University is to “prepare students to be
productive, engaged, and socially responsible citizen-leaders of a global society. It provides
research, service, and lifelong learning opportunities for its constituents. WKU is
responsible for stewarding a high quality of life for those within its reach” (Western
Kentucky University, 2012, para. 6). Consistent with these broader goals, the College of
Education and Behavioral Sciences (CEBS) of Western Kentucky University implemented a
new Master of Arts in Education (MAE) program in 2010. Students will receive their
master’s degree in a chosen specialty area as well as a leadership certification. The programs
were a response to numerous educational reforms and initiatives on the federal, state, and
local levels.

The graduate programs were created to prepare educational professionals with an
emphasis on teacher leadership. WKU aligned the new MAE Program professional
standards such that vision, mission, beliefs, dispositions, and practices were consistent with
the Kentucky Teacher Professional Standards and the requirements of the National Council
for Accreditation of Teachers (NCATE), as listed in the 2009 NCATE Institutional Report.

WKU’s Conceptual Framework represents beliefs and values, supported by research
literature, that are shared by all programs that prepare university students to enter
education professional fields. These fields include teachers in elementary, middle, and high schools; library media specialists; principals and superintendents; school counselors; school nurses; school psychologists; and, speech pathologists. All these education professional preparation programs are considered by NCATE and Kentucky’s Education Professional Standards Board to represent WKU’s Professional Education Unit. (NCATE, 2009, p. 11)

The WKU Conceptual Framework “demonstrates how these professional education unit beliefs, as well as WKU strategic planning goals and objectives, tie back to the Kentucky Teacher Standards, the umbrella for all our programs” (NCATE, 2009, p. 14). These standards specify the skills and critical performances that are to be attained by the educational professionals who complete the MAE Teacher Leader Program.

The Problem Defined

The quality of schools of education has become a global concern due to the development of technology and science, economic turmoil, and the forces of internationalization. Future school graduates will have to be prepared for the higher demands of the competitive job market and modern society.

As the economies of nations compete for strong positions within a competitive global market place, many governments have become increasingly interested in the performance of all aspects of their education systems. This trend, coupled with the enormous expenditures that are devoted to education, has also precipitated widespread public requests for higher levels of scrutiny concerning the quality of education. (Anderson, 2005, p. ix)

Consistent with Anderson’s (2005) explanation, government initiatives have promoted teacher leadership as a driving force of modern education reform. In the process teacher
leadership has become a key component of success in the 21st century education.

One of the most challenging problems in graduate education, however, is the lack of professional preparation for teacher leaders. While society recognizes the growing need of teacher leaders as agents of change in the era of school reforms, the issue on how to address teacher leader education has not received sufficient attention. In the past, teacher leaders evolved on an intuitive level and the scope of their expertise was limited to the classroom. Colleges provided professional preparation for the teachers according to their chosen specialization. The growing need for teacher leaders has helped colleges face the gap in teachers’ education and include teacher leadership as a core content area in their curriculum. This emerging trend needs future analysis and research (Manious, 2012).

Numerous studies have been done on the effects of teacher leadership. Researchers (e.g., Alvarado, 1997; Barth, 2001; Brandt, 1995; and Growther, 1997) have examined the roles of teacher leaders in professional learning communities. According to Growther, teacher leadership is "an ethical stance that is based on views of both a better world and the power of teaching to shape meaning systems. It manifests in actions that involve the wider community in the long term. It reaches its potential in contexts where system and school structures are facilitative and supportive" (Growther, 1997, p. 15).

Wynne (2001), Hinchey (1997), Hoerr (2005), and Cohron (2009) have all examined the correlation between teacher leaders and students’ achievement. Wynne did not find a direct correlation between teacher leadership and student achievement, but suggested that teacher leaders are instrumental in creating the learning climate in professional learning communities, which, in turn, will influence student learning outcomes. Cohron (2009, p. vii) found that “interactions related to the student achievement construct [were] noted as a significant predictor of student academic achievement as measured by the school Academic
Index of the Kentucky Core Content Test.”

Wynne (2001), Cohron (2009), and Gabriel (2005) studied different dimensions of teacher leadership in their professional practices as well as barriers and challenges of teacher leaders. The above mentioned researchers found a positive effect of teacher leadership on educational practices. The barriers of developing teacher leader practices in schools include increased workload on teachers combined with the absence of monetary rewards, which leads to professional dissatisfaction, lack of interest in continuous professional development of teacher leaders, teacher dropouts, and possible health and family issues, according to Cohron. Another challenge of teacher leadership is teachers’ desire to avoid potential tensions with their coworkers, and, as a result, not pursuing the teacher leader position. Cohron’s study suggests implementing teacher leadership in schools at a higher level and providing professional preparation for teacher leaders, so they will become effective professional learning community members. “The final implication of this study pertains to university teacher educational programs. In re-designing teacher educational programs, multiple opportunities should be provided, from the pre-service through graduate level, for candidates to develop knowledge and skills” (Cohron, 2009, p. 197). Despite Cohron’s plea, the author has found limited research on the preparation of teacher leaders.

Manious (2012) examined what type of universities offer Teacher Leader Master Programs and the curricula of these programs. The study provided information about the colleges, such as students’ demographics, college geographical location, and the core content and elective classes that are included in the teacher leader professional preparation programs. Maniuos examined the creation and development of the Teacher Leader professional preparation programs from 1980 until 2012, finding a trend of continuing growth in the number of Teacher Leader Programs offered nationwide. According to
Manious, recent educational reforms promoting student achievement at schools have created a need for teacher leaders and pushed colleges toward inclusion of Teacher Leader Master Programs in their lists of program emphasis.

Professional learning communities in schools promote implementation of school reforms, according to Cain and Caine (2000) and Darling-Hammond (2006), while teacher leaders are the moving force for these communities. They inspire, motivate, and coach their coworkers, students, and even the parents. Teacher leaders promote student achievement by implementing best education practices. The role of the teacher leader is challenging, because the additional workload and the lack of compensation for that role lead teacher leaders to professional and emotional distress, teacher dropouts, and health issues, as Cohron (2009) found in her study. Thus it is important that teacher leaders receive proper professional training in order to balance the above issues.

Colleges have answered the call for teacher leader preparation and have started to include additional areas of teacher leader certification or licensing in their educational programs. However, this movement is only beginning. In 2012 Manious found through his extensive research that out of 656 colleges in the United States, only 28 (4.2%) included a teacher leadership component in the curriculum.

To the author’s knowledge, the research on teacher leadership education is even more limited. The abundance of studies examine teacher leadership effects on teachers and schools, but the importance of teacher leader education and research on this topic has largely escaped the scope of researchers’ professional interest. Most researchers have used mixed methods research, where they describe existing teacher leader programs using a qualitative approach and analyze programmatic data using quantitative techniques. Researchers who collect data from several colleges face the challenges of working with digital information:
some colleges do not update their websites and the data about their programs might contain discrepancies, while other colleges constantly update their websites, so researchers do not have the opportunity to study the history of the program (Maniuos, 2012).

To this date, Western Kentucky University (WKU) has not conducted a program evaluation to examine their new MAE Teacher Leader Programs. Further, to the author’s knowledge, current research has not provided information about the quality of Teacher Leader Programs from students’ point of view. In related research, Maniuos (2012) used a mixed method approach to describe various teacher leader master programs in American colleges and universities. Thus more research is needed that evaluates the new teacher leader educational programs in schools of education, particularly from the point of view of students.

**Purpose of the Study**

This study brings together explicitly the issues just described in The Problem Defined above. The role of the teacher leader has increased since the U.S. government called for raising the quality of American school education. The initiative to implement professional learning communities is on the rise in K-12 schools, and teacher leaders are the driving force of this movement (Cain & Caine, 2000). Professional learning communities enhance the sense of belonging to school culture and history, where teacher leaders provide a systematic approach to learning and teaching, educate other teachers about updates in different content areas, develop a culture of collaboration across content areas, and enhance rigor and relevance in classrooms. Since the demand for teacher leaders has increased, the quality of teacher leader preparation has become an essential issue in teacher education. Despite this movement, as indicated above, research on teacher leader education programs is minimal, program evaluations of these new initiatives are not yet common, and, to the
author’s knowledge, no studies on teacher leader education programs have been conducted from the students’ perspectives.

Thus, this study is intended to examine students’ perspectives of the newly implemented MAE Programs at WKU. Limited information is available about the students’ perceptions of the program due to the fact that the program’s inception was in 2010. Therefore, the MAE Programs will benefit from learning students’ perceptions about the programs and their perceived effectiveness. This information will provide insight into how to prevent dissatisfaction with the program, pinpoint potentially problematic areas, and identify areas for growth and strengths. The findings from this study will assist faculty at WKU in the Program’s future development. Specifically, in addition to the educational benefit, the study will also function as a partial program evaluation, with the evidence providing some rationale for program effectiveness in a competitive educational market.

The instrument for this study is a survey, adapted from Javidi’s (2011) questionnaire to fit the teacher standards of the Education Professional Standards Board (EPSB) which are the same as the WKU MAE Program Standards. The demographics for the survey were adapted from a grant project by Miller, Chon, Houchens, and Hunt (2013). A descriptive survey with correlational design is used to evaluate MAE students’ responses toward their levels of professional preparation at the beginning of the program and at the moment of the survey completion. The procedures for the survey distribution were determined in cooperation with Dr. Murley, the MAE Teacher Leader Program Representative. The population of this study includes MAE Program students who have completed the program since its inception in 2010 (two cohorts, Fall, 2013 and Spring, 2014). For this study, Cohort 1 is the group of students who graduated from the MAE Program in December, 2013; Cohort 2 students completed the program in May, 2014. Participation in the survey is...
strictly voluntary; responders to the survey become the sample. Quantitative descriptive
statistics, $t$ tests, and correlations are used to analyze the data collected from the survey.
Thus, the central research question for this study is: What are the perceptions of teachers
completing the WKU MAE and Non-Degree Planned Fifth Year Teacher Leader Program
regarding their level of professional preparation?

**Research Questions**

This study is intended to investigate students’ perceptions of MAE Teacher Leader
Programs. The participants reflect on the process of their professional preparation according
to the MAE Program Standards. The standards are the key indicators of the MAE Program
quality and were established by WKU in accordance with NCATE and Kentucky
Educational Professional Standard Board (EPSB) regulations.

The subjects of the research are MAE Program students. Six independent variables
are clustered around two subgroups representing socio-demographic controls: Personal
Identity and Educational Identity. Subgroup 1 (Personal Identity) includes participants’
gender, race, and age. Subgroup 2 (Educational Identity) consists of grade level taught,
teaching experience, and content area. These six independent variables are hypothesized to
influence the dependent variables, which are represented by students’ perceptions of their
preparation to meet MAE program standards. The correlations between variables are
hypothesized in Figure 1. The model also indicates that there may be differences based on
which of the program strands the student chooses.
Figure 1. Relationships among socio-demographic factors, MAE Teacher Leader Strands, and students’ professional preparation vis-à-vis the Kentucky Teacher Standards.

The goal of the study is to examine the quality of the MAE Programs in teacher leadership at Western Kentucky University. The research questions follow:

From the perspective of students in the Western Kentucky University MAE Teacher Leader Program regarding their level of professional preparation:

1. What are student perceptions at the end of the program:
   a. For all students?
   b. For students in each strand (MAE in Elementary Education, MAE in
Interdisciplinary Early Childhood Education MAE in Middle Grades Education, MAE in Secondary Education, MAE in Special Education)?

2. To what extent do perceptions differ from the beginning to the end of the program:
   a. For all students?
   b. For each strand?

3. How do personal identity and educational identity variables relate to perceptions at the end of the program?

**Significance of the Study**

Teacher leadership is an emerging trend in schools for recent reforms in education calling for change due to economic, political, and social transformations in society, as well as technological advancements. The need for teacher leaders grows as teaching changes from knowledge provider to community leader, administrator, classroom manager, and mentor. In many respects, the teacher leader provides the liaison among students, their parents, and school administrators. The research shows that teacher leaders contribute to students’ achievement and retention rates (Silva et al., 2000), promote collaboration in schools at all levels, and provide mentoring and professional development for staff, which, in turn, serves as a teacher retention factor (Usdan et al., 2001). The meta-analyses of the existing literature in teacher leadership show the importance of the modern teacher leader. Most of the existing literature, however, concentrates on examining the new phenomenon of teacher leadership, while little research has been done to analyze the preparation of teacher leaders. In contrast, this study of a specific graduate teacher preparation program in teacher leadership contributes to the general field in several ways.

First, WKU’s new MAE Programs brings preparation in education and leadership to...
a new level, responding to the expectations of the Kentucky Education Professional Standards Board (EPSB) and the needs of the wider society. No research has been conducted in order to evaluate how well this program works. Assessing the program through the expectations of college students as customers, knowledge consumers, and future teacher leaders can provide important insights to the process of teacher leader preparation. WKU may use the information about students’ perceptions of the leadership component of the MAE Programs in order to improve program quality. Program graduates will benefit from the overall process by receiving better preparation which will enhance their abilities as teachers and leaders in both school and community.

Second, this study will add to the knowledge in the field of teacher leadership. Previous research in this area tended to use qualitative research designs and gathered information on existing teacher leadership practices, specifically as this phenomena plays out in schools. In contrast, this study provides quantitative data on the program quality related to teacher education programs in teacher leadership at the graduate level.

Third, the current study is based on Kentucky’s new teacher standards from EPSB. Thus the study represents an assessment of graduates’ sense of preparedness for teaching specifically on the very standards for which Kentucky teachers are held accountable. To the author’s knowledge, no other study has utilized this approach.

Fourth, this study also examines graduate students’ perceptions of how much they have improved or changed from the beginning of the MAE Teacher Leader Program to the end, a perspective not commonly utilized.

Fifth, the population of the study will also differ from other studies. While previous research has studied teacher leaders’ roles as providers of knowledge and educational practices, this research will examine teachers as recipients of teacher leadership knowledge,
specifically as masters’ level students.

Sixth, the population consists of graduate students who are working professionals and students at the same time. Much of research on teacher education has been conducted on undergraduates. Further, undergraduate students were traditionally viewed by society as high school graduates who were supported by parents. More recently, the college student population has changed. Numerous studies show that the number of nontraditional college students has increased in the past decade. According to Redd (2007), nontraditional students do not enter college in the same year they graduate high school; rather, they have full time or part time jobs and are financially independent. Redd projects that the number of nontraditional college students will continue to rise due to economic problems, rising cost of education, changes in job market, and high unemployment rates. Thus, it is likely that several of these students in the WKU MAE in Teacher Leadership were older nontraditional students when they attained their teaching certificates and began teaching. That suggests that the students in this master’s program include both those traditional undergraduate who are getting their masters at the beginning of their career as teachers (22-25 age range) and non-traditional undergraduates who began their teaching career at a later age (ages 26 up). Thus, this study will add to the knowledge of nontraditional students’ perceptions of the education graduate programs they attend.

Finally, the findings from the study may be used in the process of preparation for SACS and NCATE reviews and visits. Since program standards are aligned with the Kentucky Teacher Standards, the participants will also benefit by accessing their level of professional preparation to teaching in Kentucky.

Limitations of the Study

The concept of teacher leader preparation is large and complex. Numerous studies
reflect disagreements on the definitions of teacher leadership, as well as several contradictory theories on the concept of leadership as a whole. Trait theories define leadership as a unique personal quality which allows leaders to influence others through their unique personal characteristics (Steers, Porter, & Bigley, 1996). Situational leadership studies the role of a specific context as a catalyst which allows leaders to demonstrate their leadership potential (Hersey, 1985). Behavioral leadership concentrates on measurable acts of the leader’s behavior (Burns, 1978). Transactional theory explains leadership as interactions between leaders and followers (Burns, 1978). The theory of transformational leadership defines leaders as individuals who are able to motivate others to sacrifice their own desires to the good of larger organizational improvements (Bass, 1996; Burns, 1978).

To the author’s knowledge, there is a limited number of studies on the process of teacher leader preparation. This study’s goal is to examine the process of teacher leader preparation through the perceptions of graduate teacher-leader students. Each study dealing with human perceptions has certain limitations since these responses are more subjective than objective. Taken together, the above mentioned issues lead to some constraints in this study on teacher leader preparation.

First, the survey relies on self-reported data, so the results might be skewed due to subjectivity of the participants. Podsakoff and Organ (1986) reported that the limitations of research with self-reported data are consistency, motive, and social desirability. Participants of the study with self-reported data might maintain consistency of their answers based on lay theories because self-reported questions require summary judgments. Participants also might try to portray themselves positively in their answers in order to display socially desirable qualities.

Second, non-response bias might occur because the students who choose not to
participate might have different perceptions than those who do participate. Javidi (2011) noted that survey methods have become a popular tool in various business, marketing, technological, and educational establishments. This general inundation of the public could contribute to decreased interest by future participants to answer surveys, which could lead to a smaller research sample.

This information overload causes individuals to develop ways for dealing with e-mail, including the use of filtering software or the development of heuristics such as deleting all unsolicited email without opening it. Additionally, the threat of viruses delivered from unsolicited e-mail may discourage Internet users from reading unsolicited e-mail. (Javidi, 2011, p. 120)

Third, the accuracy of the responses may be compromised if the participants misunderstand the questions. While validity and reliability of the related survey instrument from which the current was adapted was tested by Javidi (2011), and the adapted survey instrument was tested by the panel of experts, some participants might experience personal issues preventing them from understanding the survey questions. Such issues are beyond the researcher’s control and could not be eliminated. Examples of such issues might include but not be limited to personal and professional problems, health issues, or various family and financial obligations.

Fourth, the population in the study consists of students who are enrolled in the WKU Teacher Leader Master Program, beginning in 2010, the date of the program inception. The students surveyed (the sample) are at the end of their coursework in TCHL 560, Action Research for Teacher Leaders, and represent the first and the second cohorts to complete program requirements. There are no prior graduates of the program. This limits the generalizability of the study because it concentrates on current MAE students and the
specific properties of the WKU Program. Data on the perceptions of graduates of the program after teaching a year or more are unavailable at the time of study. Also, other teacher leadership master’s programs may differ in the specifics of state policies, demographic characteristics, type of university, and actual curriculum and philosophy of the course of the study.

Fifth, the sample size was too small to analyze how the independent variables Educational Identity represented by Grade Level Taught and Content Area relate to student perceptions of their teaching practices.

Finally, this study examines changes in students’ perceptions of their level of professional preparation from the beginning to the end of their program of study. However, this research is not true longitudinal; rather, the survey utilizes a dual response set asking for their sense of preparation as they completed their coursework. Both sets of perceptions are collected at the conclusion of their course of study.

**Definitions of Key Terms**

_The Education Professional Standards Board (EPSB) in Kentucky_ is “the state agency that establishes standards and procedures” for teacher certification and “works closely with local school districts in the hiring process to ensure a properly credentialed educator in every professional position in Kentucky schools. EPSB also works with Kentucky colleges and universities, out-of-state institutions, and national evaluation agencies” (Kentucky Education Professional Standards Board, 2012, para. 3).

_Leadership_ is a process by which leaders influence followers to work synergistically toward a common goal in productive ways around organizational purposes (York-Barr & Duke, 2004, p. 256).

_Teacher leaders_: teachers who assume various roles both formally and informally in
order to promote school and student success. They lead within their professional learning communities by influencing others toward improving educational practices (Kantzenmeyer & Moller, 1996, p. 5).

**Kentucky Teacher Standards**: the units, dimensions, or criteria for measuring teacher effectiveness in the state, set in accordance with The Kentucky Education Professional Standards Board requirements and SACS and NCATE regulations (Kentucky Education Professional Standards Board Standards, 2012, p. 1).

**The National Council for Accreditation of Teacher Education (NCATE)** is a professional organization which

[A]credits schools, colleges, and departments of education in U.S. colleges and universities, as well as non-university entities that prepare educators for P-12 schools. The accreditation covers all educator preparation programs for the purpose of preparing and developing professional educators for work in P-12 school settings, including off-campus programs, distance learning programs, and alternate route programs. (National Commission on Accreditation of Teachers, 2010, p. 1)

**The Southern Association of Colleges and Schools Commission on Colleges (SACS)** “is the regional body for the accreditation of degree-granting higher education institutions in the Southern states” (Southern Accreditation of Colleges and Schools, 2013, p. 1).

**Teacher Leader Master’s Program**: an educational program designed to provide master’s level professional education for teachers in their selected area of certification (WKU Teacher Leader Proposal, 2010a, p. 74).

**Teacher Leader Masters Program Standards**: the criteria, in standards format, for “measuring candidate’s level of proficiency” adapted from the Kentucky Professional Teacher Standards from EPSB in accordance with SACS and NCATE regulations (WKU
Summary

This chapter began with an overview of the concept of teacher leadership and its role in education in the last decade. Kantzenmeyer and Moller (2006) found that teacher leaders improve educational practices in their learning communities. Teacher leaders have become very important in education systems due to their “contribution to school reform or student learning by influencing others to improve their professional practices, or by identifying and contributing to a community of leaders” (Kantzenmeyer & Moller, 1996, p. 5). Current educational reforms require excellence in education and call for highly qualified teachers. However, the process of teacher preparation has been inadequate and ill equipped, according to Levine (2006).

Traditional teacher preparation includes undergraduate and graduate degrees, which include core content and elective classes. Researchers, such as Levine (2006) and Goldberg (2001) pointed out that there are problems with teacher education, such as lack of practical and leadership skills for beginning teachers. The process of teacher leader preparation has undergone significant changes due to recent educational reforms and initiatives. Colleges and universities have started to incorporate teacher leadership classes into their curriculum. However, the research on teacher leader preparation is very limited.

Western Kentucky University has developed a new master’s program with teacher leadership as its inclusion into the core courses. This study analyzes students’ perceptions of their level of preparation toward the program standards. Students who were enrolled in the Teacher Leader Master’s Program since 2010 who are completing the program and are enrolled in the capstone class are asked to complete a survey about their perceptions of the program. The survey questions are based on the Teacher Leader Master’s Program
Standards. The study provides information to all stakeholders about the Teacher Leader Master’s Program quality from the students’ point of view, giving insight about program strengths or areas of improvements.

There are certain limitations to this study, such as subjectivity (self-reported data), non-response bias, and possible lack of interest in participation due to the over-abundance of surveys in all aspects of human life, which may lead to a smaller survey sample. The chapter includes definitions of key terms. The empirical research questions and the overall purpose of the study are encompassed by the central research question: What are the perceptions of teachers completing the WKU MAE Teacher Leader Program regarding their level of professional preparation?
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

This study analyzes the process of teacher leader preparation at a regional university in Kentucky, focusing on student perceptions of the program with respect to the Teacher Leader Masters Program Standards. Specifically the purpose of the study is to analyze the students’ professional preparation with respect to the Western Kentucky University MAE Program standards, which are identical to the Kentucky EPSB Advanced Teacher Standards (Western Kentucky University, 2010a). There is limited research on professional preparation for teachers’ educational leadership, and the WKU Program has not yet been formally evaluated. The information from this study serves as a partial program evaluation for the WKU MAE, and aids in the program’s future development, providing information to the stakeholders on program effectiveness. The study also adds to the limited knowledge base on educators’ preparation for teacher leadership.

To the author’s knowledge, research on teacher leaders has not previously been conducted as program evaluation from the students’ perceptive. Answering the national call for highly qualified teacher leaders, as indicated in one of the Obama administration’s educational reforms, Our Future, Our Teachers (U.S. Department of Education, 2011), WKU implemented new MAE Programs in the following areas: Elementary Education, Middle Grades Education, Secondary Education, Interdisciplinary Early Childhood Education, and Special Education. Students can also pursue a Non-Degree Planned Fifth
Year Program. Teacher leadership, as part of the core curriculum, was included in the above mentioned MAE Programs. This quantitative research is a descriptive survey with correlation design, adapted from a questionnaire by Javidi (2011) to fit the WKU MAE Program Standards. The population for this study is MAE students in all five strands who enrolled in the MAE Teacher Leader Program which began in winter, 2011. The population consists of Cohorts 1 and 2, as these are the only students to have completed the course of study at this point. Only students who maintained their sequence in the cohort are included. All students are teachers who have a bachelors’ degree and are working on their master’s degree or are pursuing a Non-Degree Planned Fifth Year Program. The sample includes only the MAE students who volunteer to participate in this study. Upon the completion of the survey, descriptive, comparative, and correlational analyses are conducted to answer the research questions.

Several strategies were utilized to locate the research that comprises this chapter. The wider strategy included searching the Western Kentucky University library, Elizabethtown Community College library, Amazon, and EBSCO websites using the code words teacher leaders, educational reforms, educational initiatives, student achievement, leadership in education, issues in education, teacher leader master program, and teacher leader professional preparation. Another approach was networking with the chair, committee members, and WKU graduate students through face-to-face meetings, digital communications, and various professional meetings, such as symposiums, presentations, and conferences, where topics about teacher leadership and teacher professional preparation were discussed. One key result yielded was a copy of the unpublished dissertation from Cohron (2009). The author refined the search from other published dissertations consistent with Cohron’s work, as well as obtaining hard and digital copies of research literature and
publications in accordance with the purpose of the study. The literature review examines the development of teacher leadership, roles and functions of teacher leaders, teacher leader education, and various educational reforms on the national and local level that led to the creation of teacher leader master’s programs.

The remainder of this chapter covers the following topics: Educational Reforms, Teacher Education, Teacher Leadership, and Master’s Degree in Teacher Leadership. The review concludes with a Summary.

**Educational Reforms**

The goal of all educational reforms is to improve the quality of education. The focus of recent educational reform is accountability. In the past, student achievement was the primary measure of success in federal educational initiatives by the U.S. Department of Education (1991, 2002), such as Goals 2000 and No Child Left Behind, respectively. More recently, although the goal remains accountability for improved achievement, the focus has shifted to academic standards and assessments, based on international benchmarks as a strategy. This approach will “prepare all students for success in our global economy and society” (Council of Chief State School Officers, 2010, p. 1).

The Common Core Standards provided teachers with the expectations for what students should do to in each grade level. These standards were aligned with college and career performance. This federal movement requires teachers nationwide to implement the above mentioned standards. Team work and curriculum mapping are necessary tools in order to create standards-based curriculum successfully. This is an important role for teacher leaders, in which they can work as content, assessment, and curriculum specialists (York-Barr & Duke, 2004), or as coaches, leaders, and facilitators (Katzenmeyer & Moller, 2001). Such demands require highly qualified teachers. Related to that, the quality of teacher
preparation has also been included in the accountability concept at the federal level. “More than ever before, it is imperative to have high-quality teachers. In today’s informational economy, education has become the engine driving the future of the country and of our children” (Levine, 2006, p. 11).

**Accountability**

Educational reforms set standards and demand results. In order to achieve excellence in education, the issue of accountability has become increasingly important in modern education. There are three types of accountability: “compliance with regulations, adherence to professional norms, and results” (Anderson, 2005, p. 1). The goal of accountability is to set benchmarks, measure students’ progress, and provide information when interventions will be needed. Schools have always had accountability but the forms and goals have shifted over time. Lately the push toward results in education (measured by student outcomes) from American policymakers has led to numerous educational policy mandates. According to Anderson (2005), in the past couple of decades, American education has made the shift to accountability from being “based on compliance and professional norms to one based on results” (p. 5). In the past, learning was based on “access and treatment” (Anderson, 2005, p. 5). Movement toward excellence in education has put the focus of accountability on learning goals and student outcomes. A goal-oriented accountability system is based on content standards and assessments. Within this larger movement of accountability, teachers have to align educational strategies with content standards. Teachers are now serving as a driving force to help direct schools as instructional leaders, mentors, and modelers of educational strategies (York-Barr & Duke, 2004).

According to Miller and Moore (2006), accountability models contain the following characteristics: “common high standards for all schools, statewide assessments, educators’
accountability for results, rewards for improving scores, sanctions for decline, with ultimate
takeover by the state for persistent failure” (p. 9). Miller and Moore found that the
accountability movement establishes close connections between schools and the business
community. Since accountability is based on learning outcomes, poor student performance
has come to be viewed as a result of inadequate teacher practices. This is a shift from the
logic of confidence model (Meyer & Rowan, 1977) in which achievement levels were
essentially attributed to the “quality” of the students (read affluent vs. at-risk) in different

Miller and Moore (2006) found that accountability raises the issue of teacher
preparation. The Obama Administration has developed an initiative, Our Future, Our
Teachers, to redesign teacher education. “Supporting a strong teaching force and school
leadership is a top priority for the Obama administration. Making improvements in teacher
and leader effectiveness is one of four pillars of the Administration’s education reform
agenda” (U.S. Department of Education, 2011, p. 1). This endeavor calls for improvement in
educational preparation and brings accountability to teacher education. The plan defines
clear standards in educational preparation programs and holds states and universities
accountable for the process of teacher preparation and the quality of future teachers.
Colleges will be mandated to provide meaningful data about teacher education and its
outcomes, such as K-12 student academic success, retention rates, and qualitative data on
future teachers’ perceptions about their job readiness. Graduates and their principals will
receive surveys which they describe their work experiences. The movement toward
accountability in schools calls for accountability in teacher preparation programs.

Standards-Based Reforms

The educational initiative, A Nation at Risk, by the National Commission on
Excellence in Education (1983) highlighted problems in American education, particularly students’ low achievement and inadequate high school curriculum. This report helped spur the standards-based reform movement, the goal of which was to improve U.S. school education. Other reforms, such as Goals 2000 (U.S. Department of Education, 1991), America 2000 (U.S. Department of Education, 1994), and the No Child Left Behind act (U.S. Department of Education, 2002), also focused on student outcomes and ways to improve them.

The overarching purpose of standards-based reform was to establish unity in education nationwide. Thus, U.S. students across the country would have the same expectations and benchmarks in schools. The educational standards movement encompassed two types: content standards and performance standards. Content standards are the descriptors of what students should do, while performance standards measure the mastery of students’ performance. Content standards help teachers set learning goals for students, design assessments, and provide clear benchmarks for student evaluation.

Reeves (1996, p. 5) defined standards as fixed criteria that measure students’ proficiency. Marsh and Coddington (1999) identified numerous benefits of standards-based teacher practices. First, teachers, students, and their parents will have a clear and coherent understanding of what students should be able to do in each grade level and be able to set benchmarks for students. Second, the variety of assessments will enable teachers to have a full picture of students’ knowledge and comprehension of the learning material, thus allowing educators to adapt the pace of the instruction and pinpoint the areas where students need interventions. Standards allow teachers to differentiate instruction in order to maximize learning for each student. Third, the sustainability and the unity of the content across the schools set by the standards will help students’ transition to other schools.
In order to achieve excellence in education, The Council of Chief State School Officers (2010) developed a new initiative, The Common Core Standards. These Standards focus on “core conceptual understanding and procedures starting in early grades, thus enabling teachers to take the time needed to teach core concepts and procedures well and give students the opportunity to master them” (Council of Chief State School Officers, 2010, para. 2). Currently, 45 states, District of Columbia, Guam, U.S. Virgin Islands, and American Samoa Islands have adopted the Standards. Common Core Standards are implemented in English, Language Arts, and Mathematics for K-12 schools. They set expectations on what students should know, understand, and be able to do according to their grade level.

This federal initiative helps educators across the nation set learning goals and provides teachers tools to help their students master the learning concepts. Students and their parents will benefit from the standards implementation as they will have consistent benchmarks and expectations in education from kindergarten through high school. The standards are aligned with college requirements and work expectations, which will prepare students for real life and allow them to compete on national and international levels in education. The standards enable the learning community to work toward shared goals in education.

There are several limitations of the Common Core Standards. First, “the standards do not define the intervention methods or provide support materials” in case the students are “well below or well above grade level expectations” (Council of Chief State School Officers, 2010, para. 8). Second, the expectations or methods of support for special education students or English as Second Language students are not defined in the standards. Researchers have found that it is very important for teachers “to translate the
standards into actual classroom practice in terms of what and how they teach and how they assess student mastery” (Association for Supervision and Curriculum Development, 2001, p. 1). In order to align the curriculum with the standards, share best teaching strategies, and confirm the unity and congruency of the curriculum across the schools, educators implemented curriculum mapping. The Association for Supervision and Curriculum Development (2001) defines content mapping as “a process for recording what content and skills are actually taught in a classroom, school, or district during a longer period of time” (p. 1). The role of teacher leadership has increased concomitant with the implementation of the Common Core Standards because educators must work together in departments on aligning standards with curriculum mapping.

**School Leadership**

York-Barr and Duke (2004) define teacher leadership as “the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of the school communities to improve teaching and learning practices with the aim of increased student learning and achievement” (p. 287). The traditional model of school leadership includes superintendent, principal, and other school administrators. New leadership forms have emerged in the past decade in schools as the educational process has become more complex in order to meet the challenges of the 21st century, such as diversity in the school population and the ongoing economic crisis which has made resources for schools ever more scarce. Researchers have noted new forms of school leadership: instructional, democratic, transformational, participative, and strategic (Leithwood, Louis, Anderson, & Wahlstorm, 2004, p. 4). Instructional leadership deals with pedagogical practices; transformational and strategic leadership brings change to educational practices; democratic and participative leadership involves the process of collaborative decision-
The role of teacher leaders has become more vital in school success because principals need help in order to comply with the requirements of the many complex school reforms (Barth, 2001).

Many researchers, such as Alverado (1997), Growther (1997), Dufour, Dufour, and Eaker (2008), O'Hair and Reitzug (1997), Paulu and Winters (1998), and Gabriel (2005) have studied the phenomena of teacher leadership. They define the following challenges for a teacher leader: influencing school culture, building and maintaining a successful team, equipping other teachers, and improving student achievement. The role of teacher leaders, according to Gabriel (2005, p. 3) includes mentor, subject area leader, peer coach, parliamentarian, vertical leader, back up leader, and leader who guides teams to their goals. The research shows that these defined roles are critical in building teacher professional learning communities which contribute to improved school culture and better student outcomes.

**Teacher Education**

During the 2000s American education policymakers came to view school teacher leaders as a key factor of success in implementing school reforms (Alvarado, 1997; Barth, 1991; Brandt, 1995; Growther, 1997; Darling-Hammond, 2003; Donaldson, 2001; Doyle, 2000; Fullan, 2001). Katzenmeyer and Moller (2001) define teacher leaders as “teachers who lead within and beyond the classroom . . . identify with and contribute to a community of teacher learners and leaders . . . and influence others towards improved educational practice” (p. 5).

The need for teacher leaders is increasing as the schools have become more complex due to the development of technology, globalization, and the increase in student populations. “From 2008 through 2020, public elementary and secondary enrollment is projected to
increase to 53 million students. Undergraduate enrollment is expected to increase from 17.6 million students in 2009 to 20.0 million in 2020” (Aud, Hussar, & Kena, 2011, p. iii). The Bureau of Labor Statistics (2012) expects the employment of kindergarten and elementary school teachers to grow by 17 percent from 2010 to 2020. Growth is expected because of both declines in student–teacher ratios and increases in school enrollment. Learning communities need professionally prepared educational leaders in order to meet these challenges.

**Reform Perspectives**

Numerous reforms in education call for changes in education. In 1983, the National Commission on Excellence in Education published *A Nation at Risk*. This report started the new educational standards-based reform by providing the data about the decline of American school education. Hargreaves, Earl, More, and Manning (2001) and Henning (2006) found that the standards movement influenced curriculum reform and school improvement in order to develop a more rigorous curriculum. Lord and Miller (2000) and Newmann and Wehlage (1995) found that restructuring reforms in 1990 attempted to improve student outcomes by making changes in the organization of schooling. The school reforms require that highly trained teachers are in place in order to educate U.S. students.

“The initial premise of the standards reform movement was quickly transformed in some states to a more systematic approach that covered teacher preparation, teacher evaluation, school assessment, and student assessment” (Leithwood et al., 2004, p. 30).

The recent trend in education is the accountability movement. While a decade ago policymakers concentrated their efforts on accountability in student achievement, recently the focus of their attention has become the process of accountability in teacher preparation. One of the main goals of the recent educational reforms is to improve teacher education. Our Future, Our Teachers, proposed by the U.S. Department of Education (2011), calls for changes in teacher preparation process. The teacher is an important component of school success as teachers educate the future workforce of the country: the nation’s children. The National Commission on Accreditation of Teachers (2010) developed an initiative to redesign teacher preparation. The goal of the movement is to bring a new practice into teacher education by including internships in schools in the teacher education process, giving students a more hands-on approach to future job. The role of teacher as mentor and leader will be enhanced through specially designed curricula with the inclusion of clinical practice in teams. State and federal government will provide proper incentives for teachers who will serve as mentors and leaders and work in high-need schools. Elmore (2000) found that evenly distributed leadership in professional educational communities in the process of school reforms is a key to success.

National Initiatives

Leadership Projects (The Wallace Foundation, 2001), the Individuals with Disabilities Education Improvement Act (2004), the Common Core Standards initiative (Council of Chief State School Officers, 2010), and Our Future, Our Teachers (U.S. Department of Education, 2011).

These programs were designed to help students reach their full academic potential. In a knowledge-intensive enterprise like teaching and learning, there is no way to perform these complex tasks without widely distributing the responsibility for leadership (again, guidance and direction) among roles in the organization, and without working hard at creating a common culture, or set of values, symbols, and rituals. Distributed leadership, then, means multiple sources of guidance and direction, following the contours of expertise in an organization, made coherent through a common culture. (Elmore, 2000, p. 15)

The demand for teacher leaders grows because “with the changing role of the career educator, professional preparation beyond the initial licensure phase presents some unique concerns and issues. Educators need more than rigor and relevancy to equip them to move student learning to higher levels” (Kentucky Education Professional Standards Board, 2007, p. 1).

(1999), and Halfon et al., enhancing teacher leadership will improve teacher quality and professional development as well as student learning, while teacher motivation and retention will grow.

In 1991, the first Bush administration created the Goals 2000 initiative. The bill set educational standards across the country. The purpose of the initiative was [to] improve learning and teaching by providing a national framework for education reform; to promote the research, consensus building, and systemic changes needed to ensure equitable educational opportunities and high levels of educational achievement for all American students. (U.S. Department of Education, 1991, p. 1)

This program was designed to make America a leader in secondary and post-secondary education. The program created a framework for academic standards and provided funds to the states in order to implement new standards. The program became a pivotal point in redesigning academic standards in states.

The goal of America 2000: An Educational Strategy by the U.S. Department of Education (1994) was to close the gap between secondary and post-secondary education, since schools should be responsible for the quality of the education they provide. The program also emphasized the role of technology in education.

The No Child Left Behind act by the U.S. Department of Education (2002) concentrated on student achievement. This reform mandated school accountability nationwide and set benchmarks in school education across U.S. schools. Minorities and students with disabilities were the targeted population of this educational initiative. Numerous efforts were put in place in order to improve their learning outcomes.

Urbansky and Eriksene (2000) noted the increasing role of the teacher unions as a result of the teacher leadership movement. According to Urbansky and Eriksene, the teacher
union reform from 1997 caused unions to center their work on student achievement, advancing school accountability programs, improving teacher professional development, and teacher leadership. The researchers noted that for all the tangible gains of the teaching profession such as decent salaries, employee benefit packages, and their success in lobbying federally and locally for increased funding for education, teachers owe much to union leadership.

An important step in the national teacher leader movement was the Teacher Leadership Educational Initiative. This national program was designed by the Institute for Educational Leadership (IEL, 2001) with concentration on teachers’ quality. Steelman, Powell, and Carini (2000), the IEL researchers in their report, Redefining Teacher Leadership Roles, found that the teacher is a vital part of the policy-framing and governing process at school.

As the nation has redesigned education, the role of a teacher leader became more important. In order to recognize and reward teacher leaders, The National Board for Professional Teacher Standards (NBPTS) developed the set of standards and criteria for the teachers to receive a Teacher Leader Certificate in 2009. The Core Propositions for Accomplished Educational Leaders were created by NPBTS in 2009 as the program for the educational leaders who seek the certification. This step demonstrates the importance of the new role that teacher leaders play in education and has been recognized nationwide at the board level.

American policymakers established standards in teacher preparation and the school education process. The Council of Chief State Officers (2010) initiative allows U.S. schools to adopt the Common Core State Standards. The Standards were designed to prepare students for college and career by setting clear benchmarks. This process allows all
stakeholders to learn the school expectations in the common core curriculum on each grade level.

The Obama Administration educational reform, *Our Teachers, Our Future* (U.S. Department of Education, 2011), emphasizes the importance of teacher leadership in schools and requires changes in teacher professional preparation by including “clinical practice” in the college curriculum in the form of internships in schools under teacher leader-mentor supervision (p. 13).

Numerous educational initiatives call for excellence in school education. U.S. school educators work on preparing students to be college and career ready. In parallel, American policymakers work on this task nationally and locally. State governments typically support federal initiatives in improving school education.

**Kentucky Initiatives**

Kentucky created several programs in order to improve the academic standards in schools. The *Kentucky Educational Reform Act* (KERA) was passed in 1990. It was a response to the 1989 Kentucky Supreme Court ruling that Kentucky schools were both inequitable and inefficient. As a result of KERA, Kentucky schools were restructured by changing the state testing system, giving more freedom to schools in both funding and curriculum design decisions, but also requiring schools to be accountable for improving student outcomes, i.e., adding value to their baseline level (Miller, 1992).

The *Kentucky Postsecondary Education Improvement Act* by the Kentucky Senate (1997) made an impact on the postsecondary education in Kentucky. It set several goals in order to improve education, such as creating an integrated and strategically planned system of postsecondary education with needs to be funded adequately to improve the quality of life for Kentuckians to a level that is on or above national average. The Bill stated that the
planned investments in higher education will eventually enhance economic development of the state by providing the highly qualified workforce that will provide additional revenue to the state. The Bill emphasized the necessity of creating nationally recognized programs of excellence for regional universities and the importance of the cooperation between schools and universities in order to create such programs, thus closing the gap between school and college preparation and improving students’ achievement.

Kentucky Senate Bill 1 by the Kentucky Senate (Kentucky Legislature, 2009, p. 10) addressed the issue of Kentucky school graduates’ college and career readiness. The bill focused on educational attainment and adult literacy. Kentucky state universities were allocated funds in order to provide excellent education to their students. The bill mandated the Kentucky Council on Postsecondary Education (CPE), the Kentucky Board of Education (KBE), and the Kentucky Department of Education (KDE) to develop a unified strategy to reduce college remediation rates of recent high school graduates by at least fifty percent from the rates in 2010 by 2014, and to increase the college completion rates of students enrolled in one or more remedial classes by three percent annually from 2009 to 2014. The bill led to the implementation of several education initiatives impacting college readiness and degree completion in Kentucky, such as

a) accelerated learning opportunities (focusing on the expansion of AP/IB access and dual credit opportunities), b) Secondary Intervention Programs (focusing on the development of transitional coursework), c) college and career readiness advising (focusing on the full implementation of the Individual Learning Plan and comprehensive advising programs), d) postsecondary college persistence and degree completion (focusing on bridge programming, accelerated learning opportunities, and student support and intervention systems). (Kentucky Legislature, 2009, section
Teachers have to address these issues adequately and provide the needed instructional support for struggling students as mandated by Senate Bill 1. It requires additional teachers' professional development and training, which will be received in modified teacher preparation programs. Senate Bill 1 also addressed the assessment and accountability system for Kentucky schools. “It calls for a revision of standards to be based on national and international benchmarks in order to increase the rigor and focus the content of K-12 education” (Kentucky Legislature, 2009, para.1).

The Grade Level Curriculum Shifts by the Kentucky Department of Education (2010) established new Kentucky Core Academic Standards. This document was a state response to the Common Core Standards federal initiative (U.S. Department of Education, 2010). The state created new Kentucky Core Academic Standards in Science, Mathematics, English, and History. Teachers have to implement the standards and align their lessons accordingly. Kentucky teachers implement content mapping and pacing guides for these educational practices. The role of the professional learning communities led by teacher leaders increased in Kentucky schools as a result of the curriculum shift and the mandatory unified pacing guides created for everyday instruction practices.

Fuller (2003) and McKeever (2003) found that educational change is technically simple but socially complex, when it applies to the culture of teaching. The researchers emphasized the importance of moving from external solutions in teaching practices to internal solutions, where experienced teacher leaders will share their knowledge with others and help create a new school climate. As teaching standards have been elevated, the demand for teacher leaders has increased as a result of the greater complexity of recent curriculum shifts in Kentucky. Thus colleges have had to address this demand by adding leadership
classes to their curriculum.

In 2001, The Wallace Foundation developed the State Action for Educational Leadership Projects (SAELP I and SAELP II) in order to prepare leaders in education in fifteen states, including Kentucky (Kentucky Education Professional Standards Board, 2007). The first project focused on preparation principals as school leaders, while the second project concentrated on teacher leaders’ preparation. The Kentucky Education Professional Standards Board (2007) appointed the Master’s Degree Redesign Committee to review and redesign rank change and master’s degree programs; teacher leader development was the focus of the new programs. The Committee set the guidelines for the revised Teacher Leader Master’s programs, where the conceptual framework and program design were based upon National Council for Accreditation of Teacher Education professional standards for colleges (Kentucky Education Professional Standards Board, 2007).

The Master Degree Redesign Committee also emphasized that the programs require strong collaboration between higher education, district administrators, and schools in the process of implementing the revised program and teacher leader preparation. Western Kentucky University (2010) designates Teacher Leader Masters Programs to be designed for certified teachers who will excel in professional leadership roles in their communities. The participating students will receive professional development in leadership, teaching methodologies, research, areas of their specification, and technology. They will be awarded with a professional master’s degree in their certification area upon successful completion of the program. Kentucky is not alone in the endeavor; various universities set Teacher Leaders Masters programs in accordance with their state Department of Education and their educational professional standards requirements and policies. These programs typically lead to an endorsement or certification in the Teacher Leadership area.
Finally, Kentucky added teacher leadership to the Kentucky Teaching Standards in 2003. The Education Professional Standards Board mandated that all Kentucky colleges include teacher leadership in their core content classes by 2011. Thus, Kentucky initiatives support federal reforms in order to improve school education, including the process of teacher preparation.

**Teacher Leadership**

The teacher leader role evolved during the past decade as an answer to the nation’s call for enhancing student learning and improving the learning environment (Brandt, 1992; Katzenmeyer & Moller, 2001). Childs-Bowen, Moller, and Scrivner (2000) found that teacher leaders cultivate change in schools, provide school administrators with much needed support in school, outreach to the community, building school culture, and forming positive images of their education establishment in the community (p. 28).

Teacher leaders contribute to various fields in school: they serve as mentors, collaborators, facilitators, and curriculum and assessment experts (York-Barr & Duke, 2004; Wagner, 2006). The capacity of serving various roles is very important for schools because teacher leaders positively impact school culture, co-workers, and students (Growther, 1997, p. 7).

**The Changing Role of Teachers**

The concept of teacher leadership is not new to the educational world. Reeves (2008) sees the concept of a teacher and a leader as a whole, stating that teaching and leadership are inseparable qualities. Drucker (2008, p. xxi) researched the teacher leader phenomena and found that in the emerging postindustrial world, leadership will be dominated by knowledge workers. Gabriel (2005) as well as Usdan, McCloud, and Modmostko (2001) noted that schools in the past functioned in the autocratic style but with the growing emphasis on high
stakes testing and the advent of NCLB, many school leaders are seeking effective organizational behavior by emphasizing leadership. The teacher role is redefined in order to meet the challenges of newly implemented common core standards, address curriculum mapping with pacing guides, and implement technology requirements.

**Teachers as Leaders**

Alvarado (1997), Coyle (1997), and Growther (1997) found that effective teacher leadership involves parallel leadership instead of hierarchical control. Other researchers, such as Killion (1996) and Stone and Cuper (2006), noted that modern schools need new forms of relationship between school administrators and teachers. “Teachers are leaders when they function in professional communities to affect student learning; contribute to school improvement; inspire excellence in practice; and empower stakeholders to participate in educational improvement” (Childs-Bowen, Moller, & Scrivner, 2000, p. 28). Teacher leaders assume numerous roles and responsibilities. York-Barr and Duke (2004) describe teacher leaders’ positions as formal and informal. Formal positions, such as department head, mentor, curriculum specialist, are viewed as more traditional forms of teacher leadership. Informal positions include peer coaching, facilitating teacher collaborative practices, and modeling strategy. Teachers who assume informal leadership roles often work as full-time classroom teachers. Thus, teacher leaders make significant impact on learning practices in their professional communities.

**Impact on culture.** Wagner (2006, p. 41) defines school culture as “the shared experiences both in school and out of school (traditions and celebrations) that create a sense of community, family, and team membership.” Wagner noted that important components of school culture, such as goals, vision, and mission of the organization, need to be shared by all stakeholders. Beattie (2002) researched how teacher leaders promote the development of
shared values. The researcher found that teacher leaders serve as role models via openness, transparency, and authenticity, which allow them to influence others and create teamwork. However, Beattie found that drawbacks such as professional commitment include several sacrifices from teacher leaders, such as work overload, lack of time, and potential health problems due to increased stress levels.

School culture also involves “common agreement on curricular and instructional components, as well as order and discipline, [which] are established through consensus. Tangible support from leaders at the school and district levels is also present” (Wagner, 2006, p. 41). According to Barth (2001), York-Barr et al. (2004), and Fitzgerald and Gunter (2008), teacher leaders play an important role in the above mentioned constructs of school climate, serving as a mentor, instructional leader, and peer coach. Teacher leaders improve collaboration between coworkers and enhance self-esteem in teachers and students by nurturing “a culture of success” through sharing responsibilities and making informed decisions as a professional learning community (Growther, Ferguson, & Hann, 2008, p. 3).

Another impact of teacher leaders on school culture is bringing a sense of stability and trust to the working atmosphere. Barth (2001), Wagner (2006), and Anderson (2006) all emphasized the importance of trust in school culture, vital for a healthy professional relationship between all stakeholders.

Schools that are accomplishing the goal of all students achieving success are most likely to have strong and stable teachers and administrators. Strength comes from factors such as greater content knowledge and visionary instructional leadership. Stability, in terms of commitment to the school over time, is needed to shape the school culture and climate. Stability enables the development of relationships with parents and the community that are anchored in mutual trust and focused upon students’ present and future needs (Anderson,
2006, p. 4). Thus, teacher leaders impact school climate by developing a sense of trust as key stakeholders in the school culture. Trust creates a positive learning environment for students and coworkers, improves academic achievement, and fosters better relationships with parents.

**Impact on students.** According to Wynne (2001), Hincheny (1997), and Hoerr (2005), the ultimate measure of the contributions of teacher leaders is their impact on student academic performance. Lieberman (1994), Leithwood and Jantzi (1999), Conley and Muncey (1999), Reeves (2008), Urbanski and Nickolaou (1997), Growther et al. (2008), and Nye, Konstantopolous, and Hedges (2004) all found that teacher leaders make a positive impact on overall school success during a time of school reform. Wynne (2001) noticed, however, that although teacher leaders play important roles in student achievement, other factors are necessary to bring about all reform goals, such as support of the school administration and adequate funding.

Cain and Caine (2000), Usdan et al. (2001), and Hatch, White, and Faigenbaum (2005) emphasized their support for transformational leadership, which evolved in schools in the past decade. Goldberg (2001) found that the teacher leader movement is an important part of a democratic process in schools. “Parallel leadership represents a more advanced form of a democratic process than is to be found in the bureaucratically derived concepts of leadership that have dominated schools in the past” (Goldberg, 2001, p. 757). Barth (2001), Glikman, Gordon, and Ross-Gordon (2001), and Katzenmeyer and Moller (2001) also support these findings, emphasizing that it will benefit the larger community when students learn the importance of sustaining the democratic form of government.

**Impact on co-workers.** Growther et al. (2008) found that teacher leaders play an important role in decentralization of the power at schools. Teacher leader practices include
parallel leadership in which teachers are involved in making decisions. According to this research, shared decision making promotes teachers’ involvement in school life and fosters a sense of belonging, reduces isolation, and leads to overall positive work experience in teachers. Teacher efficacy plays an important role in overall job satisfaction, teacher retention, and learning practices.

Teacher leaders promote teacher retention by coaching beginning teachers. According to Ingersoll and Strong (2011), the lack of professional support is one of the main reasons why one out of five new teachers leave within three years and almost 50 percent of teachers leave within the first six years. Reeves (2008) and Ingersoll and Strong (2011) both found that teachers who don’t receive mentoring and encouragement on an ongoing basis are more likely to leave school. One of the teacher leader roles is mentoring coworkers, which will give beginning teachers the support they need to do their job well and stay in the profession.

Reeves (2008) stated that in the past decade teacher professional development changed. He developed the new teacher leader framework, where action research by teacher leaders and school administrators became the core component of professional development. This practical application of teacher leaders’ knowledge and experience is extremely important in the age of technology when schools are required to prepare students for the worldwide competitive workforce in an environment in which science achievements create the need for complex, high level skills.

Reeves (2008) found that a school leadership crisis is coming because about half of school administrators will be eligible for retirement in the next five years. The problem will be solved not by retention of prior administrative leadership practices, but by a new approach that embraces leadership at every level. Muijs and Harris (2006) found that
parallel leadership will help school administrators address students’ needs and share the increasing responsibilities of 21st century education.

**Barriers**

There are several barriers to teacher leadership development in schools. Muijs and Harris (2006) and Fitzgerald and Gunter (2008) found that increased responsibilities and workload prevent many teachers from practicing leadership. The increased demands of standardized testing and curriculum mapping add to the overall workload and other teacher responsibilities, such as club sponsorship, coaching, and supervising students during various school-related events. The additional responsibilities associated with teacher leadership may prevent current teachers from becoming teacher-leaders.

Another barrier to the development of teacher leadership is the lack of tangible rewards for the extra workload of teacher leaders. Fitzgerald and Gunter (2008) found that teacher leadership has become widespread at schools, but there is no salary increase for teacher leaders. The question about proper compensation for the additional work of teacher leaders requires thoughtful research and attention of American policymakers, but is beyond the scope of this study. In that regard, Gabriel (2005) noticed that school leaders are semi-balanced between having authority and being regular workers but have no formal power. This opens a wide avenue for policymakers and future research in that area.

According to Barth (2001), Fitzgerald and Gunter (2008), and York-Barr et al. (2004), relationships with coworkers might threaten teacher leader practices. Some colleagues feel competition from teacher leaders, especially in a tightened job market and hard economic conditions. Those tensions can damage healthy professional interactions, put additional pressure on teacher leaders, and might even prevent them from taking teacher leader roles.
Benefits

Teacher leaders provide numerous benefits to all stakeholders. Growther et al. (2008) found during two decades of research that teacher leaders provide the following positive outcomes for all stakeholders. Teacher leaders convey convictions about a better world by articulating a positive future for all students and contributing to an image of teaching as a profession that makes a difference (Growther et al., 2008, p. 3). Teacher leaders also improve pedagogical practices by participating in shared decision-making and professional development activities; providing liaisons between students, teachers, and school administrators; establishing networks inside and outside school for educational support; enhancing school culture by celebrating success; and fostering self-respect in students and job satisfaction in coworkers (Growther et al., 2008, p. 3). The last, but not least benefit of teacher leadership is improved student learning. Cohron (2009) conducted a study on teacher leader interactions with teachers and the effect it makes on student achievement. She found a positive correlation between student academic success and teacher leadership.

Master’s Degree in Teacher Leadership

Keaster and Schlinker (2009) found that Teacher Leader Masters Programs offer numerous benefits for participating teachers: (a) provide greater teachers’ understanding on the process of schooling at all levels; (b) reduce teachers’ stress caused by unawareness of the nature of school administrators job by understanding the process of decision making on all school levels; (c) give teachers skills to deal with school issues which will promote their independence in decision-making process; (d) enhance the role of teacher to teacher leader; (e) enhance teachers’ knowledge; (f) make administrators’ job easier due to teachers’ understanding of the school decision-making process; and (g) make their organization more
Overview of Teacher Leader Programs

Since educational reforms and technology development require a new type of teacher, the new teacher leader education program emerged nationally and locally, in programs such as the Jacqueline B. Vaughn Graduate School for Teachers, Chicago, IL; the Center for Educational Leadership, California State University, Hayward, CA; Teacher Leadership, Wheelock College, Boston, MA; Teacher as Leader, University of Wisconsin-Milwaukee; the Teacher Leader Program, Wright State University; and the Urban Teacher Leadership MS at Georgia State University. Many universities spearheaded programs where a teaching degree is combined with the certificate in the special area for teacher leaders.

The Usdan et al. (2001) research on the teacher leader phenomena shows that this trend changes the process of teacher preparation. In response to teacher leader preparation, universities and colleges in America broadened teacher training programs by blending undergraduate and graduate programs, where students gain two degrees and/or certifications in five years. Various programs were created by colleges in response to the need for providing an adequate work force for modern schools: teacher internships, professional development programs, certification programs, etc.

The growing competition between colleges, the need for teachers on the job market, and the demand for a marketable degree created a trend in college programs: the teaching degree with additional license or certification. Nationwide universities have started to develop various programs for the modern teacher: a working professional who already holds a degree and pursues additional certification or tries to upgrade his/her level of education. Examples of such programs include The California Math/Science Teacher Corps Project at California, The Project Promise in Colorado, The Delta Effective Leaders in Teaching in
Virginia, The Navaho Teacher Educational Program, and others (Usdan et al., 2001).

**WKU’s MAE in Teacher Leadership**

Western Kentucky University implemented the Teacher Leader Master (MAE) Program in 2010. The framework for the program was based upon Danielson’s (2006) research on teacher leadership. It includes teacher leaders’ collaboration and networking on various levels within and beyond the school, with student learning as the main component of the program. Lave and Wenger (1991) emphasize the importance of learning in the professional community by being submerged in that community's values, history, beliefs, and rules. The shared knowledge enhanced participants' educational success. This partnership helps teacher leaders extend transformational leadership beyond their professional educational settings. Teachers are partners with all stakeholders, including students’ families, community stakeholders, and colleagues. The teacher leaders communicate within the department and across the school to reach the community, according to Danielson’s (2006) model. MAE Programs promote learning in professional learning communities as the teachers continue to work and study at the same time.

The WKU Teacher Leader Program Proposal (2010) lists the following core obligation “on which WKU MAE programs are conceived: teacher leadership is collaborative and inclusive, teacher leadership is transformative, teacher leadership is grounded in knowledge of learners and subject matter, teacher leadership is a professional commitment” (p. 3). The Response to Intervention model (RTI), which is a part of the 2004 Individuals with Disabilities Education Improvement Act (IDEIA), is included in the Teacher Leader Master Program Curriculum. The program concentrates on placing highly qualified teachers in every classroom.

Western Kentucky University has developed a Teacher Leader Masters and Planned
Fifth-Year Program endorsed by the Kentucky Education Professional Standards Board, leading to certification rank change. The importance of preparing teacher leaders is to improve student achievement, teacher collaboration, and overall teaching practices. The Teacher Leader Masters Program goal is designed to close the gap between teacher preparation and teaching practice that directly impacts student learning. The Program transitions teachers from the world of theoretical knowledge to the translation of real-world classroom instruction. In order for students to learn at high levels, the teachers instructing them must do the same. The MAE Program is the bridge between theory and practice that provides the resources and support needed to raise beginning teachers’ professional skills to high quality, accomplished teaching practices. The Program promotes daily collaboration and team building, further development of teachers’ knowledge base, and refining the use of curriculum maps and content pacing for classroom instruction.

**Program description.** The Program beliefs are based on research from Marzano (2007), Sanders and Rivers (1996), Reeves (2004), the National Board of Professional Teaching Standards (2002), and others. The list of the WKU Teacher Leader Masters Program beliefs is located in Appendix A. The admission requirements include a GPA of 2.75 or above, being a graduate of a higher education institution, and a valid Kentucky teacher certification.

The Teacher Leader Master’s Program is divided into two instructional levels. Level 1 provides pedagogy, leadership, and content applicable to all P-12 teachers working across the wide gamut of developmental levels and content areas. Level 2 directs the candidate into an individual program in content, pedagogy, and areas of professional growth concurrent with the goals of each candidate. An action research project is required for completion of the program. This focuses on classroom, school, or district issues. The delivery options for
classes include face-to-face meetings, online instruction through Blackboard and other web-based classes, and small group meetings.

The Teacher Leader Master’s Program will move teachers toward acquiring advanced levels of teacher proficiency in teaching and learning, partnering with families and community stakeholders, and becoming leader/collaborators within their classroom, school, and beyond. The fact that MAE participants will study in their learning communities provides them hands-on experiences in leadership skills in their learning communities, both in classrooms and with their coworkers. On a broader level, the Kentucky Department of Education has a huge stake in the effectiveness of the Teacher Leader Masters Programs, since the state is held accountable by No Child Left Behind and Kentucky has its own Unbridled Learning accountability system (Kentucky Department of Education, 2010).

**Program content and structure.** The Teacher Leader Master’s Program development was based on EPSB guidelines. Several meetings with P-12 teachers and focus groups were conducted by WKU in order to establish the program. Local superintendents will support the program since the program is designed for teachers who currently hold Kentucky teacher certificates in order to move them to the master’s level, according to the WKU Teacher Leaders Masters Program Graduate Program Documents (2010). The conceptual framework includes WKU’s professional vision and mission: to prepare students to be productive, engaged leaders in a global society and to provide service and lifelong learning opportunities for its constituents (see Appendix B for WKU vision and mission).

The goals of the program are to impact students’ learning directly; to include a professional educational core based on pedagogy, leadership, and content; to allow for individualized programs of study; and to empower teachers to address authentic needs in classroom management, differentiated instruction, and student learning (Evans & Powers,
2011, p. 2). The program has a set of standards in order to measure student’s proficiency (see Appendix C for WKU MAE Standards).

The Western Kentucky University Teacher Leader Masters Program offers graduate degrees in Elementary Education, Middle Grades Education, Secondary Education, Interdisciplinary Early Childhood Education, and Special Education with a focus on Learning and Behavioral Disorders or Moderate and Severe Disabilities. Upon completion of the program the participants will be awarded a Master of Arts in Education degree. The individual program requirements vary depending on the area of teaching of the participant.

**Interdisciplinary Early Childhood Education.** Interdisciplinary Early Childhood Education is a program for prospective teachers who will work with the following age groups: Birth through Kindergarten. The future graduates will work with children from birth through five years in K-12 school system, public or private child care centers, and various child programs, serving as liaisons between school administrators, children families, and educational learning communities at large.

The Teacher Leader Masters Program in Interdisciplinary Early Childhood Education for Teacher Leaders requires 36 credit hours, divided between Professional Education (18 hours) and a Specialization (18 hours).

**Elementary Education.** The Teacher Leader Masters Program in Elementary Education for teacher leaders requires 9-16 credit hours of Professional work and 15-21 hours of individual program. There are the following endorsements and areas of specialization available: Elementary Education, Educational Administration, English as a Second Language, Environmental Education, Gifted and Talented Endorsement, Instructional Technology Endorsement, or Math Endorsement.

**Middle Grades Education.** The Teacher Leader Masters Program in Middle Grades
Education for Teacher Leaders requires 30-37 hours, where 9-16 hours will be in Professional education, and 14-41 hours in Specialization, such as Exceptional Education, Interdisciplinary Early Childhood Education, Library Media Education, or Literacy of Psychology. Endorsements such as English as a Second Language, Gifted and Talented, Environmental Education, or Instructional Computer Technology are also offered.

**Secondary Education.** The Teacher Leader Masters Program in Secondary Education for Teacher leaders requires 30-37 hours. Students complete a major in one of the following certification disciplines: Art, Biology, Chemistry, History, Music, Secondary Education, or a minor in one of the following areas: Agriculture, Art, Biology, Business and Marketing Education, Chemistry, Earth and Space Science, English, Family and Consumer Science, French, German, Health, History, Technology Education, Math, Physical Education, Physics, Secondary Education, and Spanish. The program also allows for including an endorsement for the following areas: Gifted and Talented, English as a Second Language, Environmental Education, and Instructional Computer Technology. The program consists of 9-16 hours of Professional Education and 18 hours of Specialization.

**Special Education.** The Teacher Leader Masters Program in Special Education for teacher leaders is available in two certification areas: Moderate and Severe Disabilities or Learning and Behavioral Disorders. The program requires 30-37 credit hours with 16 hours in Professional Education and 21 hours in Specialization. The Specialization is available in the following areas: Special Education Curriculum, Special Education Behavior/Classroom Management, Special Education Collaboration, Special Education Assistive Technology. For students who chose Moderate and Severe Disabilities certification, the Autism Spectrum Disorders Certificate is available and requires four Autism Spectrum Disorder Courses in addition to the program of study.
**Proficiency evaluations.** The proficiency evaluations are offered for all programs as an optional evaluation for MAE Program graduates when students can demonstrate proficiency of course objectives and assessments. Students have to meet with the advisor and determine the course they will choose to demonstrate proficiency prior to registering for the chosen course. They must complete the online application in order to be permitted to have proficiency evaluation prior to taking the proficiency evaluation.

The proficiency evaluation includes Test I and Test II for the following classes: Instructional Strategies, Equitable Schools, Managing Learning Environment Assessment, Fundamentals, Assessment II Standardized Testing, and Assessment III: Classroom Tests. The student has to receive a passing grade of 90% on Test I, and after that he/she can take Test II. The student has to receive a “pass” score on the Test II. The time limit for Test I is two hours, and three hours for Test II. According to WKU MAE Program policies, the student has to pass both tests in order to demonstrate proficiency. Both tests are scored by the School of Teacher Education Graduate Faculty. According to Teacher Leader Program Representative, Dr. Murley (personal communication, September 3, 2014), no students passed Test I; therefore, no one qualified for Test II.

**Theoretical Perspective**

This study is based generally on transformational and constructivist theories identifying the teacher leader role in education. Burns (1978) emphasized a transformational role for teacher leaders, who “engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality” (p. 20). He saw transformational leadership as a process where leaders inspire followers, where both parties are mutually involved in changing the working atmosphere for the better.

added to this theory the importance of shared decision-making, teacher empowerment, and fostering school and community relationship, and teamwork.

Constructivist theory, developed by Piaget (1977), explains the mechanism of learning through experimenting and reflecting. More recently, Brandt (1992), Hord (1997), and Silva et al. (2000) added a new approach to constructivism in educational leadership by developing the concept of collaborative practices and professional learning communities. According to Canella and Reiff (1994) and Kroll and LaBosky (1996), the constructivist approach changed the method of teaching from a didactic, memory-oriented transmission model to an active engagement and problem solving model. The role of teacher leaders became more vital in professional learning communities. Coyle (1997), McKeever (2003), and Growther et al. (2008) found that teachers who are engaged in collaboration help improve school culture, which is a very important component of a learning climate. Silin, Mulford, and Zarins (2002) found that teacher leadership influences student engagement with schools and affects the development of students.

More specifically, the WKU Teacher Leader Master’s Program is based on Danielson’s (2006) framework for the teacher leadership concept, which is grounded in the constructivist view of teaching and learning. The Conceptual Framework for the WKU Teacher Leader Program was developed by using an alignment matrix, which included the following components: NCATE standards, Kentucky Teacher Standards, and the WKU Conceptual Framework. NCATE standards “establish the shared vision for a unit’s efforts in preparing educators to work in P–12 schools” and “provide direction for programs, courses, teaching, candidate performance, scholarship, service, and unit accountability” (NCATE, 2009, p. 1). These standards measure teacher preparation in the following areas: knowledge, skills, and professional disposition; assessment system and unit evaluation; field experience
and clinical practice; diversity; faculty qualifications, performance, and development; unit governance and resources. The Kentucky Teacher Standards measure teacher professional preparation. Finally, the WKU Conceptual Framework is also framed within the university’s vision, mission, and beliefs.

**Current Research**

In the past few decades teacher leadership has become an important part of school education. There is extensive research on this phenomena and its effect on student achievement. While many researchers noticed that there is a direct correlation between implementing teacher leader practices and overall school success, Cohron (2009) analyzed the particular effect teacher leaders have on student learning in Kentucky schools. Cohron studied teacher leadership and its effects on students’ achievement as measured by the Kentucky Core Content Test (KCCT). The researcher used Lambert’s (1998) framework in order to construct the study. This framework consists of five elements which refer to the interactions between teachers, students, teacher leaders, and school administrators and student achievement. Student achievement is measured by various assessments and utilized as benchmarks for interventions in order to help students succeed. The economic aspect of teacher leadership in school was also shown in Cohron’s (2009) research by testing and confirming the hypothesis of teachers’ leadership having a positive influence on the improvement of student learning outcomes. Cohron found that some school districts questioned the effectiveness of investments in teacher leaders during budget cuts and the effectiveness of teacher leadership on student achievement.

Cohron (2009) used a non-experimental study design and standard multiple regression in order to analyze the data. Independent variables were derived from Lambert’s (1998) framework and included activities in the following areas: leadership, use of
information in shared decisions, collaboration practice, innovation, and analyses of learning. This researcher studied the specific behavior of the teacher leaders in the above mentioned areas. Ethnicity and socioeconomic factors were also included as independent control variables since these dimensions affect responses. Ethnicity was measured by the percentage of African American students in the population, and socioeconomic status was measured by the percentage of students on free and reduced lunch. KCCT test scores in Kentucky elementary schools in 2008 were the dependent variable.

Cohron (2009) adapted Lambert’s (1998) *Leadership Capacity Staff Survey*. The survey items clustered around five areas of teachers’ behaviors associated with leadership practices. The answers ranged from 1 to 5, where 1 was associated with *Not Observed* and 5 with *Can Teach Others*. The survey was e-mailed to participants. A panel of experts addressed the validity of the test instrument, and test/re-test procedure was used to confirm reliability. The population consisted of 2526 Kentucky public elementary school teachers from 83 schools in 23 districts in 2008-2009. The sample (N = 573) represented a 23% return.

The findings also showed a moderate negative correlation between student achievement and ethnicity (-0.280, p < .01) and socioeconomic status (-0.280, p < .01). Findings also show positive correlation between student achievement and leadership constructs: leadership work (.211, p < .01), shared decisions (.205, p < .01), collaboration (.197, p < .01), and analysis of learning (.229, p < .01). The research showed that teacher leadership is positively associated with student learning, although the correlations were weak (a .2 correlation has an effect size of only .04). The factor that influenced student achievement the most was analysis of learning (Cohron, 2009).

There were several limitations to Cohron’s (2009) study. The sample selection
included only elementary teachers in Kentucky, which limited generalizability of the study. Also, such variables as improved student learning and effective classroom instruction could not be measured directly. Response bias is obviously a possibility as well with only 23% returning the survey.

There is limited research on teacher leader preparation. While studies show the positive effect teacher leaders have on schools, the process of teacher preparation itself has not often been the focus of researcher attention. The Mainous (2012) study of teacher leader preparation programs provides analysis of Teacher Leader Master’s of Education Programs and their effectiveness based on program goals and standards. Mixed methods research was used. In order to analyze Teacher Leader Program goals and their alignment with Teacher Leader standards, the researcher used a qualitative approach. Five schools were randomly selected out of all institutions in the study, and an analysis of the content of syllabi was performed. The goals and skills discovered in the leadership programs were compared with Teacher Leader Model Standards from the Teacher Leader Exploratory Consortium. Mainous used frequencies and percentages in order to find out what type of institutions offer master’s programs in Teacher Leadership and what courses are included in them.

The population included colleges accredited by The National Council for Accreditation in Teacher Education (NCATE) and consisted of 656 schools. Mainous (2012) used The Carnegie Classification by the Carnegie Commission on Higher Education (2010) as a framework for college classification. For the purpose of the study, the geographic locations of colleges were also used. The framework came from the 2010 Census Division of the United States, where the country was divided into four regions: Northeast, Midwest, South, and West. Each region has nine divisions. Frequencies of college placements were calculated to find out the common trends in their locations. The
description of the Teacher Leader Master’s Programs included number of credit hours for
core and elective classes, the type of classes offered, and their method of delivery.
Frequencies also were calculated to determine what new themes were being developed in
teacher leader education.

Mainous (2012) found that only 28 (4.2%) of 656 NCATE schools have Teacher
Leader Master Programs. Out of these 28 schools, 27 were education-focused large or
medium sized four year schools, and one school with a low-enrollment profile of 1,000-
2,999 students was awarding Masters of Art in Education degrees only. Out of the above
mentioned 28 schools offering Teacher Leader Master Programs, 85.6% were located in the
Midwest or South.

Mainous (2012) found that this could be possibly influenced by the fact that this
region belongs to a five-state consortium which promotes teacher leadership. In particular,
Kentucky mandated the inclusion of Teacher leadership courses in all Master of Education
programs. Overall, 42.8% of the schools with teacher leader graduate programs were coded
as Master’s in Education, 39.2% as Master’s in Arts, and 17.7% as Master’s in Science. The
highest frequency (88.7%) had a total requirement of 30-36 hours. The maximum amount of
hours was 48, which may prevent potential students from getting a Teacher Leader degree
due to tuition cost and return on investments. Core content hours ranged from 12 to 48.
Elective hours vary by institution, but the highest frequency (35.7%) had zero electives,
which showed rigid course requirements scheduled by colleges for these Teacher Leadership
courses. For the delivery method, there was a range across on-campus classes (39.4%), a
combination of online and face-to-face classes (39.2%), and online classes (21.4%). The
core classes included school law (35.7%), research (17.8%), collaboration (4.8%),
community relations (2.0%), philosophy (2.0%), and advocacy (0.8%).
The fact that all information about colleges was found on college websites was one of the research limitations for this study because online information could be inaccurate or outdated. Another limitation was the small sample size which could limit the number of themes discovered during the research provided by Mainous (2012) on teacher leader preparation programs.

Javidi (2011) conducted a study at the University of North Carolina, Charlotte. The objective of the study was to analyze student and graduate perceptions of the quality of the university’s teacher preparation program according to the National Association for the Education of Young Children (NAEYC). Javidi used NAYEC standards for the assessment of the student perceptions. The goal of NAYEC is to improve professional preparation practices for elementary school teachers. The organization developed five standards for teacher preparation. Colleges, accredited by NAEYC, use these standards as a tool for program assessment and improvement. The University of North Carolina received NAEYC accreditation in 2007.

The research questions analyzed students’ perceptions toward their professional preparation according to NAYEC standards and examined the benefits of the program and the areas of the program that need improvement. Javidi (2011) used the survey method in order to collect data from the students. The survey questions addressed students’ demographics (12 questions) and students’ perceptions of their level of preparation according to the North Carolina Professional Teacher Standards (25 questions). Seven questions were open-ended and addressed program strength and weaknesses. To test the validity and the reliability of the survey, Javidi used a panel of experts to establish face validity of the survey. Two faculty members examined the survey items clustered around NAEYC standards. The experts independently determined that all survey items measured
NAEYC standards with 100% agreement. Content validity was established by examining the elements of the NAEYC standards. The experts agreed that each survey item matches the corresponding standard. A pilot study was conducted in 2010. The sample consisted of 15 students who agreed to participate. All were females. It took them between nine to fifteen minutes to complete the survey. Out of 15 students, 14 agreed that the survey questions are easy to understand, and one responded “neutral” to this question. Internal reliability was measured as greater than 0.7 for Cronbach’s alpha, the accepted minimum for scale reliability (Nunnally & Bernstein, 1994). Inter-item correlations for the survey questions ranged from 0.48 to 0.90.

The surveys were e-mailed to graduated students. Each e-mail sent to a potential participant had a web link to the survey to ensure that responses would be anonymous. The researcher used Teleform, a website supported by the institution. The population consisted of 938 students graduated in 2006 and 2007. The sample included 96 College of Education graduates in 2006 and 2007 that completed the survey (10.2%). Javidi (2011) used a mixed method approach. Student perceptions were analyzed using frequencies, means, and percentages. Content analysis was employed for the open-ended questions about program benefits and weaknesses.

The researcher found that students felt well prepared for the teaching job. The strengths of the program were the areas of instruction planning and implementation. The area where student preparation needed improvement was the education of diverse learners which included students in special education, English as a Second Language, as well as from low income families. Javidi (2011) found that graduates felt that they were prepared for the teaching jobs.

The survey had several limitations. First, the college did not keep up with the
database of the graduates’ personal e-mails. The researcher used graduates’ college e-mails. It was obvious that some graduates did not check their college emails after graduation, so they ended up being non-responders. Another limitation was non-responder bias, related to the very low response rate. The results of Javidi’s (2011) research might be used for program improvement and for NAEYC re-accreditation.

Summary

Western Kentucky University, a leading American University in teacher preparation, designed and implemented a new Teacher Leader Masters Program, which allows students to receive a degree or an advanced rank if students are pursuing the Non-Degree Planned Fifth Year Program in their teaching area as well as professional preparation in leadership. This chapter researched national and local initiatives that led to the creation and development of the MAE Programs at WKU. The goal of this research is to evaluate MAE Programs at WKU by examining students’ perceptions of the program according to the program standards which are the same as Kentucky’s EPSB Advanced Level Teacher Standards. In summary, the creation of the MAE Program is a response to national and local need for teacher leaders as a critical component of bringing excellence to American education. However, the WKU MAE Program inception began in 2010, so further research is needed to evaluate student perceptions of the effectiveness of the WKU MAE Program.

The research on teacher leadership shows that teacher leaders bring positive changes to their communities and work as agents of change (Barth, 2001; Cain & Caine, 2000; Darling-Hammond, 2006; Fullan, 2001; Growther, 1997). The existing literature reveals that teacher leaders create nurturing school environment, promote positive school culture, and drive school improvement. The need in teacher leaders as transformational agents of change grows nationally because, on one hand, there is growth in the student population. On the
other hand, numerous educational initiatives require schools to bring extensive changes to their practices.

Teacher leadership became a necessity in schools due to recent reforms oriented around excellence of school education. “The reform movement put a spotlight on school leadership, highlighted its importance for school success, made student achievement the measure of school performance, and demanded accountability from leaders for results” (Levine, 2005, p. 17). Reforms called for changes in schools, requiring teachers to put high emphasis on student achievement.

In order to address these requirements, colleges and universities responded with modified programs of teacher preparation. Leadership components were included in the curriculum of teacher graduate programs nationwide. Teacher leadership is a tool of success in schools. According to Burns’ (1978) transformational theory, transformational leadership enables leaders to inspire and motivate their followers and improve the working climate in their communities. Brandt (1992), Hord (1997), and Silva et al. (2000) researched the constructivist approach to educational leadership wherein collaboration in professional learning communities initiated by educators improves students’ learning outcomes. Cohron’s (2009) study demonstrated the positive effect teacher leaders have on a learning community.
CHAPTER III

METHODOLOGY

Introduction

Numerous studies have been conducted on the topic of teacher leadership in the past decade. The research shows that teacher leaders serve as agents of change in schools. Within every school there is a sleeping giant of teacher leadership, which can be a strong catalyst for making change. By using the energy of teacher leaders as agents of school change, the reform of public education will stand a better chance of building momentum. (Katzenmeyer & Moller, 2001, p. 2)

However, the preparation of teacher leaders is just coming to policymakers’ attention. A recent initiative of the Kentucky EPSB mandated the inclusion of leadership courses in the Master’s of Art in Education (MAE) curriculum in Kentucky universities. Given the very limited research done on the topic of the teacher leader preparation, the purpose of this study is to examine students’ perceptions of the WKU MAE Program students regarding the quality of their MAE Program, based on the MAE Program standards. Utilizing survey methods, these perceptions serve as a partial program evaluation of the WKU MAE Program.

Chapter III describes the methodology for the study and consists of the following sections: Introduction, Research Design, Population and Sample, Research Questions, Instrumentation, Description of the Variables, Procedures, Missing Data, Data Analysis, Validity and Reliability, Ethical Considerations, and a Summary. Of note is
the distinctive instrument used in this research, a descriptive double matrix survey (students’ perceptions of their level of preparation for teaching for the beginning and end of the program), based on the WKU Program standards, as adopted from the Kentucky EPSB Advanced Level Teacher Standards, with demographic questions included.

**Research Design**

The purpose of this research is to evaluate the quality of the newly revised MAE Programs in a comprehensive regional university in Kentucky. The study design is a descriptive quantitative survey research utilizing comparison of pre-post data. In that regard, the data also serve as a partial program evaluation of the WKU Teacher Leader Master Programs. Beyond the descriptive results, the author explores relationships between socio-demographic factors, the five program strands, and the 10 teacher standards.

**Population and Sample**

The population includes the first two cohorts of the MAE Program students from 2010, the year of the program’s inception. There are five different areas of the MAE program specialization: Elementary School, Middle School, Secondary School, Interdisciplinary Early Childhood Education, and Special Education. The students are working professionals who already have a bachelor’s degree and teacher certification. All participants are using the MAE Program to meet Kentucky’s requirements that all teachers obtain a master’s degree or the 32 hour Non-Degree Planned Fifth Year Program. The students come from various backgrounds, but the majority of them graduated from WKU, according to Dr. Lisa Murley (personal communication, April, 3, 2014). The program consists of online classes with the inclusion of optional face-to-face meetings during class presentations. For the Specialization Component, students may choose between online and regular face-to-face classes, but the frequency of each method of course delivery is based on
students’ class selection.

The opportunity to become a participant in the research is given to each MAE student in both Cohort 1 and Cohort 2. Specifically, the population as defined here includes only those cohort members who completed the program in sequence. Any students who fell behind their cohort would not have been part of this study. The class selected for survey participation was the final capstone class, with the approval of Dr. Lisa Murley, Program Representative. Participation in the study was strictly voluntary. Thus, the sample consists of MAE Cohort 1 and Cohort 2 members who completed the survey given to all students completing the capstone class. (Students were not placed in a cohort per se, but became part of these two groups through enrollment in the first or second semester of the program.)

**Research Questions**

For the readers’ convenience, the research questions are repeated from Chapter I.

From the perspective of students in the Western Kentucky University MAE Teacher Leader Program regarding their level of professional preparation:

1. What are student perceptions at the end of the program:
   a. For all students?
   b. For students in each strand (MAE in Elementary Education, MAE in Interdisciplinary Early Childhood Education MAE in Middle Grades Education, MAE in Secondary Education, MAE in Special Education)?

2. To what extent do perceptions differ from the beginning to the end of the program:
   a. For all students?
   b. For each strand?

3. How do personal identity and educational identity variables relate to
perceptions at the end of the program?

**Instrumentation**

The survey model utilizing program standards to check student perceptions about the level of preparation toward their future teaching positions was adapted from Javidi’s (2011) study of student perceptions of early childhood program quality according to the National Association for the Education of Young Children. The permission to adapt that instrument was received from Dr. Javidi via e-mail (see Appendix D).

The first part of the current survey has a set of demographic questions while the second part explores student perceptions about the level of professional preparation at the beginning and at the end of the MAE teacher leader program. The questions in the second part of the survey clustered around the ten MAE Program Standards, which are the same as the ten Advanced Level Kentucky Teacher Standards. Each standard has a set of three to five sub-standards with yields a total of 45 sub-standards. The participants were offered a choice of five Likert-type scale answers which included 1 = *Very Unprepared* (VU), 2 = *Unprepared* (U), 3 = *Medium Prepared* (MP), 4 = *Prepared* (P), 5 = *Very Prepared* (VP) where numbers from one through five were added at the top of the columns. The responses were measured twice as a dual response matrix, at the beginning and end of the program (the capstone TCHL 560 Action Research for Teacher Leaders Course). (See Appendix E for a copy of the complete questionnaire, The MAE Teacher Leader Program: Survey of Student’ Perceptions. The survey includes an Informed Consent/Preamble, in lieu of individual consent forms.) The survey is online using Qualtrics.

**Description of the Variables**

The independent variables from this study consisted of two types—socio-demographic factors and the five MAE Program strands. The dependent variables are the
students’ perceptions regarding their professional preparation according to the MAE Program Standards before they started the MAE Program and currently, at the end of the program. The description of the variables is organized according to the logic model located in Chapter I (Figure 1). Each variable was assigned an operational definition and variable label code. All data are self-reported by students, a problem addressed in the Limitations section of Chapter I. The data were coded to be consistent with the operational definitions for research purposes and analysis.

**Independent Variables**

There are two types of independent variables—Demographic Controls and Program Strands. These are addressed in turn.

**Demographic Controls.** Demographic factors have two subcategories—Personal Identity and Educational Identity.

**Personal Identity.** This cluster represents characteristics commonly associated with a person’s basic identity, in this study responders’ age, gender, and race. As such, these factors are considered to influence students’ responses (Lynes, 2008, pp. 154-155). This study serves as a partial program evaluation of the WKU MAE in teacher leadership. As far as the author knows, program outcomes have not been examined for gender differences, age, and ethnic backgrounds of the responders; accordingly the data should provide valuable insight for program effectiveness and any recommendations for program improvements that may be needed.

**Gender (GEN).** Javidi (2011), from which this study was modeled, did not include gender. Instead, this study follows the Miller et al. (2013) demographics portion of their revision of Kentucky’s Standards and Indictors for School Improvement; the nominal variable is coded 0 = female, 1 = male.
**Race/Ethnicity (RACE).** The research provides valuable insight toward any differences in students’ perceptions based on race. Javidi (2011) found no differences in responses of students with different ethnic backgrounds with respect to students’ perceptions of their preparation to meet NAEYC standards based on race. For this study, these are nominal data, coded 1 = African American, 2 = Asian, 3 = Latino/Hispanic, 4 = Native American, 5 = White/Caucasian, 6 = Other.

**Age (AGE).** Self-reported age in years is a ratio scale.

**Educational Identity.** This cluster of variables constitutes context on teachers’ background. These are important because such factors can have both situational (content, what level taught) and developmental (years experience) influence.

**Grade Level Taught (GRADE).** This ordinal coded variable refers to the responders’ primary grade responsibilities for their current teaching position. It includes four categories, coded: 1 = Preschool, 2 = Elementary (K-5), 3 = Middle (6-8), and 4 = Secondary (9-12).

**Teaching Experience (EXP).** Teacher experience can lead to changes in professional attitudes regarding cultural, personal, and professional qualities, all of which may influence effectiveness. This is a ratio variable, coded by number of years taught.

**Content Area (CONT).** This construct describes the specific content area of the professional preparation of teachers. This is a nominal scale, coded as follows:

1 = Elementary Related Arts (Music, Art, Library, Physical Education, Health, etc.)
2 = Elementary Remedial Services (Title I, ELL, Reading Assistance, etc.)
3 = Elementary Special Education
4 = Elementary Teacher leader/Effectiveness coach/Curriculum coordinator (or similar duties)
5 = Counselor
6 = Math
7 = Language Arts
8 = Social Studies
9 = Science
10 = Foreign Language

Program Track (TRACK). The second type of independent variables consists of the different strands in the MAE Teacher Leader Program. There are five strands, coded nominally as follows: 1 = MAE in Interdisciplinary Early Education, 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, 5 = MAE in Special Education.

Dependent Variables

The dependent variables represent students’ perceptions of their level of professional preparation toward the MAE Program Standards, which are identical to the ten Advanced Level Kentucky Teacher Standards. Each standard has from three to five sub-standards (total of 45 sub-standards). Students’ perceptions are divided into two distinct time dimensions reflecting a dual response matrix that measures their level of professional preparation at the beginning of the program and currently, both on a 5-point Likert-type scale where 1 = Very Unprepared (VU), 2 = Unprepared (U), 3 = Medium Prepared (MP), 4 = Prepared (P), 5 = Very Prepared (VP).

Procedures

Data collection procedures were discussed with Dr. Lisa Murley, the Teacher Leader Program Representative, via e-mail. The study involved human subjects; therefore human subjects’ clearance was required from the IRB prior to beginning the study. After WKU IRB approval, sponsorship of the study was sought from Dr. Murley, who provided a letter to the researcher. This letter was included in the survey in order to emphasize the importance of the research to the university, encourage student participation in the survey, and foster WKU students’ sense of belonging to their alma mater by taking account of their opinion through program evaluation to be used for continuing improvement of the WKU educational
Upon IRB approval (see Appendix E), the author developed a procedure through consultations with the dissertation chair, Dr. Miller, and Dr. Murley. To capture the end of the program time frame, the survey was distributed in the capstone TCHL 560 Action Research final classes for Cohort 1 and Cohort 2 in Fall, 2013 and Spring, 2014 semesters, respectively. Three WKU professors Drs. Cribbs, Gandy, and Pereira were teaching these classes. These instructors were actively involved in the discussion about developing the methods and the dates for the data collection.

The professors in each capstone class (three in the December, 2013 Cohort and two in April, 2014 Cohort) were given a link to the study via e-mail, which they sent to all their students enrolled in their capstone TCHL 560 action research class. The e-mail, along with the link to the survey, consisted of the letter of sponsorship from Dr. Murley, an explanation of the use of Preamble/Informed Consent instead of a signed consent form for survey research (see Appendix F), and the explanation of procedures (see Appendix F, Letter to Potential Participants). The survey was created and disseminated to the students using Qualtrics software, which provides anonymous responses by deleting students’ identifying information.

Each student in Cohort 1 received this letter in December, 2013, and Cohort 2 students received this letter in April, 2014 near the time of their graduation from the MAE program. The letter provided a link to Qualtrics where the students were invited to take the survey via online. One week was given to the students to submit their responses. The invitation to take the survey (including a link) was sent to the students twice more: after a seven day period, and again three weeks from the date of the first survey distribution (see Appendix G). Students who did not respond to any of these invitations were considered to
be non-responders and were excluded from the research if they did not reply within three weeks after the third invitation.

**Missing Data**

Prior to any analysis, survey data have to be checked for obvious errors and missing data. Particularly in working with samples of relatively small size, these decisions can be important to the research. With respect to the validity and reliability of the data, the decision rules about the surveys with missing data and their handling should be made prior to the data collection.

If the data were congruent with the following parameters, the surveys were included in the sample, while the inconsistent surveys were deleted, i.e., the cut mark for inclusion of the surveys in the sample was considered: (a) 10% or less missing data of all items, (b) the omission of an entire scale, or (c) the omission of more than two identifying categories of demographic data.

Once this set of data was assembled, any missing data were handled based on listwise deletion. For the ratio data, there were never more than three cases that were affected by this strategy. Selected demographic variables with nominal or ordinal scale of measurement had more missing values but any analyses for these data were of secondary importance for the overall purpose of the study. The alternative to listwise deletion is the substitution of some value for the missing data. But according to Schafer and Graham (2002), both decisions show a bias. Eliminating the particular survey with missing data for a specific statistical procedure shows systematic bias because these responders might be different from other responders; however, entering a substitute value also carries some unknown amount of bias. Further, the possibility of distortion of the dataset is greater when the missing data substituted for are nominal or ordinal measures. Finally, the sample size
precluded more sophisticated techniques such as the imputation of missing values based on regression weights. Thus given the small sample and the exploratory nature of this work, the listwise deletion procedure is the most reasonable option.

**Data Analysis**

This study is a descriptive quantitative survey with additional correlational analysis, representing MAE student perceptions of the level of professional preparation on the MAE Program Standards (the Kentucky EPSB Advanced Level Teacher Standards). All data were analyzed consistent with the logic model and research questions as depicted in Chapter I. As shown in the logic model, the researcher examines relationships between two types of independent variables (student demographic controls and the different program strands) and the dependent variables (student perceptions of their level of professional preparation at the end of the program and changes in the student perceptions from the beginning to the end of the program). Data analysis included descriptive statistics, psychometric analysis, and separate analysis for the research questions.

For descriptive statistics, frequency counts and percentages were calculated for nominal data. Means, standards deviations, minimums, maximums, and range were calculated for the continuous data. Psychometric analysis included the computation of Cronbach’s alpha in order to establish internal scale reliability for each of the 10 MAE Program Standards. RQ1 reflects the results of the psychometric analysis for the 10 program standards. RQ2 required $t$ test analysis. RQ3 examined the correlations between the independent variables and student perceptions of the program standards.

The statistical computations are divided into three sections: Descriptive Statistics, Psychometric Analysis, and the Research Questions. Specific procedures under each are outlined below.
Descriptive Statistics

Descriptive statistics were calculated for both independent and dependent variables in order to describe the distribution of data. The independent variables consist of Demographic Controls and Program Strands. The plan of analysis for each variable depends on the type of the variable and is described below.

Demographic Controls. These variables are divided into two subgroups: Personal Identity and Educational Identity.

Personal Identity. This group of variables includes Gender and Race/Ethnicity (both nominal variables) and Age (ratio measurement). Frequency counts and percentages were computed for the nominal variables; for Age, mean, standard deviation, range, minimum, and maximum were computed.

Educational Identity. This grouping has three variables: Grade Level Taught is an ordinal variable; Teaching Experience is ratio; Content Area is nominal. Frequency counts and percentages were calculated for the nominal and ordinal measures while mean, standard deviation, range, minimum and maximum were computed for the ratio scale.

Program Strands. This category has five subgroups: MAE in Interdisciplinary Early Education, MAE in Elementary Education, MAE in Middle Grades Education, MAE in Secondary School Education, and MAE in Special Education. These variables are nominal, so frequencies and percentages were computed.

Psychometric Analysis

Descriptive statistics for the dependent variables were calculated under this psychometric analysis section, associated with the computation of Cronbach’s alpha internal scale reliability.

Psychometric analysis for this study involves the calculation of Cronbach’s alpha for
internal scale reliability, a procedure which also helps establish partial validity of the survey. The author adapted the original survey, created by Javidi (2011), to the needs of this research. In particular, Javidi used the set of NAYEC standards to measure students’ perceptions of the program, while this study analyzes the WKU MAE Teacher Leader Programs and by extension, the MAE Program Standards, which are equivalent to the Advanced Level Kentucky Teacher Standards utilized in the survey. To the author’s knowledge, neither KDE or the EPSB has conducted any validity analysis of these standards. Thus this aspect of data analysis is important accordingly.

In particular, there are 10 MAE program standards, each with from three to five indicators. For each of the 10 standards, the set of respective indicators were subjected to Cronbach’s alpha. Tables reporting these calculations include the descriptive statistics for each indicator (mean, standard deviation, minimum, maximum, and range) plus the alpha-with-item-deleted value. The overall alpha is reported with the descriptives for the composite set of indicators for each standard.

Finally, inter-standard correlations were computed. This provides an estimate of the extent that the standards are independent of one another.

**Research Questions**

For Research Question 1, the mean, standard deviation, minimum, maximum, and range were calculated for each substandard for each of the 10 program standards, based on end of program (current) data. For RQ1.a, the overall mean for the entire sample was calculated for each standard. That entailed calculating the composite mean for each standard by summing the values for each substandard in each respective standard and then dividing by the respective number of those indicators. That step, however, is dependent on the psychometric examination of each standard. If Cronbach’ alpha is not adequate for a
specific standard, calculations are conducted on the individual indicators rather than reporting the standard as a whole. For RQ1.b, the same procedure is followed only for the sub-samples associated with each program strand.

Research Question 2 measured how students’ perceptions differ from the beginning to the end of the program for all students and for each strand. The calculations conducted for RQ1 are for students’ perceptions at the end of the program. For RQ2, those same computations are repeated for the perceptions for the beginning of the program. Then, the differences between beginning and current means were examined in order to see if there is a change in students’ self-perceptions over the course of their professional preparation. Paired sample t tests were calculated for this comparison of the beginning and current student responses.

Research Question 3 addressed whether socio-demographic factors were related to student perceptions of their level of preparation on the MAE Program Standards. The analysis of data for RQ3 employed calculation of Pearson correlations, t tests, and unbalanced ANOVA. Pearson correlation was calculated for variables with continuous data (students’ age and teaching experience). Nominal data were examined by t tests to determine if students responded differently depending on their gender. For the remaining categorical measures, the unbalanced ANOVA test was computed, for Race/Ethnicity, Grade Level Taught, and Content Area.

Validity and Reliability

Javidi’s (2011) study served as a model for this study. Javidi’s instrument measured students’ perceptions of their professional preparation using NAYEC standards. In contrast, this study measured students’ perceptions of the Western Kentucky University MAE in Teacher Leadership Program standards, which are consistent with the Kentucky Teacher
Standards. Because the WKU program standards equate to Kentucky’s advanced teacher standards, as developed by the Education Professional Standards Board, the current study provides a yardstick for how well prepared these MAE graduates are with respect to the standards that they will be held accountable for on the job. Javidi established his survey instrument’s validity through review of the survey questions by a panel of experts who examined face validity and content validity.

The pilot study conducted by Javidi in 2010 helped establish internal reliability for his instrument, with overall Cronbach’s alpha of .960. In parallel, the current study provides evidence for internal scale reliability through the use of Cronbach’s alpha (see Psychometric Analysis, above), which also serves as rudimentary construct validity (Nunnally & Bernstein, 1994). Because the WKU MAE Program utilizes the EPSB Advanced Level Teacher Standards as the program standards, no content or face validity check was needed.

**Ethical Considerations**

The study holds no known risks for participants. There are several procedures included in the data collection in order to eliminate possible misconceptions. The participants received a letter with a detailed explanation of the procedures. The participation in the survey is completely voluntary, and the anonymity of the participants was provided by Qualtrics software which precludes responses being linked to any individual. Thus, no identification of personal information is possible from the survey data.

The benefits include the impact that the participants can make on the quality of the MAE Programs by providing their feedback about their perceived professional preparation over the program standards, i.e., the study serves as a partial evaluation of this new MAE Teacher Leader Program. Also, the study may foster a sense of belonging to Western
Kentucky University by giving students the opportunity to have their voice heard and count.

The participation in the study is voluntary and carries no penalties for non-participation. The Preamble/Informed Consent and letter of approval from the Western Kentucky University IRB are attached at Appendices E and F.

**Summary**

Expectations for the quality of teacher preparation are on the rise. The growing need for teacher leaders and recent changes in education policies on federal and state levels have led to changes in the process of teacher preparation. One result is classes on teacher leaders being included in the core content area in Kentucky, beginning in 2010. However, to the author’s knowledge, no research has been done on the effectiveness of these classes.

This research examines students’ perspectives toward their professional preparation according to the new Western Kentucky University MAE Teacher Leader Program standards. The chapter provides information about the research methods used to evaluate the MAE Programs from the students’ perspective according to the MAE Program standards, which are identical to the Kentucky EPSB Advanced Level Teacher Standards.

The study includes two types of independent variables (demographic controls, which include personal identity and professional identity; and five different program strands from preschool to secondary levels). Both types of independent variables are hypothetical influences on the dependent variables, which include students’ perceptions toward their professional preparation according to MAE Program standards, both at the end of the program and for any change in perceptions from the beginning to end of the program.

The survey instrument for the research was adapted from the existing literature per the author’s permission for one time use in the study. Javidi (2011), the author of the original survey instrument, tested the instrument validity and reliability through the...
examination of content conducted by a panel of experts in addition to the use of Cronbach’s coefficient alpha which also provides a rudimentary sense of validity (Nunnally & Bernstein, 1994). For the current study, no content review was necessary because the instrument utilizes the Kentucky EPSB Advanced Level Teacher Standards. However, Cronbach’s alpha provides scale reliability for the respective sets of indicators at the end of the program.

Qualtrics software was used for survey creation, distribution, and data collection. The survey was distributed in the Fall, 2013 for Cohort 1 and Spring, 2014 for Cohort 2 in their final capstone TCHL 560 class via e-mail with the assistance of three WKU professors teaching this class. The letter to the potential participants included the explanation about the survey, letter of sponsorship from the Teacher Leader Program Representative, Dr. Lisa Murley, and the link to the survey. The Preamble/Informed Consent was included at the beginning of the survey, which was sent three times: at the end of the class, and twice more with a one-week interval. Students who did not respond to the survey within three weeks after the third invitation were considered non-responders.

Data analysis included descriptive statistics, psychometric analysis, and separate analysis for the research questions. For descriptive statistics, frequency counts and percentages were calculated for nominal data. Means, standards deviations, minimums, maximums, and range were calculated for the continuous data. Psychometric analysis included the computation of Cronbach’s alpha in order to establish internal scale reliability for each of the 10 MAE Program standards. RQ1 represents descriptive statistics for the results of the psychometric analysis for the 10 program standards. RQ2 required paired sample t tests. RQ3 examined the relationships between the independent variables and students’ perceptions of the program standards, with calculations including Pearson
correlation, \( t \) tests, and unbalanced ANOVA.

There are no known risks for the participants. IRB approval from Western Kentucky University was obtained prior to the collection of data. The study serves as a partial program evaluation of the WKU MAE Teacher Leader Program, providing information toward the new program’s strengths and highlighting areas needing improvements, if any.
CHAPTER IV
RESULTS

Introduction

The purpose of this study was twofold. First, the study examines the perceptions of the WKU MAE Program students toward their level of professional preparation. Second, the study serves as a partial program evaluation. Additionally, this research provides valuable information for future development since the WKU MAE Teacher Leader Program was begun in 2010 and no other assessment of students’ perceptions of these issues has been conducted.

In order to address these goals and test the research questions, the researcher collected MAE students’ responses through the survey created for this purpose, using Javidi’s (2011) approach to using program standards as a measure of program effectiveness; the model for the demographics section came from Miller et al. (2013). The survey was distributed with the assistance of the WKU MAE professors teaching the program’s capstone course in action research, using Qualtrics software. All data were self-reported.

The relationships between dependent and independent variables are depicted in Figure 1 (Chapter I). The dependent variables are students’ perceptions toward their level of professional preparation. A dual-response matrix asked for students’ perceptions at the beginning and end of their studies.

Cronbach’s alpha was calculated as a measure of the internal reliability of the survey; this also served as a rudimentary form of scale validity. Specifically, the set of
indicators for each of the 10 Program Standards were examined for their structure as a “scale.” Paired t tests were used to determine if there was any difference between the beginning and the current responses for RQ2. Pearson correlations, t tests, and unbalanced ANOVA were used to answer RQ3, i.e., the extent of any relationships between the socio-demographic controls and student responses. Descriptive statistics, such as frequencies, percentages, means, standard deviation, range, minimum, and maximum were calculated to determine the distribution of the different variables. The remaining sections of this chapter provide the results and analysis of the research and cover Descriptive Statistics, Psychometric Analyses, Research Questions, and a Summary.

Descriptive Statistics

For this section, descriptive statistics were calculated for the independent variables including Personal Identity, Educational Identity, and the Program Strands. The results of analysis are reported in the sections below. This population consisted of 107 students from Cohort 1 and Cohort 2, who were enrolled and successfully completed the WKU MAE Teacher Leader Program. Data were collected in the TCHL 560 capstone class on action research during their last semester. For Cohort 1 the survey was distributed in December, 2013; for Cohort 2, distribution was in May, 2014. The final sample consisted of those 46 students (43%) who had complete surveys. Of the 57 who responded (53.3%), 11 were lost because they failed to meet the criteria in the decision rules for missing data. Descriptive statistics for the dependent variables (students’ perceptions of their level of educational preparation on the WKU MAE Teacher Standards) are presented in the Psychometric Analyses section below.

Independent Variables

The Independent Variables consist of the demographic controls with two subgroups
(Personal Identity and Educational Identity) and the Program Strands. This division is based on the goals of the research to find out the factors influencing students' level of professional preparation and is consistent with similar research after which this study was modeled, specifically Javidi (2011) for the study design and Miller et al. (2013) for the demographics. According to Bloom (1980), control variables are typically unalterable personal markers, while the dependent variables are the primary focus of the research, considered to be subject to change depending on quality and circumstances. In this particular research, the goal is to find out how well the students feel they are prepared to teach. The examination of the demographic data permits correlations between student responses and their background and can be utilized for implementing program adjustments if needed.

**Personal Identity.** These control variables include Gender (GEN), Race/Ethnicity (RACE), and Age (AGE). These three variables were selected because these aspects of the targeted population typically represent important indicators of students’ upbringing which can influence their responses to school and life outcomes (Lynes, 2008, p. 154).

The data show that of the 46 respondents, \( n = 34 \) (73.9\%) were females; \( n = 12 \) (26.2\%) were male. Analysis of students’ ethnicity indicates that 3 (6.7\%) were African Americans, and 42 (93.3\%) were White/Caucasian. Participants’ age varies from 26 to 56 with a mean and standard deviation of 31.39 and 6.35.

**Educational Identity.** The three factors in the block include Grade Level Taught (GRADE), Teaching Experience (EXP), and Content Area (CONT).

*Grade Level Taught* has the following distribution: Elementary (K through 5) has a frequency of 19 (41.3\%), Middle School (grades 6 through 8) has 9 (19.6\%), and High School (grades 9-12) has 18 (39.1\%).

*Teaching Experience* ranges from 1 to 15 years, with mean of 6.24 years and
standard deviation of 2.46.

Content Area: these data were combined into Preschool/Elementary School ($n = 19$) and Middle/High School ($n = 27$) due to missing data for some categories. For Preschool/Elementary the frequencies were Preschool ($n = 8, 42.1\%$), Upper Elementary ($n = 6, 31.6\%$), Related Arts ($n = 1, 5.3\%$), Special Education ($n = 4, 21.1\%$).

The Middle/High School Teachers had content area frequencies as follows: Math ($n = 8, 29.6\%$), Language Arts ($n = 3, 11.1\%$), Social Studies ($n = 6, 22.2\%$), Science ($n = 2, 7.4\%$), Related Arts ($n = 3, 11.1\%$), Special Education ($n = 4, 14.8\%$), Teacher Leader ($n = 1, 3.7\%$).

**Program Strands.** These strands are the five areas of content emphasis in the WKU MAE Teacher Leader Program. There was no participation in the Interdisciplinary Early Childhood Education strand for the respondents who replied to the survey. Frequency counts were as follows: MAE in Elementary Education ($n = 14, 30.4\%$), MAE in Middle Grades Education ($n = 7, 15.2\%$), MAE in High School Education ($n = 15, 32.6\%$), and MAE in Special Education ($n = 10, 21.7\%$).

**Psychometric Analyses**

There are ten WKU MAE Program Standards which are the same as the Kentucky Advanced Level Teacher Standards as developed by the EPSB. There are 45 substandards which describe teachers’ behaviors for these standards, representing teacher effectiveness. To the author’s knowledge, KDE conducted no psychometric analysis for the EPSB Kentucky Teacher Standards. In the current research, the sample is not large to support a factor analysis, but Cronbach’s alpha was calculated for the substandards for each standard to measure scale reliability. This also gives a rudimentary sense of validity for the standards, which were assessed through student responses at the beginning of the program and
currently at completion of the program. The alpha-with-item-deleted value indicates the reliability for the scale with that item deleted from the calculation (Nunnally & Bernstein, 1994). The data for each of the standards for the students’ current responses are exhibited in tables 1-10 below.

For Standard 1 the data are illustrated in Table 1 where the first number in the standard identifier refers to the number of the entire standard, i.e., Standard 1 in this particular table; the second number refers to the sub standards for Standard 1; and the letter c stands for currently, referring to the time for the students’ rating in the dual response matrix, at the beginning of the program, b, or currently (see Appendix C for listing of all 10 standards and their respective substandards). For the readers’ convenience, Table 1 through Table 10 are organized in the same pattern where each numbers refers to the appropriate standard and substandard as well as the time of the ratings regarding program completion. The tables also include descriptive statistics for each substandard; the Total row shows the composite scale calculations, with the value in the $\alpha$ - d column for that row representing the overall alpha for that standard.

For Table 1, the overall Cronbach’s alpha is .88, a relatively strong scale reliability. Item 1.4c has the highest alpha-when-deleted value of .88, but this is not higher than the overall alpha. This suggests that all five substandards fit together as a single construct, so that the standards can be combined as the unit of measurement rather than having to consider each substandard separately.
Table 1

*Internal Reliability and Item Characteristics for Standard 1, Current Values (N = 46)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>( \alpha - d )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1c</td>
<td>4.24</td>
<td>.67</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>1.2c</td>
<td>4.22</td>
<td>.73</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td>1.3c</td>
<td>4.22</td>
<td>.73</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td>1.4c</td>
<td>3.91</td>
<td>.81</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>1.5c</td>
<td>4.17</td>
<td>.61</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>Total(^b)</td>
<td>4.15</td>
<td>.58</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88(^c)</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program* Standards (Appendix C).

\(^a\)\( \alpha - d \) = alpha with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total \( N \) across all of the substandards for that standard.

\(^c\)Value for \( \alpha - d \) for Total is Cronbach’s coefficient alpha for the entire scale.

For Standard 2 (Table 2), the overall coefficient alpha is .90, considered to be a very strong scale reliability. Substandard 2.1 has the highest \( \alpha - d \) value at .90, but again, none of the values for alpha with item deleted are higher than the total scale alpha, so that all of the items fit together as a single construct.
Table 2

*Internal Reliability and Item Characteristics for Standard 2, Current Values (N = 46)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>(\alpha - d^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1c</td>
<td>4.31</td>
<td>.79</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.90</td>
</tr>
<tr>
<td>2.2c</td>
<td>4.16</td>
<td>.71</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>2.3c</td>
<td>4.22</td>
<td>.79</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>2.4c</td>
<td>4.22</td>
<td>.74</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>2.5c</td>
<td>4.24</td>
<td>.74</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>Total(^b)</td>
<td>4.23</td>
<td>.63</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.90^c</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\)\(\alpha - d = \) alpha with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total \(N\) across all of the substandards for that standard.

\(^c\)Value for \(\alpha - d\) for Total is Cronbach’s coefficient alpha for the entire scale.

Data for Standard 3 are depicted in Table 3. The overall alpha is .91, again very high. Substandard 3.3 has an alpha-when-deleted coefficient of .92 which indicates that by removing this substandard, the scale reliability would increase by .01. However, that is a negligible amount and the cost would be the removal of one of the state’s EPSB official substandards. Thus, Standard 3 as represented by the five substandards can be considered as a unitary construct as defined by the EPSB.
Table 3

**Internal Reliability and Item Characteristics for Standard 3, Current Values (N = 46)**

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha - d^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1c</td>
<td>4.26</td>
<td>.77</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.91</td>
</tr>
<tr>
<td>3.2c</td>
<td>4.61</td>
<td>.68</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>3.3c</td>
<td>4.20</td>
<td>.72</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.92</td>
</tr>
<tr>
<td>3.4c</td>
<td>4.63</td>
<td>.64</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>3.5c</td>
<td>4.63</td>
<td>.64</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>Total$^b$</td>
<td>4.47</td>
<td>.60</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.91$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program*

*Standards* (Appendix C).

$^a\alpha - d =$ alpha with item deleted.

$^b$Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

$^c$Value for $\alpha - d$ for Total is Cronbach’s coefficient alpha for the entire scale.

The Standard 4 data analysis is described below (Table 4), with a high scale reliability of .90. This total scale overall is higher than any of the alpha-with-item-deleted values, an indication that all of the substandards clearly measure a single standard.
<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>( \alpha - d^a )</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1c</td>
<td>4.22</td>
<td>.67</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>4.2c</td>
<td>3.96</td>
<td>.71</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.89</td>
</tr>
<tr>
<td>4.3c</td>
<td>4.24</td>
<td>.68</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>4.4c</td>
<td>4.27</td>
<td>.69</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.89</td>
</tr>
<tr>
<td>4.5c</td>
<td>4.27</td>
<td>.65</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>Total(^b)</td>
<td>4.19</td>
<td>.57</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.90(^c)</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\alpha - d = \alpha \) with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total \( N \) across all of the substandards for that standard.

\(^c\)Value for \( \alpha - d \) for Total is Cronbach’s coefficient alpha for the entire scale.

Standard 5 (see Table 5) has a Total Cronbach’s alpha of .88. Substandard 5.2 has the highest alpha-when-deleted coefficient at .89, but the increase in overall scale reliability of .01 is negligible and does not warrant removing that substandard from the EPSB set of five that defines this standard. Again, Standard 5 can be considered to represent a unitary construct.
Table 5

*Internal Reliability and Item Characteristics for Standard 5, Current Values (N = 46)*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>(\alpha - d^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1c</td>
<td>3.93</td>
<td>.81</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td>5.2c</td>
<td>4.33</td>
<td>.71</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.89</td>
</tr>
<tr>
<td>5.3c</td>
<td>3.96</td>
<td>.67</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.82</td>
</tr>
<tr>
<td>5.4c</td>
<td>4.18</td>
<td>.78</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.86</td>
</tr>
<tr>
<td>5.5c</td>
<td>3.93</td>
<td>.72</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>Total(^b)</td>
<td>4.07</td>
<td>.61</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88(^c)</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\) \(\alpha - d = \) alpha with item deleted.

\(^b\) Values for Total are based on separate substandards summed and divided by the total \(N\) across all of the substandards for that standard.

\(^c\) Value for \(\alpha - d\) for Total is Cronbach’s coefficient alpha for the entire scale.

For Standard 6 (located in Table 6 below), the overall coefficient alpha is .93, exceptionally strong for scale reliability. Substandards 6.4 and 6.5 have the highest alpha-when-deleted coefficients at .93, but again, these are not higher than the Total alpha; thus Standard 6 substandards as defined by the Kentucky EPSB represents a unitary standard.
Table 6

*Internal Reliability and Item Characteristics for Standard 6, Current Values (N = 45)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha$ - d$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1c</td>
<td>4.31</td>
<td>.76</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.90</td>
</tr>
<tr>
<td>6.2c</td>
<td>4.24</td>
<td>.83</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.91</td>
</tr>
<tr>
<td>6.3c</td>
<td>4.18</td>
<td>.81</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.92</td>
</tr>
<tr>
<td>6.4c</td>
<td>4.20</td>
<td>.92</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93</td>
</tr>
<tr>
<td>6.5c</td>
<td>4.38</td>
<td>.78</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.93</td>
</tr>
<tr>
<td>Total$^b$</td>
<td>4.26</td>
<td>.73</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.93$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

$^a\alpha$ - d = alpha with item deleted.

$^b$Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

$^c$Value for $\alpha$ - d for Total is Cronbach’s coefficient alpha for the entire scale.

For Standard 7 (presented in Table 7) the Total alpha is .88. The highest alpha-when-deleted value is also .88, for Substandard 7.3, so once again the state’s EPSB set of substandards functions as a single scale.
Table 7

*Internal Reliability and Item Characteristics for Standard 7, Current Values (N = 45)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha - d^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1c</td>
<td>4.29</td>
<td>.63</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.83</td>
</tr>
<tr>
<td>7.2c</td>
<td>4.24</td>
<td>.68</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.79</td>
</tr>
<tr>
<td>7.3c</td>
<td>4.13</td>
<td>.73</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>Total$^b$</td>
<td>4.22</td>
<td>.61</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.88$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

$^a$$\alpha - d = alpha with item deleted.$

$^b$Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

$^c$Value for $\alpha - d$ for Total is Cronbach’s coefficient alpha for the entire scale.

Standard 8 as depicted in Table 8 demonstrates a very high scale reliability ($\alpha = .92$), with all of the alpha-when-deleted values being less than the overall alpha, indicating that the four substandards fit together exceptionally well.
Table 8

*Internal Reliability and Item Characteristics for Standard 8, Current Values (N = 45)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>( \alpha - d^a )</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1c</td>
<td>4.09</td>
<td>.68</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.91</td>
</tr>
<tr>
<td>8.2c</td>
<td>4.07</td>
<td>.70</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.91</td>
</tr>
<tr>
<td>8.3c</td>
<td>4.02</td>
<td>.83</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>8.4c</td>
<td>4.09</td>
<td>.84</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>Total(^b)</td>
<td>4.07</td>
<td>.67</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.92(^c)</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\)\( \alpha - d = \) alpha with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total \( N \) across all of the substandards for that standard.

\(^c\)Value for \( \alpha - d \) for Total is Cronbach’s coefficient alpha for the entire scale.

For Standard 9, the Total scale reliability is .91. All of the alpha-when-deleted values (see Table 9) are lower than the overall alpha, indicating once again that the state’s EPSB decision to represent Standard 9 with four substandards was valid psychometrically.
Table 9

*Internal Reliability and Item Characteristics for Standard 9, Current Values (N = 45)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha$ - d&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1c</td>
<td>4.20</td>
<td>.69</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.89</td>
</tr>
<tr>
<td>9.2c</td>
<td>4.27</td>
<td>.72</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>9.3c</td>
<td>4.33</td>
<td>.71</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>9.4c</td>
<td>4.18</td>
<td>.81</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.86</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.24</td>
<td>.65</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.91&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

<sup>a</sup>$\alpha$ - d = alpha with item deleted.

<sup>b</sup>Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

<sup>c</sup>Value for $\alpha$ - d for Total is Cronbach’s coefficient alpha for the entire scale.

For Standard 10, the Total alpha is an exceptionally strong .95. All of the alpha-when-deleted values are less than this overall value, again indicating the validity of the four substandards as a single construct as developed by EPSB (see Table 10).
### Table 10

**Internal Reliability and Item Characteristics for Standard 10, Current Values (N = 45)**

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha - d^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1c</td>
<td>4.05</td>
<td>.81</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.94</td>
</tr>
<tr>
<td>10.2c</td>
<td>4.11</td>
<td>.81</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93</td>
</tr>
<tr>
<td>10.3c</td>
<td>4.14</td>
<td>.85</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93</td>
</tr>
<tr>
<td>10.4c</td>
<td>4.11</td>
<td>.84</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.94</td>
</tr>
<tr>
<td>Total$^b$</td>
<td>4.12</td>
<td>.78</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.95$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program* Standards (Appendix C).

*a* $\alpha - d = \alpha$ with item deleted.

*b* Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

*c* Value for $\alpha - d$ for Total is Cronbach’s coefficient alpha for the entire scale.

**Cronbach’s Alpha at Beginning of Program**

Tables 1-10 above represent psychometric evaluation based on students’ responses at the end of the program (data marked with a c). Calculations were also performed for the b data for beginning of the program. (These b and c data are not true longitudinal responses. Students marked their sense of educational preparation on a dual-response matrix at the Beginning of program and Currently at completion of the capstone course. However, both of these perspectives were given when the survey was conducted at the end of their MAE coursework.)
These computations for beginning data are represented in Tables I-1 through I-10 in Appendix I. Those tables parallel Tables 1-10 in format. Results confirm that each of the Advanced Level Kentucky Teacher Standards, as defined by EPSB, represent unity constructs. That is, for each standard, the substandards (from 3-5, depending on which standard) correlate highly with each other as one overall scale. In fact, the results for the beginning data are slightly stronger in terms of overall Cronbach’s alpha than the parallel data for the current data (see Tables I-1 to I-10). Specifically, the Total alpha for these beginning data ranges from .88 for Standards 1 and 4 to alpha = .98 for Standard 10.

**Inter-Standard Correlations**

Overall, the respective sets of substandards for each of the 10 standards (both beginning and current values) have high internal scale reliability, ranging from .88 to .95 for current data and from .88 to .98 for the beginning data. All of these represent high scale reliability. These same data indicate a rudimentary sense of scale validity (Nunnally et al., 1994). However, there is another issue when examining the psychometric properties of scales (in this instance, the 10 program standards). To what extent do the standards measure content that is distinctive rather than overlapping, an aspect of internal criterion validity. Inter-standard correlations provide this information. Ideally these associations range from about .3 to .75 (lower than this suggests little correlation rather than an integrated set of measures; higher values indicate that the standards are not distinctive and are measuring similar content).

Table 11 presents the correlation matrix for the 10 Kentucky Advanced Teacher Standards, based on current (end of program) data. The results show that all 10 standards have generally strong correlation, ranging from .49 to .86. A few of these values are somewhat higher than ideal, but because the standards were developed by EPSB and
represent the WKU MAE Teacher Leader Program, they are utilized in the remainder of the study as is.

Table 11

*Correlation Matrix for Inter-Standard Correlations and Current MAE Student Responses (N = 45)*

<table>
<thead>
<tr>
<th></th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
<th>S6</th>
<th>S7</th>
<th>S8</th>
<th>S9</th>
<th>S10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 1</td>
<td>1.00&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 2</td>
<td>0.86&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.00&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 3</td>
<td>0.79&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.74&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.00&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 4</td>
<td>0.86&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.82&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.75&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.00&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 5</td>
<td>0.75</td>
<td>0.68</td>
<td>0.72</td>
<td>0.81</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 6</td>
<td>0.70</td>
<td>0.64</td>
<td>0.58</td>
<td>0.74</td>
<td>0.65</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 7</td>
<td>0.78</td>
<td>0.74</td>
<td>0.58</td>
<td>0.74</td>
<td>0.75</td>
<td>0.63</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 8</td>
<td>0.61</td>
<td>0.50</td>
<td>0.49</td>
<td>0.64</td>
<td>0.70</td>
<td>0.63</td>
<td>0.75</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 9</td>
<td>0.74</td>
<td>0.64</td>
<td>0.64</td>
<td>0.75</td>
<td>0.67</td>
<td>0.62</td>
<td>0.68</td>
<td>0.71</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Standard 10</td>
<td>0.76</td>
<td>0.70</td>
<td>0.69</td>
<td>0.83</td>
<td>0.77</td>
<td>0.70</td>
<td>0.76</td>
<td>0.69</td>
<td>0.75</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<sup>a</sup>*Number of observations = 46.*

Based on these results, all computations to answer the research questions can be calculated on the overall (unitary) standards rather than examining the 45 separate substandards that comprise these 10 Advanced Level Teacher Standards for the Commonwealth of Kentucky. The findings will be discussed further in Chapter V.
Research Questions

The purpose of the study is to examine the quality of the MAE Programs in teacher leadership at Western Kentucky University. Three empirical research questions (repeated for the convenience of the reader) guided the analyses. RQ1.a was addressed by calculating means for the dependent variables, i.e., student perceptions of their level of educational preparation on the 10 EPSB Kentucky Advanced Level Teacher Standards at the completion (current data) of their program. For RQ1.b these computations were repeated for each strand. Paired t tests were used to determine any difference between the beginning and the current student responses for RQ2 for both the overall set of responses and for the program strands separately. Pearson correlations, paired t tests, and unbalanced ANOVA were used to answer RQ3 to determine any relationship between student responses and the socio-demographic factors in the Personal Identity and Educational Identity blocks.

Research Question 1

From the perspective of students in the Western Kentucky University MAE Teacher Leader Program regarding their level of professional preparation:

What are the perceptions at the end of the program:

a. For all students?

b. For students in each strand (MAE in Interdisciplinary Early Childhood Education, MAE in Elementary Education, MAE in Middle Grades, MAE in Secondary Education, MAE in Special Education)?

For RQ1.a means, standard deviations, minimum, maximum, and range were calculated for each standard. However, the validity of the data for the overall standard is dependent on the results of the Psychometric Analyses reported above.

The reason for this is that the students responded to the 45 substandards (spread
across the 10 EPSB Advanced Level Teacher Standards) rather than the standards as a whole. Thus reporting results at the level of the standard requires evidence that the respective set of substandards for each standard actually function as a single construct.

Results from the psychometric work (preceding section) did confirm that conclusion (reported in Tables 1-10 for the current data at the conclusion of the MAE Program and in Tables I-1 through I-10 in Appendix I for the beginning of the program). That is, the Cronbach’s alpha values for the overall 10 standards were all very high, ranging from .88 for Standard 1 and 7 to .95 for Standard 10. Thus the calculations for RQ1.a have already been shown (the Total line for Tables 1-10).

Table 12 summarizes that prior work on the adequacy of the standards in terms of scale reliability. The 5-point Likert-type scale reflected perceived level of educational preparation from 1 = Very Unprepared to 5 = Very Prepared. The findings show that upon completion the program, the teachers felt that they are prepared the best to teach Standard 3 with a mean at 4.47, while Standards 5 and 8 had the lowest mean at 4.07. Overall, the respondents perceived themselves as slightly better than Prepared, as all 10 standards received a mean of more than 4.0.
Table 12

*Students’ Current Ratings for All Standards*

<table>
<thead>
<tr>
<th>Standard</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c</td>
<td>46</td>
<td>4.15</td>
<td>0.58</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>2c</td>
<td>46</td>
<td>4.23</td>
<td>0.63</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>3c</td>
<td>46</td>
<td>4.47</td>
<td>0.60</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>4c</td>
<td>46</td>
<td>4.19</td>
<td>0.57</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5c</td>
<td>45</td>
<td>4.07</td>
<td>0.61</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>6c</td>
<td>45</td>
<td>4.26</td>
<td>0.73</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>7c</td>
<td>45</td>
<td>4.22</td>
<td>0.61</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>8c</td>
<td>45</td>
<td>4.07</td>
<td>0.67</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>9c</td>
<td>45</td>
<td>4.24</td>
<td>0.65</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>10c</td>
<td>45</td>
<td>4.12</td>
<td>0.78</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are noted in the document, *WKU Program Standards* (Appendix C).

For RQ1.b, the data reporting the perceptions of the students at the end of the program for each strand are in tables 13-22. The strands in the tables are numbered from 2 through 5, where the number 2 refers to the MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education. The WKU MAE in Teacher Leadership has a fifth strand, MAE in Interdisciplinary Early Childhood Education, but there were no respondents, so this strand was omitted in Tables 13-22.
For Standard 1 stating that “The teacher demonstrates a current and sufficient academic knowledge of certified content areas to develop student knowledge and performance in those areas” (Kentucky Education Professional Standards Board, 2012), students in the MAE in Special Education felt the least prepared upon the completion of the MAE Program ($M = 3.94$), while the MAE in Primary/Elementary and Middle Grades students reported the most prepared ($M = 4.31$ and $4.29$, respectively) (see Table 13).

Table 13

Current Ratings for Standard 1 by Strand

<table>
<thead>
<tr>
<th>Strands(^a)</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>14</td>
<td>4.31</td>
<td>0.40</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.29</td>
<td>0.50</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.08</td>
<td>0.56</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>3.94</td>
<td>0.84</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total(^b)</strong></td>
<td><strong>46</strong></td>
<td><strong>4.15</strong></td>
<td><strong>0.58</strong></td>
<td><strong>2</strong></td>
<td><strong>5</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>

\(^a\)Strands are coded as $2 = \text{MAE in Elementary Education}$, $3 = \text{MAE in Middle Grades Education}$, $4 = \text{MAE in Secondary Education}$, and $5 = \text{MAE in Special Education}$.

\(^b\)Total values are taken from Table 12.

For Standard 2 referring to “Designs/Plans: [Teacher] designs/plans instruction and learning climates that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge” (Kentucky Education Professional Standards Board, 2012), the results are in Table 14. MAE in Elementary Education teachers reported
the highest preparation to teach with a mean of 4.36 while MAE in Special Education teachers felt they were the least prepared (mean of 3.96).

Table 14

*Current Ratings for Standard 2 by Strand*

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>14</td>
<td>4.36</td>
<td>0.56</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.20</td>
<td>0.55</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.29</td>
<td>0.55</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>3.96</td>
<td>0.87</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td>46</td>
<td>4.23</td>
<td>0.63</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

MAE in Elementary Education teachers reported the highest level of preparation (*M* = 4.71) for Standard 3 (Learning Climate: [Teacher] creates a learning climate that supports the development of student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge”) (Kentucky Education Professional Standards Board, 2012). Again the MAE in Special Education teachers felt they were the least prepared compared to other stands with a mean of 4.30. Referring back to Table 12, Standard 3 had the highest overall rating among the 10 program standards (see Table 15).
Table 15

*Current Ratings for Standard 3 by Strand*

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>Minimum</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>4.71</td>
<td>0.36</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.40</td>
<td>0.58</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.37</td>
<td>0.51</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.30</td>
<td>0.91</td>
<td>2</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>46</td>
<td>4.47</td>
<td>0.60</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

Table 16 depicts the results for Standard 4, “[Teacher] Introduces/implements/manages instruction that develops student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge” (Kentucky Education Professional Standards Board, 2012). The results are split. Both the Elementary Education and Middle Grades students reported higher means at 4.27 and 4.31, respectively, while the MAE students in Secondary and in Special Education indicated lower levels of preparation (M = 4.11 and 4.10, respectively).
Table 16

Current Ratings for Standard 4 by Strand

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>14</td>
<td>4.27</td>
<td>0.47</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.31</td>
<td>0.45</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.11</td>
<td>0.54</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.10</td>
<td>0.83</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>46</td>
<td>4.19</td>
<td>0.57</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

Standard 5 refers to assessment: “[Teacher] assesses learning and communicates results to students and others with respect to students abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge” (Kentucky Education Professional Standards Board, 2012). MAE Elementary Education students felt most qualified to teach with a mean of 4.17. The Middle Grades and Secondary Education teachers reported the least preparation with means of 4.00 and 3.97, respectively (Table 17).
Table 17

*Current Ratings for Standard 5 by Strand*

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>13</td>
<td>4.17</td>
<td>0.38</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.00</td>
<td>0.60</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>3.97</td>
<td>0.60</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.12</td>
<td>0.88</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>45</td>
<td>4.07</td>
<td>0.61</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

Table 18 presents Standard 6 “Technology: [Teacher] uses technology to support instruction; access and manipulate data; enhance professional growth and productivity; communicate and collaborate with colleagues, parents, and the community; and conduct research” (Kentucky Education Professional Standards Board, 2012). MAE in Middle Grades Education teachers felt the most confident ($M = 4.54$), and MAE in Secondary Education students felt the least prepared to teach to this standard ($M = 4.01$).
Table 18

*Current Ratings for Standard 6 by Strand*

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>(N)</th>
<th>(M)</th>
<th>(SD)</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
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<td>4.51</td>
<td>0.46</td>
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<td>1</td>
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<td>3</td>
<td>7</td>
<td>4.54</td>
<td>0.53</td>
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<td>5</td>
<td>1</td>
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<tr>
<td>4</td>
<td>15</td>
<td>4.01</td>
<td>0.71</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.12</td>
<td>1.04</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>45</td>
<td>4.26</td>
<td>0.73</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

MAE in Elementary Education students reported that they are well prepared to teach \((M = 4.33)\) to Standard 7 “Reflection: Reflects on and evaluates specific teaching/learning situations and/or programs” (Kentucky Education Professional Standards Board, 2012). The lowest mean (4.11) was calculated for MAE in Secondary Education students. The results of the computations are in Table 19.
Table 19

*Current Ratings for Standard 7 by Strand*

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>13</td>
<td>4.33</td>
<td>0.47</td>
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<td>5</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.24</td>
<td>0.69</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.11</td>
<td>0.60</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.23</td>
<td>0.79</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>45</td>
<td>4.22</td>
<td>0.61</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

The results of teachers’ responses and their analysis for Standard 8 “The teacher collaborates with colleagues, parents, and other agencies to design, implement, and support learning programs that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge” (Kentucky Education Professional Standards Board, 2012) are in Table 20. MAE in Elementary Education students reported the highest mean of 4.37, and MAE in Secondary Education students felt they were the least prepared for Standard 8 with a mean of 3.63.
Table 20

*Current Ratings for Standard 8 by Strand*

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
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<td>2</td>
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<td>4.37</td>
<td>0.56</td>
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<td>5</td>
<td>2</td>
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<tr>
<td>3</td>
<td>7</td>
<td>4.25</td>
<td>0.50</td>
<td>4</td>
<td>5</td>
<td>1</td>
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<tr>
<td>4</td>
<td>15</td>
<td>3.63</td>
<td>0.65</td>
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<td>2</td>
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<tr>
<td>5</td>
<td>10</td>
<td>4.20</td>
<td>0.69</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>45</td>
<td>4.07</td>
<td>0.67</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

For Standard 9 “Professional Development: [Teacher] evaluates his/her overall performance with respect to modeling and teaching Kentucky's learning goals, refines the skills and processes necessary, and implements a professional development plan” (Kentucky Education Professional Standards Board, 2012), MAE in Middle Grades Education students had the highest mean of 4.61, while students from the MAE in Special Education and Secondary Education had the lowest perceptions of their preparation (\(M = 4.05\) and \(4.08\), respectively). Table 21 presents these computations.
Table 21

Current Ratings for Standard 9 by Strand

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
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<td>7</td>
<td>4.61</td>
<td>0.43</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.08</td>
<td>0.52</td>
<td>3</td>
<td>5</td>
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<td>10</td>
<td>4.05</td>
<td>0.93</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>45</td>
<td>4.24</td>
<td>0.65</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

For Standard 10 “Leadership: [Teacher] provides professional leadership within the school, community, and education profession to improve student learning and well-being” (Kentucky Education Professional Standards Board, 2012), the MAE in Elementary Education students reported that they are well prepared for this standard with a mean of 4.40. The lowest mean (3.95) was calculated for the MAE in Secondary Education students. See Table 22 for the computations.
Table 22

Current Ratings for Standard 10 by Strand

<table>
<thead>
<tr>
<th>Strands&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>13</td>
<td>4.40</td>
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<td>5</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>4.11</td>
<td>0.70</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>3.95</td>
<td>0.70</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.03</td>
<td>1.17</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>45</td>
<td>4.12</td>
<td>0.78</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

<sup>a</sup>Strands are coded as 2 = MAE in Elementary Education, 3 = MAE in Middle Grades Education, 4 = MAE in Secondary Education, and 5 = MAE in Special Education.

<sup>b</sup>Total values are taken from Table 12.

Research Question 2

To what extent do perceptions differ from the beginning to the end of the program:

a. For all students?

b. For each strand (MAE in Elementary Education, MAE in Interdisciplinary Early Childhood Education MAE in Middle Grades, MAE in Secondary Education, MAE in Special Education)?

RQ2.a analyzes how students’ perceptions differ from the beginning to the end of the program for all students; RQ2.b examines these values for each strand. Descriptive statistics were calculated for each standard at the beginning and currently in order to answer RQ2 (for both the entire sample and the separate strands). To address the differences between beginning and current levels of students’ perceptions of their professional preparation,
paired sample *t* tests were calculated to compare beginning and end level responses. The results for RQ2.a are depicted the Tables 23 for each standard. The numbers in the tables refer to the standard number.

The results for Standards 1 through 10 are in Table 23. Mean values indicate considerable improvement in student perceptions for each standard, ranging from $M = .70$ (for Standard 4) to $M = .80$ (Standards 2 and 7). Thus students demonstrated an improvement in perceived professional preparation for each standard over the course of the program. Since the psychometric analyses demonstrated that each of these standards can be viewed as a single construct (for both beginning and current data), substandard values were not examined for RQ2.
Table 23

*Differences in Student Level of Professional Preparation for Standards 1-10 from Beginning to Completing of Program*

<table>
<thead>
<tr>
<th>Standard</th>
<th>n</th>
<th>Current Mean</th>
<th>Current SD</th>
<th>Beginning Mean</th>
<th>Beginning SD</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>46</td>
<td>4.15</td>
<td>.58</td>
<td>3.44</td>
<td>.67</td>
<td>.71</td>
</tr>
<tr>
<td>2</td>
<td>46</td>
<td>4.22</td>
<td>.63</td>
<td>3.42</td>
<td>.78</td>
<td>.80</td>
</tr>
<tr>
<td>3</td>
<td>46</td>
<td>4.47</td>
<td>.60</td>
<td>4.00</td>
<td>.69</td>
<td>.47</td>
</tr>
<tr>
<td>4</td>
<td>46</td>
<td>4.19</td>
<td>.57</td>
<td>3.48</td>
<td>.66</td>
<td>.70</td>
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<td>5</td>
<td>45</td>
<td>4.07</td>
<td>.61</td>
<td>3.36</td>
<td>.77</td>
<td>.71</td>
</tr>
<tr>
<td>6</td>
<td>45</td>
<td>4.26</td>
<td>.73</td>
<td>3.55</td>
<td>.78</td>
<td>.72</td>
</tr>
<tr>
<td>7</td>
<td>45</td>
<td>4.22</td>
<td>.61</td>
<td>3.42</td>
<td>.93</td>
<td>.80</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>4.07</td>
<td>.67</td>
<td>3.28</td>
<td>.91</td>
<td>.78</td>
</tr>
<tr>
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<td>4.24</td>
<td>.65</td>
<td>3.52</td>
<td>.82</td>
<td>.72</td>
</tr>
<tr>
<td>10</td>
<td>45</td>
<td>4.12</td>
<td>.78</td>
<td>3.38</td>
<td>.97</td>
<td>.74</td>
</tr>
</tbody>
</table>

Table 24 presents the comparison for Standards 1-10 between beginning (before the program) and current (at the program completion) based on paired sample *t* tests. The *t* values range from 4.40 (Standard 3) to 6.48 (Standard 1) with probability of *t* below 0.001 for all ten standards, highly significant. Overall, consistent improvement is observed for each standard in students’ perceptions of their professional preparation.
Table 24

*Paired Sample t Tests Comparing Differences between Current and Beginning Level of Professional Preparation for Standards 1-10*

<table>
<thead>
<tr>
<th>Standard Comparison</th>
<th>n</th>
<th>Difference</th>
<th>t</th>
<th>p</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c-1b</td>
<td>46</td>
<td>.71</td>
<td>6.48</td>
<td>&lt; .001</td>
<td>.49 to .93</td>
</tr>
<tr>
<td>2c-2b</td>
<td>46</td>
<td>.80</td>
<td>6.02</td>
<td>&lt; .001</td>
<td>.54 to 1.07</td>
</tr>
<tr>
<td>3c-3b</td>
<td>46</td>
<td>.47</td>
<td>4.40</td>
<td>&lt; .001</td>
<td>.25 to .68</td>
</tr>
<tr>
<td>4c-4b</td>
<td>46</td>
<td>.70</td>
<td>5.68</td>
<td>&lt; .001</td>
<td>.45 to .95</td>
</tr>
<tr>
<td>5c-5b</td>
<td>45</td>
<td>.71</td>
<td>5.90</td>
<td>&lt; .001</td>
<td>.47 to .95</td>
</tr>
<tr>
<td>6c-6b</td>
<td>45</td>
<td>.72</td>
<td>6.05</td>
<td>&lt; .001</td>
<td>.48 to .95</td>
</tr>
<tr>
<td>7c-7b</td>
<td>45</td>
<td>.80</td>
<td>5.84</td>
<td>&lt; .001</td>
<td>.52 to 1.08</td>
</tr>
<tr>
<td>8c-8b</td>
<td>45</td>
<td>.78</td>
<td>6.08</td>
<td>&lt; .001</td>
<td>.52 to 1.04</td>
</tr>
<tr>
<td>9c-9b</td>
<td>45</td>
<td>.72</td>
<td>5.60</td>
<td>&lt; .001</td>
<td>.46 to .98</td>
</tr>
<tr>
<td>10c-10b</td>
<td>45</td>
<td>.74</td>
<td>4.53</td>
<td>&lt; .001</td>
<td>.41 to 1.07</td>
</tr>
</tbody>
</table>

For RQ2.b the calculations parallel those for RQ2.a, except done for each of the four strands for which there are data. Tables 25-28 report these means for each standard for beginning and end of the program for each strand, respectively. There are five strands in the MAE program; however there were no responses for the MAE in Interdisciplinary Early Education, as stated previously.

The MAE in Elementary Education student responses are presented in Table 25. The differences in mean values across the ten standards range from .36 (Standard 3) to .92
Table 25

Differences in Student Level of Professional Preparation for Elementary Education for Standards 1-10 from Beginning to Completion of Program

<table>
<thead>
<tr>
<th>Standard</th>
<th>$n$</th>
<th>Current Mean</th>
<th>Current SD</th>
<th>Beginning Mean</th>
<th>Beginning SD</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>4.31</td>
<td>.40</td>
<td>3.70</td>
<td>.47</td>
<td>.61</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>4.36</td>
<td>.56</td>
<td>3.54</td>
<td>.59</td>
<td>.81*</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>4.71</td>
<td>.36</td>
<td>4.36</td>
<td>.66</td>
<td>.36*</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>4.27</td>
<td>.47</td>
<td>3.46</td>
<td>.51</td>
<td>.81</td>
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<td>13</td>
<td>4.17</td>
<td>.38</td>
<td>3.38</td>
<td>.63</td>
<td>.78</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>4.51</td>
<td>.46</td>
<td>3.92</td>
<td>.44</td>
<td>.58*</td>
</tr>
<tr>
<td>7</td>
<td>13</td>
<td>4.33</td>
<td>.47</td>
<td>3.49</td>
<td>.79</td>
<td>.85*</td>
</tr>
<tr>
<td>8</td>
<td>13</td>
<td>4.37</td>
<td>.56</td>
<td>3.58</td>
<td>.72</td>
<td>.79</td>
</tr>
<tr>
<td>9</td>
<td>13</td>
<td>4.38</td>
<td>.55</td>
<td>3.56</td>
<td>.74</td>
<td>.83*</td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>4.40</td>
<td>.48</td>
<td>3.48</td>
<td>.87</td>
<td>.92</td>
</tr>
</tbody>
</table>

*aDifference shown versus that for Current Mean minus Beginning Mean is due to rounding.

Table 26 shows the differences in student perceptions for Middle Grades Education. The lowest mean difference (.69) is for Standard 3, while the highest is 1.24 for Standard 1. These student perceptions demonstrate a steady improvement from beginning values to current values across each standard.
Table 26

*Differences in Student Level of Professional Preparation for Middle Grades Education for Standards 1-10 from Beginning to Completion of Program*

<table>
<thead>
<tr>
<th>Standard</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>4.28</td>
<td>.50</td>
<td>3.05</td>
<td>.43</td>
<td>1.24a</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>4.20</td>
<td>.55</td>
<td>3.03</td>
<td>.39</td>
<td>1.17</td>
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<td>3</td>
<td>7</td>
<td>4.40</td>
<td>.58</td>
<td>3.71</td>
<td>.62</td>
<td>.69</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>4.31</td>
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<td>3.20</td>
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<td>1.11</td>
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<td>.97</td>
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<tr>
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<td>7</td>
<td>4.54</td>
<td>.53</td>
<td>3.37</td>
<td>.53</td>
<td>1.17</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>4.24</td>
<td>.69</td>
<td>3.19</td>
<td>.63</td>
<td>1.05</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>4.25</td>
<td>.50</td>
<td>3.18</td>
<td>.62</td>
<td>1.07</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>4.61</td>
<td>.43</td>
<td>3.68</td>
<td>.73</td>
<td>.93</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>4.11</td>
<td>.71</td>
<td>3.00</td>
<td>.65</td>
<td>1.11</td>
</tr>
</tbody>
</table>

*Difference shown versus that for Current Mean minus Beginning Mean is due to rounding.*

Data for the MAE in Secondary Education student perceptions toward differences in their professional preparation are presented in Table 27. The mean values indicate that, once again, there is improvement in student perceptions for all ten standards, i.e., a positive difference between current and beginning values, with the lowest for Standard 3 (.53) and the highest for Standard 2 (.84).
Table 27

Differences in Student Level of Professional Preparation for Secondary Education for Standards 1-10 from Beginning to Completion of Program

<table>
<thead>
<tr>
<th>Standard</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>4.08</td>
<td>.56</td>
<td>3.52</td>
<td>.59</td>
<td>.56</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>4.29</td>
<td>.54</td>
<td>3.45</td>
<td>.87</td>
<td>.84</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>4.37</td>
<td>.51</td>
<td>3.84</td>
<td>.59</td>
<td>.53</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>4.11</td>
<td>.54</td>
<td>3.48</td>
<td>.73</td>
<td>.63</td>
</tr>
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<td>5</td>
<td>15</td>
<td>3.97</td>
<td>.60</td>
<td>3.37</td>
<td>.74</td>
<td>.60</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>4.01</td>
<td>.71</td>
<td>3.40</td>
<td>.74</td>
<td>.61</td>
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<tr>
<td>7</td>
<td>15</td>
<td>4.11</td>
<td>.60</td>
<td>3.33</td>
<td>.87</td>
<td>.78</td>
</tr>
<tr>
<td>8</td>
<td>15</td>
<td>3.63</td>
<td>.65</td>
<td>2.87</td>
<td>.85</td>
<td>.77*</td>
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<tr>
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<td>15</td>
<td>4.08</td>
<td>.52</td>
<td>3.53</td>
<td>.55</td>
<td>.55</td>
</tr>
<tr>
<td>10</td>
<td>15</td>
<td>3.95</td>
<td>.70</td>
<td>3.23</td>
<td>.82</td>
<td>.72</td>
</tr>
</tbody>
</table>

\*Difference shown versus that for Current Mean minus Beginning Mean is due to rounding.

Findings for differences in students’ responses for the MAE in Special Education are in Table 28. All 10 standards have a positive difference between current and beginning mean values for these students’ self-perceptions of their professional preparation upon program completion. The lowest mean difference value (.28) corresponds to Standard 10 while the highest is Standard 6 (.72).
Table 28

Differences in Student Level of Professional Preparation for Special Education for
Standards 1-10 from Beginning to Completion of Program

<table>
<thead>
<tr>
<th>Standard</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>3.94</td>
<td>.83</td>
<td>3.24</td>
<td>.00</td>
<td>.70</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>3.96</td>
<td>.87</td>
<td>3.48</td>
<td>1.07</td>
<td>.48</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>4.30</td>
<td>.81</td>
<td>3.92</td>
<td>.87</td>
<td>.38</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>4.10</td>
<td>.83</td>
<td>3.72</td>
<td>.74</td>
<td>.38</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.12</td>
<td>.88</td>
<td>3.52</td>
<td>1.12</td>
<td>.60</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>4.12</td>
<td>1.04</td>
<td>3.40</td>
<td>1.18</td>
<td>.72</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>4.23</td>
<td>.79</td>
<td>3.63</td>
<td>1.35</td>
<td>.60</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>4.20</td>
<td>.69</td>
<td>3.60</td>
<td>1.20</td>
<td>.60</td>
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<td>10</td>
<td>4.05</td>
<td>.93</td>
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<td>1.30</td>
<td>.70</td>
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<tr>
<td>10</td>
<td>10</td>
<td>4.03</td>
<td>1.17</td>
<td>3.74</td>
<td>1.39</td>
<td>.28</td>
</tr>
</tbody>
</table>

*aDifference shown versus that for Current Mean minus Beginning Mean is due to rounding.

To determine whether the improvements presented in Tables 25-28 were significant, paired t tests for the means and differences between the values for the beginning and end of the program for each strand were calculated for each standard. Those analyses are presented in Tables 29-32.
For the MAE in Elementary Education students, the data in Table 29 show comparison of current (at the end of the program) and beginning (of the program) teacher responses. Paired sample $t$ test values range from 2.23 for Standard 3 to 5.06 for Standard 1. The difference between beginning and current values shows improvement for all 10 standards with the probability of $t$ significant for each of these standards.

<table>
<thead>
<tr>
<th>Standard Comparison</th>
<th>$n$</th>
<th>Difference</th>
<th>$t$</th>
<th>$p$</th>
<th>95% Lower</th>
<th>95% Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c-1b</td>
<td>14</td>
<td>.61</td>
<td>5.06</td>
<td>&lt; .001</td>
<td>.35</td>
<td>.88</td>
</tr>
<tr>
<td>2c-2b</td>
<td>14</td>
<td>.81</td>
<td>4.99</td>
<td>&lt; .001</td>
<td>.46</td>
<td>1.17</td>
</tr>
<tr>
<td>3c-3b</td>
<td>14</td>
<td>.36</td>
<td>2.23</td>
<td>.044</td>
<td>.01</td>
<td>.70</td>
</tr>
<tr>
<td>4c-4b</td>
<td>14</td>
<td>.81</td>
<td>4.59</td>
<td>&lt; .001</td>
<td>.43</td>
<td>1.20</td>
</tr>
<tr>
<td>5c-5b</td>
<td>13</td>
<td>.78</td>
<td>4.65</td>
<td>&lt; .001</td>
<td>.42</td>
<td>1.15</td>
</tr>
<tr>
<td>6c-6b</td>
<td>13</td>
<td>.58</td>
<td>4.22</td>
<td>&lt; .001</td>
<td>.28</td>
<td>.89</td>
</tr>
<tr>
<td>7c-7b</td>
<td>13</td>
<td>.85</td>
<td>3.39</td>
<td>.005</td>
<td>.30</td>
<td>1.39</td>
</tr>
<tr>
<td>8c-8b</td>
<td>13</td>
<td>.79</td>
<td>3.91</td>
<td>.002</td>
<td>.35</td>
<td>1.23</td>
</tr>
<tr>
<td>9c-9b</td>
<td>13</td>
<td>.83</td>
<td>4.49</td>
<td>&lt; .001</td>
<td>.43</td>
<td>1.23</td>
</tr>
<tr>
<td>10c-10b</td>
<td>13</td>
<td>.92</td>
<td>4.20</td>
<td>.001</td>
<td>.44</td>
<td>1.40</td>
</tr>
</tbody>
</table>
Table 30

Paired Sample $t$ Tests Comparing Differences between Current and Beginning Level of Professional Preparation for the MAE in Middle Grades Education for Standards 1-10

<table>
<thead>
<tr>
<th>Standard Comparison</th>
<th>$n$</th>
<th>Difference</th>
<th>$t$</th>
<th>$p$</th>
<th>95% Lower</th>
<th>Confidence Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c-1b</td>
<td>7</td>
<td>1.24</td>
<td>5.41</td>
<td>.002</td>
<td>.68</td>
<td>1.79</td>
</tr>
<tr>
<td>2c-2b</td>
<td>7</td>
<td>1.17</td>
<td>4.64</td>
<td>.004</td>
<td>.55</td>
<td>1.79</td>
</tr>
<tr>
<td>3c-3b</td>
<td>7</td>
<td>.69</td>
<td>2.70</td>
<td>.036</td>
<td>.06</td>
<td>1.31</td>
</tr>
<tr>
<td>4c-4b</td>
<td>7</td>
<td>1.11</td>
<td>3.90</td>
<td>.008</td>
<td>.42</td>
<td>1.81</td>
</tr>
<tr>
<td>5c-5b</td>
<td>7</td>
<td>.97</td>
<td>3.59</td>
<td>.012</td>
<td>.31</td>
<td>1.63</td>
</tr>
<tr>
<td>6c-6b</td>
<td>7</td>
<td>1.17</td>
<td>4.79</td>
<td>.003</td>
<td>.57</td>
<td>1.77</td>
</tr>
<tr>
<td>7c-7b</td>
<td>7</td>
<td>1.05</td>
<td>3.79</td>
<td>.009</td>
<td>.37</td>
<td>1.72</td>
</tr>
<tr>
<td>8c-8b</td>
<td>7</td>
<td>1.07</td>
<td>3.67</td>
<td>.011</td>
<td>.36</td>
<td>1.79</td>
</tr>
<tr>
<td>9c-9b</td>
<td>7</td>
<td>.93</td>
<td>3.12</td>
<td>.021</td>
<td>.20</td>
<td>1.66</td>
</tr>
<tr>
<td>10c-10b</td>
<td>7</td>
<td>1.11</td>
<td>3.60</td>
<td>.011</td>
<td>.35</td>
<td>1.86</td>
</tr>
</tbody>
</table>

Table 30 shows differences between current and beginning student responses for the MAE in Middle Grades Education. Students reported improvements for all standards, with $t$ values ranging from 2.70 (Standard 3) to 5.41 (Standard 1). The paired sample $t$ tests are significant for all 10 standards despite the low ($n = 7$) size of the subsample.
### Table 31

**Paired Sample t Tests Comparing Differences between Current and Beginning Level of Professional Preparation for the MAE in Secondary Education for Standards 1-10**

<table>
<thead>
<tr>
<th>Standard Comparison</th>
<th>n</th>
<th>Difference</th>
<th>t</th>
<th>p</th>
<th>95% Lower</th>
<th>Confidence Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c-1b</td>
<td>15</td>
<td>.56</td>
<td>3.42</td>
<td>.004</td>
<td>.21</td>
<td>.91</td>
</tr>
<tr>
<td>2c-2b</td>
<td>15</td>
<td>.84</td>
<td>3.69</td>
<td>.002</td>
<td>.35</td>
<td>1.33</td>
</tr>
<tr>
<td>3c-3b</td>
<td>15</td>
<td>.53</td>
<td>3.30</td>
<td>.005</td>
<td>.19</td>
<td>.88</td>
</tr>
<tr>
<td>4c-4b</td>
<td>15</td>
<td>.63</td>
<td>2.81</td>
<td>.014</td>
<td>.15</td>
<td>1.11</td>
</tr>
<tr>
<td>5c-5b</td>
<td>15</td>
<td>.60</td>
<td>2.99</td>
<td>.010</td>
<td>.17</td>
<td>1.03</td>
</tr>
<tr>
<td>6c-6b</td>
<td>15</td>
<td>.61</td>
<td>3.23</td>
<td>.006</td>
<td>.21</td>
<td>1.02</td>
</tr>
<tr>
<td>7c-7b</td>
<td>15</td>
<td>.78</td>
<td>3.02</td>
<td>.009</td>
<td>.23</td>
<td>1.33</td>
</tr>
<tr>
<td>8c-8b</td>
<td>15</td>
<td>.77</td>
<td>3.18</td>
<td>.007</td>
<td>.25</td>
<td>1.28</td>
</tr>
<tr>
<td>9c-9b</td>
<td>15</td>
<td>.55</td>
<td>2.98</td>
<td>.010</td>
<td>.15</td>
<td>.95</td>
</tr>
<tr>
<td>10c-10b</td>
<td>15</td>
<td>.72</td>
<td>3.49</td>
<td>.004</td>
<td>.28</td>
<td>1.16</td>
</tr>
</tbody>
</table>

Results for paired sample t tests for the MAE in Secondary Education students are shown in Table 31. All students reported improvement for all standards, ranging from .53 for Standard 3 to .84 for Standard 2. All findings are significant as p values are below 0.05.
Data analysis for the MAE in Special Education is in Table 32. The results show that students reported improvements for all standards. However, the findings are not significant since the paired sample t test values differ from a low of .28 (Standard 10) to .72 (Standard 6) and are higher than probability 0.05 for all standards for this subsample of only 10 cases.

Research Question 3
How do personal identity and educational identity variables relate to perceptions at the end of the program?

The analysis of data for RQ3 employed calculation of Pearson correlations, $t$ tests, and unbalanced ANOVA. The data are organized consistent with Figure 1 (from Chapter I), first for the Personal Identity block and then the Educational Identity block. These results represent the relationship between the socio-demographic variables and student perceptions of their level of educational preparation on the 10 MAE Program Standards at the end of their coursework.

**Personal Identity.** The three Personal Identity variables are Gender, Race/Ethnicity, and Age. For Gender, $t$ tests were calculated on the current (end of program) data for males and females for each of the 10 program strands.
Table 33

*Gender Differences in Professional Preparation for Standards 1-10 at Completion of Program*

| Standard | Female | | Male | | | | Difference |
|----------|--------|---|--------|---|---|---|
|          | $n$    | $M$ | $SD$  | $n$ | $M$ | $SD$ |          |
| 1        | 34     | 4.12 | .61  | 12  | 4.23 | .52  | -0.11    |
| 2        | 34     | 4.18 | .67  | 12  | 4.35 | .52  | -0.17    |
| 3        | 34     | 4.45 | .66  | 12  | 4.50 | .40  | -0.05    |
| 4        | 34     | 4.14 | .60  | 12  | 4.33 | .46  | -0.20    |
| 5        | 33     | 4.03 | .61  | 12  | 4.17 | .61  | -0.14    |
| 6        | 33     | 4.33 | .71  | 12  | 4.07 | .79  | 0.27     |
| 7        | 33     | 4.17 | .65  | 12  | 4.36 | .50  | -0.19    |
| 8        | 33     | 4.05 | .71  | 12  | 4.10 | .57  | -0.05    |
| 9        | 33     | 4.22 | .68  | 12  | 4.31 | .54  | -0.09    |
| 10       | 33     | 4.11 | .82  | 12  | 4.17 | .65  | -0.06    |

*Differences shown versus that for Female mean minus Male mean is due to rounding.*

The results for differences in students’ perceptions for professional preparation by gender are in Table 33. The differences in responses for all standards range from -0.05 (Standard 4 and 8) to 0.27 (Standard 6); these differences are negative for all Standards, except Standard 6 (0.27), i.e., males reported higher level of professional preparation upon program completion according to their self-perceptions for nine out of ten standards.
Table 34

*Independent Samples t Tests for Gender Comparing Professional Preparation for Standards*

*1-10 at Completion of Program*

<table>
<thead>
<tr>
<th>Standard Comparison</th>
<th>Difference</th>
<th>t</th>
<th>p</th>
<th>95% Lower</th>
<th>Confidence Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1F-1M</td>
<td>-.11</td>
<td>-.56</td>
<td>.58</td>
<td>-.51</td>
<td>.29</td>
</tr>
<tr>
<td>2F-2M</td>
<td>-.17</td>
<td>-.79</td>
<td>.44</td>
<td>-.60</td>
<td>.26</td>
</tr>
<tr>
<td>3F-3M</td>
<td>-.05</td>
<td>-.23</td>
<td>.82</td>
<td>-.46</td>
<td>.36</td>
</tr>
<tr>
<td>4F-4M</td>
<td>-.20</td>
<td>-1.03</td>
<td>.31</td>
<td>-.59</td>
<td>.19</td>
</tr>
<tr>
<td>5F-5M</td>
<td>-.14</td>
<td>-.66</td>
<td>.51</td>
<td>-.55</td>
<td>.28</td>
</tr>
<tr>
<td>6F-6M</td>
<td>.27</td>
<td>1.09</td>
<td>.28</td>
<td>-.23</td>
<td>.76</td>
</tr>
<tr>
<td>7F-7M</td>
<td>-.19</td>
<td>-.92</td>
<td>.36</td>
<td>-.61</td>
<td>.23</td>
</tr>
<tr>
<td>8F-8M</td>
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<td>-.22</td>
<td>.82</td>
<td>-.51</td>
<td>.41</td>
</tr>
<tr>
<td>9F-9M</td>
<td>-.09</td>
<td>-.42</td>
<td>.67</td>
<td>-.54</td>
<td>.35</td>
</tr>
<tr>
<td>1F-1M</td>
<td>-.06</td>
<td>-.23</td>
<td>.82</td>
<td>-.59</td>
<td>.47</td>
</tr>
</tbody>
</table>

*Note.* F = Female; M = Male. Means and standard deviations for each standard are presented in Table 33.

The null hypothesis states that $F \text{ Mean} - M \text{ Mean} = 0.0$. Data shown in Table 34 represent the independent samples $t$ tests for differences between female and male perceptions of their professional preparation for all 10 standards. Consistent with Table 33, these $t$ values are all negative except Standard 6, “Uses technology to support instruction; access and manipulate data; enhance professional growth and productivity; communicate and collaborate with colleagues, parents, and the community; and conduct research”
(Kentucky Education Professional Standards Board, 2012), i.e., males feel more prepared for nine of 10 standards. However, \( p \) values are greater than 0.05 and the Confidence Levels include 0.0 for all ten standards, so none of the findings are significant.

For race/ethnicity, the frequency counts were White = 42; African-American = 3; missing data = 1. Accordingly, no calculations were done for differences in professional preparation for this variable (insufficient variance).

Among the three Personal Identity variables, only Age is recorded as ratio measurement. That analysis is included under the Educational Identity section below.

**Educational Identity.** The three Educational Identity variables are Grade Level, Teaching Experience, and Content Area. For the Educational Identity block, only Teaching Experience is ratio data. To examine whether Teacher Experience and Age (from the Personal Identity block) are related to the students’ perceptions of their level of professional preparation, Pearson correlations were computed. Those results are presented in Table 35.
Table 35

Pearson Correlations for Age and Teaching Experience for Level of Professional Preparation for Standards 1-10 at Completion of Program

<table>
<thead>
<tr>
<th>Standard</th>
<th>Age</th>
<th>N</th>
<th>r</th>
<th>P</th>
<th>Teaching Experience</th>
<th>N</th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>44</td>
<td>.26</td>
<td>.09</td>
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<td>.34</td>
<td>.02</td>
</tr>
<tr>
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<td></td>
<td>44</td>
<td>.31</td>
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<td>45</td>
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<td>.04</td>
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<tr>
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<td>.39</td>
<td>.01</td>
<td></td>
<td>45</td>
<td>.07</td>
<td>.65</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>43</td>
<td>.28</td>
<td>.07</td>
<td></td>
<td>45</td>
<td>.23</td>
<td>.13</td>
</tr>
<tr>
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<td></td>
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<td>.07</td>
<td>.64</td>
<td></td>
<td>45</td>
<td>.07</td>
<td>.67</td>
</tr>
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<td>.78</td>
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<td>43</td>
<td>.33</td>
<td>.03</td>
<td></td>
<td>45</td>
<td>.30</td>
<td>.05</td>
</tr>
</tbody>
</table>

Table 35 shows how students’ perceptions differ depending on their age and teaching experience. Age was significant for Standards 2, 3, 4, 6, and 10, with $r$ ranging from .31 (Standard 2) to .39 (Standard 6), i.e., weak relationships as the coefficient of determination for Standard 2, the effect size, was only .10. The non-significant correlations ranged from .28 (Standard 7) to negligible at .04 for Standard 9. For participants’ teaching experience, the correlations were significant for Standards 1, 2, 3, 4, 5, and 10 with these associations also in the weak range, from $r = .30$ (Standard 5 and 10) to $r = .36$ for Standard 2.

For Content Area, these designations were recorded separately for Elementary,
Middle Grades, and High School Grade Levels. Within these three areas, the cell sizes for the various content areas such as Math, Science, Language Arts, Special Education, etc., were too small to support ANOVA to determine if there were differences across these content specializations and the perceived level of professional preparation for Standards 1-10 at the end of the MAE Program. Therefore, it was not possible to do any analysis for these data; consequently only Grade Level data are reported in this section.
Table 36

Descriptive Statistics and ANOVA Analyses for Grade Level (Elementary, Middle, Secondary) by Level of Professional Preparation on Standards 1-10 at Completion of Program

<table>
<thead>
<tr>
<th>Standard</th>
<th></th>
<th>Elementary</th>
<th></th>
<th>Middle</th>
<th></th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$F$</td>
<td>$n$</td>
<td>$M$</td>
<td>$SD$</td>
<td>$n$</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>.84</td>
<td>19</td>
<td>4.16</td>
<td>.68</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>.91</td>
<td>19</td>
<td>4.20</td>
<td>.77</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>.36</td>
<td>19</td>
<td>4.54</td>
<td>.72</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>.88</td>
<td>19</td>
<td>4.19</td>
<td>.69</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>.59</td>
<td>18</td>
<td>4.09</td>
<td>.64</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>.66</td>
<td>18</td>
<td>4.27</td>
<td>.83</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>.63</td>
<td>18</td>
<td>4.24</td>
<td>.64</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>3.39*</td>
<td>18</td>
<td>4.26</td>
<td>.63</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>.96</td>
<td>18</td>
<td>4.28</td>
<td>.78</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>.64</td>
<td>18</td>
<td>4.22</td>
<td>.94</td>
<td>9</td>
</tr>
</tbody>
</table>

$F^* = 0.4$; all other $p$ 7.12.

Table 36 represents students’ perceptions of their professional preparation according to their grade level at the completion of the program. The analysis shows that for all 10 standards, these students’ self-perceptions of their professional preparation upon program completion is essentially positive for each grade level (all values above 4.0 on a 5-point scale for elementary and middle, all but standards 8 and 10 above 4.0 for high school). Overall, the lowest mean value (3.77) corresponds to Standard 8 for high school while the highest mean (4.62) was calculated for Standard 3 at the middle school level.
The ANOVA analyses for Grade Level and student responses at the completion of the program for all ten standards are also presented in Table 36. Only Standard 8, “Collaborates with colleagues, parents, and other agencies to design, implement, and support learning programs that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge” (Kentucky Education Professional Standards Board, 2012), has a significant $F$ value (3.39) with $p = .04$. Means for Standard 8 (from Table 36) indicate that the value for Secondary (3.76) is lower than Elementary (4.26) and Middle School (4.28). The remaining mean values reported by grade levels in Table 36 are not significantly different for the remaining Standards 1-7, 9-10.

Table 37

*Tukey’s Post Hoc Analysis for Differences across Grade Level for Standard 8*

<table>
<thead>
<tr>
<th>Contrast</th>
<th>Mean Difference</th>
<th>95% Lower</th>
<th>Confidence Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>E - M</td>
<td>-.01</td>
<td>-.65</td>
<td>.62</td>
</tr>
<tr>
<td>E - S</td>
<td>.50</td>
<td>-.02</td>
<td>1.02</td>
</tr>
<tr>
<td>M - S</td>
<td>.51</td>
<td>-.12</td>
<td>1.15</td>
</tr>
</tbody>
</table>

*Note. E = Elementary Level; M = Middle Grades Level; S = Secondary Level.*

Tukey’s post hoc data for Grade Level differences for Standard 8 are presented in Table 37. None of the three contrasts are significant as 0.0 is included in all three Confidence Level ranges. This is an instance where the overall ANOVA equation is
significant (Table 36) but the separate contrasts do not reach significance, likely because of the small sample size and the fact that Tukey’s test controls for family-wise error, despite the Secondary School mean being visibly lower (less prepared for Standard 8) than Elementary and Middle School. However, the E – S contrast comes very close to being significant as the lower limit for that difference is only -.02 so that 0.0 is barely within this confidence range.

**Summary**

The purpose of this quantitative study was to examine the perceptions of the MAE students about their level of professional preparation. The data were collected through a survey disseminated in Qualtrics via e-mails in students’ TCHL 560 final capstone class. The perceptions were measured using the MAE Teacher Leader Program standards which mirror the Kentucky Advanced EPSB Teaching Standards. The 10 standards have 45 indicators which were rated utilizing a double matrix, checking students’ perceptions at the beginning and at the end of the program. The population for this study consisted of 107 students from Cohort 1 and Cohort 2 in the new program. Surveys that did not meet decision rules for missing data (n = 11) were eliminated. This left a final sample of 46 students (43%).

The researcher calculated descriptive statistics, such as frequencies, percentages, means, maximums, minimums, range, and standard deviations. The dependent variables for the study were Perceptions at the End of the Program and Differences in the Perceptions from the Beginning to the End of the Program. The independent variables included the Program Strands representing the five content areas (MAE in Interdisciplinary Early Education, MAE in Elementary Education, MAE in Middle Grades Education, MAE in Secondary School Education, and MAE in Special Education) and the demographic control
variables divided into two subgroups: Personal Identity (Gender, Race, Age) and Educational Identity (Grade Level taught, Teaching Experience, and Content Area).

After computing the descriptive statistics, psychometric analyses were calculated to check whether the specific statements of dispositions, values, beliefs, skills, and knowledge representing each standard (from 3-5 statements or indicators) functioned as a unitary scale. Because sample size precluded factor analysis, Cronbach’s alpha was performed. Results indicated that each of the ten Standards functioned as a whole, with coefficient alpha ranging from .88 to .98 for student perceptions at the beginning of the program and from .88 to .95 at the completion of the program. The 10 MAE Program Standards are identical to the Kentucky Advanced EPSB Teaching Standards, so they represent the content deemed important as developed by the Kentucky EPSB. Thus, it can be presumed that the internal validity of the standards is high.

The analysis shows that students felt prepared to implement the MAE Program Standards at the end of the program as mean student responses ranged from 4.07 (Standard 5) to 4.47 (Standard 3) across the standards. Breaking the overall data down from the program strands – MAE content in Elementary, Middle School, Secondary, and Special Education – revealed that across the 10 standards, the students in the Elementary and Middle School strands generally felt more prepared to teach than did those in the secondary and special education strands.

Examining growth in perceptions from beginning to end of program, \( t \) tests demonstrated that these students overall indicated that they were better prepared professionally for all 10 standards (significantly so) with \( t \) values ranging from 4.40 (Standard 3) to 6.48 (Standard 1). The analyses revealed a similarly positive increase in perceived preparation across the 10 standards when broken down by program strand. For the
Elementary, Middle School, and Secondary strands, the perceived growth was positive and significant for all 10 standards. However, for the Special Education strand, none of the differences (albeit all positive) reached the level of significance.

Data for RQ3 indicate that the demographic controls (Personal Identity and Educational Identity) are only somewhat related to the perceptions at the end of the program. For Personal Identity, none of the differences for Gender are significant. There was insufficient variance to calculate difference for Race/Ethnicity. Age was weakly but significantly correlated with perceived level of professional preparation for half of the standards (2, 3, 4, 6, and 10). For Educational Identity, it was not possible to calculate whether Content Area Taught was related to student perceptions of professional preparation to teach due to small cell sizes. The findings show that Teaching Experience is correlated with six of the ten Standards (Standards 1, 2, 3, 4, 5, and 10). Finally, Grade Level Taught is essentially unrelated to students’ perceptions of their level of professional preparation at the end of the program as only one of the ten ANOVA calculations was significant (for Standard 8) and the Tukey post hoc analysis revealed that none of the contrasts between grades taught (elementary, middle, and high) were significant.

The central research question for this study is: What are the perceptions of teachers completing the WKU MAE Teacher Leader Program regarding their level of professional preparation? Overall, the findings show that teachers feel prepared to do their job upon completion of the MAE Program (generally above 4.0 on a 5-point scale) according to the WKU MAE program standards which are same as the Kentucky EPSB Advanced Teacher Standards. Further, paired t tests showed a significant difference in their responses between the beginning and completion of the program for each of the 10 standards. Thus the overall analysis reveals student perceptions that are generally positive on preparation to teach and
significant improvement in that preparation over the course of the program.
CHAPTER V
DISCUSSION AND CONCLUSIONS

Introduction

American schools were in crisis, as the A Nation at Risk report (National Commission on Excellence in Education, 1983) pointed out. As a result, numerous efforts were made in order to improve the quality of education since the 1980s. The continuous reforms addressed both schools of education and the process of teacher preparation on the state and federal levels (Anderson, 2005). Recent efforts in schools of education emphasized accountability and aligning curriculum. In Kentucky, the Department of Education (2010) implemented curriculum reform across grade levels in order to improve student outcomes. Quality of teachers also became an important issue in school improvement. As Miller et al. (2003) noted, quality workers are the key to success in any organization.

Preparing better teachers also became the goal of the recent educational initiative Our Future, Our Teachers (U.S. Department of Education, 2011). As a result of these reforms, colleges and universities across the United States have been strengthening their educational preparation programs. One of the steps in that direction was including teacher leadership classes in their curricula. Researchers have found that teacher leaders improve the quality of school education, mentor and coach colleagues, promote teacher retention, and serve as agents of change in their learning communities (Danielson, 2006; Henning, 2006; Stone et al., 2006). Teacher leader preparation has become one answer to the reforms needed in response to the call for school improvement.
Despite the facts that many colleges included teacher leader programs in their curriculum (Manious, 2012), to the author’s knowledge, no quantitative studies have been done on teacher leader master’s programs. This study evaluates a teacher leader program from the students’ perspective. The idea for the study came from Javidi’s (2011) work in which early childhood program quality was evaluated by using program standards as a measure of program quality. The study constitutes survey research with correlational design. Students’ demographic background and program strands were the independent variables; students’ perceptions of their level of preparation on the Kentucky EPSB Advanced Level Teacher Standards were the dependent variables. The program inception was in 2010; thus the population is limited to Cohort 1 and Cohort 2 for this new MAE degree. The data for this study came from students’ self-reported survey responses. The central research question for this study is: What are the perceptions of teachers completing the WKU MAE Teacher Leader Program regarding their level of professional preparation?

The remainder of this chapter includes a brief overview of the study, discussion and analysis of the findings, and recommendations. Finally, the author addresses conclusions from this research.

The Study in Brief

Research demonstrates that teacher leaders bring positive changes to schools (Alvarado, 1997; Brandt, 1995; Danielson, 2006; Evans & Powers, 2011). The goal of numerous reforms and initiatives on federal and local level was to improve the quality of school education. Effective teachers have positive impact on student achievement (Cohron, 2009).

Overview of the Literature

Numerous studies address the topic of teacher leadership, specifically the effects of
teacher leaders on school and student outcomes; however the process of teacher leader preparation has not been the focus of empirical research. Educational reforms of the past decade put an emphasis on accountability in education (Anderson, 2005). This movement led to implementing Common Core standards as a measure of students’ achievement for each grade level. With the continued struggle to improve the quality of schools, policymakers in America have gradually focused more attention on preparing highly qualified teachers in colleges. Numerous national and state initiatives addressed the process of teacher preparation within the context of improving schools of education.

The complexity of modern education led to the changing role of teachers (Barth, 2001). The phenomena of teacher leadership became the focus of research because this type of leadership brings positive changes to schools and helps in the implementation of numerous reforms in school settings (Alvarado, 1997). Colleges have modified their educational preparation programs by including teacher leadership in their core content classes.

The remainder of Chapter II covers current research by Cohron (2009) and Javidi (2011), studies on teacher leadership and program evaluation, respectively. The theoretical perspective utilized as the framework for the study is based on Burns’ (1978) transformational role of teacher leaders, the constructivist model of educational leadership based on collaborative practices and professional learning communities (Hord, 1997; Silva et al., 2000), and Danielson’s (2006) research on the teacher leader concept. More expansively, the literature reviewed in Chapter II covers the topics of Educational Reforms, Teacher Education, Teacher Leadership, and Masters’ Degree in Teacher Education. The review concludes with a Summary.

The Study Design
This quantitative research study analyzed students’ responses to a survey about their perceptions of their level of professional preparation, following MAE Program completion, on the ten MAE Program Standards, which are also the Advanced Level Kentucky Teacher Standards. Recent educational initiatives have emphasized the quality of teacher preparation and improving student achievement. As a response to this call, colleges started to implement new teacher preparation programs. While research shows the positive effect of teacher leadership on school success, research on the quality of teacher leader preparation is limited.

This study is a partial program evaluation of a pioneer MAE Teacher Leader Program at Western Kentucky University. The program was established in 2010 as an answer to the national call for school improvement. There are five program strands: MAE in Interdisciplinary Early Education, MAE in Elementary Education, MAE in Middle Grades Education, MAE in Secondary Education, and MAE in Special Education. The population includes students from Cohort 1 and Cohort 2 in their TCHL 560 action research class. They were invited to take a survey via Qualtrics. The link to the survey and the sponsorship letter from the Teacher Leader Program Representative, Dr. Lisa Murley, was sent to the students by their professors Drs. Cribbs, Gandy, and Pereira. The sample consists of students who completed the survey.

The data for this study came from the first two cohorts during their final capstone class ($N = 107$). Cohort 1 students received the link to the survey and the letter in Fall, 2013 and Cohort 2 in the Spring, 2014, accordingly. Students who were enrolled in the program but had not progressed to the final capstone class were excluded from the population. The final sample consisted of 46 MAE students (43% of the population) who successfully completed the program, voluntarily responded to the survey questions, and met the criteria of the decision rules for missing data. There were 24 students from the Fall, 2013 class and
22 students from Spring, 2014 class, respectively. Surveys with missing data were excluded from the sample consistent with decision rules adapted from Lynes’ (2008) study: the amount of information missing from the surveys was 10% or less of all data, or the omission of an entire scale, or the omission of demographic data. Each of the 45 indicators is scored on a five-point Likert-type scale describing students’ perceptions toward their level of professional preparation on each standard.

Research demonstrates that personal and professional identity impact a person’s decisions (Lynes, 2008; Javidi, 2011; Miller et al., 2013). These categories were addressed in the study as control variables affecting students’ perceptions. The independent variables for this research were demographic factors and the five program strands. Demographic factors were divided into two categories: Personal Identity and Professional Identity. Personal Identity included Gender, Race, and Age. Educational Identity factors are Grade Level Taught, Teaching Experience, and Content Area. The Program Strands include: MAE in Interdisciplinary Early Childhood Education, MAE in Elementary Education, MAE in Middle Grades Education, MAE in Secondary School Education, MAE in Special Education. Descriptive statistics were reported for the Demographic Factors and five program strands.

The dependent variables included two categories: MAE Teacher Leader student perceptions at the end of the program and differences in perceptions from the beginning to the end of the program. The perceptions of the students reflect their opinions toward the level of their professional preparation according to the 10 Kentucky EPSB Advanced Level Teacher Standards. The logic model for this study is depicted in Figure 1 (p. 18). The data for the study were obtained from student surveys based on these teacher standards. The self-report by students is one of the limitations to the study. This is a partial program evaluation
study of the new WKU MAE Program. However, to the author’s knowledge, no psychometric analysis had been done by KDE for the ten EPSB Teacher standards and their respective 45 indicators. In that regard, the study also serves as the first empirical validation of these Kentucky standards for teacher quality.

For this study, the small sample size precluded factor analysis; instead, Cronbach’s alpha was computed for scale reliability on the sets of indicators associated with each of the 10 standards. Crohbach’s alpha also functions as a rudimentary form of construct validity, providing a measure of the extent that the indicators for their respective standards combine into a single factor (see Nunnally & Bernstein, 1994).

In addition to the psychometric analysis, the research questions required correlational analysis (or $t$ tests and ANOVA for variables with nominal or ordinal scale of measurement) to determine the extent of association among the demographic factors, the five program strands, and students’ perceptions of their level of preparation on the 10 teacher standards at the end of the program (data collected during the capstone class on action research). A second research question examined the extent of differences on students’ perceptions of their level of preparation from the beginning to the end of the program. These differences were calculated and checked for significance utilizing $t$ tests.

Prior to any data collection, this study was approved by the Institutional Review Board at Western Kentucky University. The letter of approval is located in Appendix E.

**Discussion**

This section of Chapter V provides summary and analysis of the findings of this research. The structure of this part of the dissertation follows the pattern of Chapter IV. It starts with Descriptive Statistics and concludes with Psychometric Analysis and the Research Questions.
Chapter II provided literature review on teacher leadership and how it affects various stakeholders. While these topics represented the focus of the research interest, studies on teacher leader professional preparation were limited. The author found only one study by Manious (2012) examining college programs on teacher leader preparation. Thus, there is a clear need to investigate teacher leader preparation programs. This study provides a research and a partial evaluation of the WKU MAE Teacher Leader Program.

**Descriptive Statistics**

Descriptive statistics were reported for the independent variables: Demographic Controls and Program Strands. Demographic Controls are Personal Identity (Gender, Race, and Age) and Educational Identity (Grade Level Taught, Teaching Experience, and Content Area). Data were self-reported by two groups of WKU MAE Program students graduating in 2013 and 2014. The findings and analysis are presented in the section below.

**Summary.** Reports indicated that 73.9% of the students were females. Race/Ethnicity data show that 6.7% were African Americans, and 93.3% were White/Caucasian. The mean for these students was 31.4 years of age with a range from 26 to 56.

Regarding Educational Identity, analysis shows that Elementary (K through 5) and High School (9-12) teachers represent the majority of the students with almost equal numbers of 41.3% and 39.1%, respectively; Middle School (6 through 8 grades) comprises only 19.6% of the sample. Students reported that their Teaching Experience is between 1 and 15 years with a mean of 6.24. For Content Area, Elementary School was represented by Preschool (42.1%), Upper Elementary (31.6%), Related Arts (5.3%), and Special Education (21.1%). For Middle/High School combined, teachers were distributed as Math (29.6%), Language Arts (11.1%), Social Studies (22.2%), Science (7.4%), Related Arts (11.1%),
Special Education (14.8%), and Teacher Leader (3.7%).

Program Strand analysis shows the following distribution: no respondents were enrolled in the MAE in Early Childhood Education; the MAE in Elementary Education had 30.4%; MAE in Middle Grades Education, 15.2%; MAE in High School Education, 32.6%, and MAE in Special Education, 21.7%.

**Analysis.** Because there are essentially no prior empirical evaluations of the MAE teacher leadership programs, these data represent information new to the field. The descriptive findings are consistent with the population at WKU, a regional university in a mid-southern rural area. These results could help program administrators pinpoint the targeted group of prospective students for program enrollment and create adequate support classes and counseling teams for minority populations. These data can be used as a starting point for business analysis to predict market opportunities for program development and cater to the needs of the specific student population based on their demographics. Analyzing learning opportunities based on demographic data can help target underserved populations and make the necessary adjustments in providing workshops and additional services according to their needs.

**Psychometric Analysis**

For this study, factor analysis was precluded as psychometric evaluation due to small sample size. Cronbach’s alpha was computed for the set of substandards (from 3-5 for each of the ten standards) representing the skills that teachers need to perform effectively according to the Kentucky Education Professional Standards Board. This computation provides scale reliability and a rudimentary sense of the Standards’ construct validity. To the author’s knowledge, no such analysis had been performed on any of these standards by either Kentucky EPSB or by the KDE.
Summary. The Cronbach’s alpha computations range from 0.88 to 0.95 for the current standards where Standards 1, 5 and 7 have the lowest reliability and Standard 10 has the highest. For the beginning of the program, the results were similar, ranging from an alpha of .88 for Standard 1 to .98 for Standard 10.

Analysis. These finding represent not only a validation of the program standards utilized in the WKU MAE in Teaching Leadership, but even more importantly, the only empirical evidence on the validity of the Advanced Teacher Standards that were developed by the Kentucky Education Professional Standards Board and for which all teachers in the state are held accountable.

There are several implications of these results. First, although the state holds teachers responsible for the content of these standards, the failure of EPSB or KDE to validate their content is a major shortcoming of the accountability process. These findings provide a rudimentary evaluation that the Standards are both valid and reliable, particularly in the context of the latest reform movement of standardization of education on national level, i.e., that teacher’ skills and quality are focused on student achievement as a pivotal point in education.

Second, these results also provide evidence that the program standards for the WKU MAE in Teacher Leadership are valid.

Third, the data on the Standards’ validity and reliability can be used by future researchers in this field. These analyses provide a starting point, but the small sample size precluded a more rigorous statistical analysis. Thus, these results should encourage other researchers to examine the entire edifice of teacher standards for overall quality, including but not limited to construct validity and reliability. This statement holds not only for Kentucky but for other states as well.
Finally, the pragmatic result of these findings is that the sets of from three to five substandards in each standard represent unitary scales. Thus, educators can reasonably examine what they are doing in light of the ten holistic standards, rather than having to consider the 45 substandards individually had they not demonstrated adequate construct validity.

**Research Question 1**

From the perspectives of students in the Western Kentucky University MAE Teacher Leader Program regarding their level of professional preparation:

What are their perceptions at the end of the program:

a. For all students?

b. For students in each strand (MAE in Elementary Education, MAE in Interdisciplinary Early Childhood Education MAE in Middle Grades, MAE in Secondary Education, MAE in Special Education)?

**Summary.** Based on the psychometric results, each standard can be considered as a whole; the Grand Means, standard deviations, minimum, maximum, and range were calculated for each standard. Overall, according to the MAE Program Standards, teachers felt prepared to teach at the completion of the program with means on the 5-point scale from 4.07 (Standards 5 and 8) to 4.47 (Standard 3).

The data analysis for professional preparation by strand revealed that there were no respondents for the MAE in Interdisciplinary Early Childhood Education. Generally, the overall results were positive regarding the perceptions of these students’ professional preparation at the end of the program, but there was some variation by strand. The students in the MAE in Elementary Education and MAE in Middle Grades Education had higher perceptions of their level of professional preparation (approximately 4.3) while the MAE in
Secondary Education and MAE in Special Education strands reported lower preparation (just above and below 4.0, respectively).

There was also some variation from standard to standard. The Elementary strand had means ranging from 4.17 (for Standard 5) to 4.71 (for Standard 3). For Middle Grades the means were from 4.0 (for Standard 5) to 4.61 (for Standard 9). In contrast, the means for the Secondary Education strand (lower perceived preparation) ranged from 3.63 (for Standard 8) to 4.29 (for Standard 2). For Special Education the range was from 3.94 (for Standard 1) to 4.30 (for Standard 3).

**Analysis.** The data can be used for holistic program evaluation as well as a guide for specific program improvements needed as the study pinpoints the overall success of the program but also highlights the different strands with the greatest need for additional support as well as the particular standards on which students report different levels of preparation. Both Secondary Education and Special Education students might need extra help from the program administrators. The reasons why these program strands are experiencing greater concern about their professional preparation is beyond the scope of this study, but future program evaluations could address this understanding of the problem (perhaps via qualitative interviews) and suggest corresponding program modifications. Such qualitative data could examine both strand to strand differences and variations from one standard to the next.

**Research Question 2**

To what extent do perceptions differ from the beginning to the end of the program:

a. For all students?

b. For each strand (MAE in Elementary Education, MAE in Interdisciplinary Early
Childhood Education MAE in Middle Grades, MAE in Secondary Education, MAE in Special Education)?

Summary for RQ2.a. The data analysis indicated that overall, these students reported improvements for each standard from the beginning to the end of the program. Mean differences upon program completion ranged from .70 (for Standard 4) to .80 (Standards 2 and 7) for nine of the 10 standards. Standard 3 had only a .47 increase but this represented a ceiling effect as this was the only content area that reached 4.0 for beginning level assessment and the 4.47 at completion was the highest of the 10 standards. Paired sample t tests demonstrated that the improvements from the beginning to the end of the program were significant at p less than .001 for all 10 standards.

Analysis for RQ2.a. Overall, these findings show that the Western Kentucky University MAE in Teacher Leadership is functioning effectively. These data represent the first empirical evidence available as program evaluation with respect to students’ sense of professional confidence, specifically preparation to teach the content embedded in the WKU Program Standards (the same as the EPSB Advanced Teacher Standards).

That same positive conclusion holds not only for students’ level of preparation at the completion of the program, but also for their perceived level of improvement from the beginning to the end of the program. That is a remarkable accomplishment, i.e., overall, the change was both positive and statistically significant for each of the 10 standards.

These findings need to be shared with school faculties and principals, and students encouraged to apply for the program. The findings constitute empirical evidence that the WKU MAE in Teacher Leadership is effective and that students enrolled are growing professionally. That level of validation of teacher education programs is all too rare.

Summary for RQ2.b. Student responses by strand (RQ2.b.) show that students
reported an improvement in professional preparation for each standard over the course of the program. Differences in mean values on the 5-point scale from the beginning to the end of the program were distributed in the following manner: for Elementary Education from .36 (Standard 3) to .92 (Standard 10); for Middle Grades from .69 (Standard 3) to 1.24 (Standard 1); for Secondary Education from .53 (Standard 3) to .84 (Standard 2); and for Special Education from .28 (Standard 10) to .72 (Standard 6). There were no responses from the students in the MAE in Interdisciplinary Early Education.

Paired sample t tests were also calculated for the degree of change for each standard across all four strands. Those results revealed that these improvements were significant for each of the 10 standards for the MAE in Elementary Education, the MAE in Middle Grades Education, and the MAE in Secondary Education. However, none of the improvements for the 10 standards were significant for the MAE in Special Education. Thus, while students in all four strands reported improvement toward their professional preparation, the changes in the MAE in Special Education means were lower (and not significant) compared to the statistically significant improvements in the other three strands.

**Analysis for RQ2.b.** Similar evidence was compiled for each of the four program strands. Analyzing these tendencies provides needed information on variation in outcomes across the program levels.

First, students in the MAE in Elementary Education and MAE in Middle Grades Education generally reported a higher level of professional preparation at the completion of the program (around 4.3) than those in the MAE in Secondary Education and MAE in Special Education strands (around 4.0). This was due to slightly lower levels of reported preparation at the beginning of the program, but also smaller incremental improvement over the course of the program.
Second, there were differences in perceived growth from the beginning to the end of the MAE program. Specifically, as was the case for the overall analysis, students in each separate strand reported improved sense of professional preparation for all 10 strands. However, that growth was statistically significant for only three of the four program strands: MAE in Elementary Education, MAE in Middle Grades Education, and MAE in Secondary Education (for all 10 strands in all three areas).

In contrast, the improvement was *not* statistically significant, for any of the 10 standards, for the MAE in Special Education. This reflects smaller reported incremental improvements but also less statistical power (*n* = 10 for the Special Education strand). Thus, particular attention should be given to MAE in Special Education students, as they reported both less confidence with their professional preparation and smaller incremental improvements upon program completion. These findings do not reveal why this is the case (again qualitative follow-up studies could address this). Possibilities include specific workshops and professional practices under the guidance of veteran teachers that could help the MAE in Special Education students feel familiar with the skills involved in mastering these standards. Hands on approaches and blended class format (particularly with MAE in Elementary Education students) might also benefit students in overcoming the obstacles and reaching mastery in teaching.

These suggestions are only speculations, however. More information is clearly needed for the Special Education strand. To a lesser extent, this also holds for the Secondary Education strand (significant improvement over the course of the program but still lower than the Elementary and Middle Grades groups). Because these data represent findings new to the field, there is essentially no prior information to guide such specific program improvements. This some conclusion also holds with respect to differences in students’
reported preparation for the content covered from one standard to the next.

**Research Question 3**

How do personal identity and educational identity variables relate to perceptions at the end of the program?

**Summary.** According to Figure 1, the **Personal Identity** block consists of participants’ Gender, Race/Ethnicity, and Age.

For Gender, differences in responses between males and females are negative, except for Standard 6 (0.27), with mean differences ranging from -0.05 (Standards 4 and 8) to .27 (Standard 6), i.e., these findings show that males reported higher level of professional preparation upon program completion. However, the $p$ values for $t$ tests to examine these gender differences were above 0.05, so these findings were not significant.

For Race/Ethnicity, 42 of the respondents reported that they are White while 3 were African Americans. One person did not respond to this question.

For Age, values for the computed correlations ranged from $r = .31$ (Standard 2) to $r = .39$ (Standard 6) for Standards 2, 3, 4, 6, and 10 (significant correlations), showing that there is a relationship between age and the level of professional preparation for the above mentioned 50% of the standards. For three more (Standards 1, 5, and 7) Age was almost significant. For Standard 8 and Standard 9, the correlation was essentially zero.

The **Educational Identity** block consists of Grade Level, Teaching Experience, and Content Area. Content Area was reported separately for Elementary, Middle Grades, and High School levels. To investigate further, these three areas were divided for the various content areas such as Math, Science, Language Arts, Special Education, etc. However, these sub-samples of content disciplines were too small to compute an ANOVA to determine whether there were differences in perceived level of educational preparation on the WKU
Program Standards across those curriculum areas.

The continuous variable Teaching Experience was correlated significantly with level of professional preparation for Standards 1, 2, 3, 4, 5, and 10 with $r$ ranging between .30 (Standard 5 and 10) and .36 for Standard 2. Standard 9 was almost significant as well.

The students in the WKU MAE in Teacher Leadership are practicing professional teachers. The Grade Level classification indicates the number of students teaching at elementary, middle, or high school levels. The mean values for the perceived level of professional preparation for the 10 program standards are positive and above 4.0 on a 5-point scale for those elementary and middle school teachers; for high school level, only Standard 8 falls substantially below the 4.0 level (Standards 5 and 10 are at 3.97 and 3.99, respectively).

Across all three levels of teachers, Standard 8 (Collaboration) showed the lowest mean value (3.76 for high school), and Standard 3 had the highest mean (4.62 at the middle school level). ANOVA tests demonstrated that only Standard 8 had significantly different values when comparing the level of professional preparation across the grade levels. The value for Secondary (3.76) is lower than Elementary (4.26) and Middle School (4.28), but based on Tukey’s post hoc examination for Grade Level differences for Standard 8, none of the three contrasts are significant, possibly because of the small sample size (low power). For the rest of the standards, the ANOVAs for mean values of educational preparation by grade level of teaching are not significantly different.

**Analysis.** For the **Personal Identity** block, Gender, Race/Ethnicity, and Age were included. The **Educational Identity** block contained Grade Level Taught, Teaching Experience, and Content Area.

Briefly, these new results for the two blocks of socio-demographic variables are as
follows. For **Personal Identity**, males feel that they are better prepared than females for all except Standard 6, but the results were not significant. No analysis was performed for Race/Ethnicity, because of insufficient variance (White – 93.3%, African-American – 6.7%). For Age, older students indicated a weak but significant relationship to self-perceptions of mastery of the MAE Program Standards (Standards 2, 3, 4, 6, and 10) while three additional standards (1, 5, and 7) were almost significant. With respect to **Educational Identity**, no analysis was performed for Content Area due to small cell sizes. Similar to the finding that older teachers reported better preparation on these program standards, Teaching Experience (more experience, better preparation) is correlated with six of the ten Standards (Standards 1, 2, 3, 4, 5, and 10) and was almost significant for Standard 9. Finally, Grade Level Taught is not significantly related to these teachers’ perceptions of their preparation for any of the standards.

Summarizing these findings, for the Personal and Professional Identity blocks, only age and teacher experience demonstrated significance for students’ confidence in their professional preparation for any of the ten program standards. Additional research with a larger sample needs to be done for analysis of possible relationships between students’ perceptions of professional preparation and other demographic factors as the small sample size either did not allow data analysis or resulted in low statistical power.

Based on these current findings, younger and less experienced teachers are groups that need to be provided with resources that will assist them in succeeding professionally. Support from the MAE program staff could provide these students with much needed help. Group work with more experienced teachers in class discussions and focused WKU workshops could aid less experienced and younger teachers. Technology tools, such as digital communication through professional web links and various websites where teachers
share lesson plans, professional advice, pacing guides, and samples of worksheets for various grades could also help less experienced teachers to find the additional resources that they need. WKU program staff could introduce such resources to teachers and train them in how to use them. These strategies and the information available in these teacher resources accessible on the internet could help these MAE students to become better professionals and ultimately improve their own students’ learning outcomes.

Recommendations

This section of Chapter V is organized into two areas. The specific recommendations are in the sections Policy and Practice and Future Research below.

Policy and Practice

The purpose of this section is to provide suggestions on program policy and practice according to the research data. Although in general students reported improvement in each area of professional preparation based on program standards, some findings pinpointed areas of improvement for the program. Specifically, the research suggested areas where students in these strands need additional support from WKU personnel, possibly in the form of workshops on the skills indicated in the standards where students felt deficiency in improvement. Face-to-face meetings and professional guidance could be organized and provided by program administrators and faculty members, and students should be encouraged to attend so they will receive professional preparation as needed.

First, the study shows that the WKU MAE program in Teacher Leadership improves students’ teaching skills according to the students’ point of view. Thus, these program results need to be disseminated and advertised for prospective students. The findings demonstrate that teachers can master educational practices, fulfilling Kentucky EPSB requirements for highly qualified teachers, while earning advanced degrees. For too long.
the perception has been that receiving a Master’s degree was because of state requirements and the salary schedule increases. It is encouraging that this program provides consistent evidence of significant improvement in teacher quality was well.

Second, students with certain demographic characteristics reported that they experienced greater difficulties in mastering some of the MAE program standards (which are the EPSB Advanced Teacher Standards). In particular, beginning and younger teachers reported lower confidence in their teaching according to the program standards. For Age (older teachers reported higher levels of preparation), perceptions of Standards 2, 3, 4, 6, and 10 were significant and Standards 1, 5, and 7 were almost at that level. Only Standards 8 and 9 (Collaboration and Professional Development) were not related to Age. The data were similar for Teaching Experience (Standards 1, 2, 3, 4, 5, and 10 significant and Standards 7 and 9 almost significant). Only Standards 6 and 8 showed no relationship between experience and perceived level of preparation at the end of the program. Therefore, beginning teachers and younger teachers need extra support on the skills involved in these standards, possibly in the form of consultation or advising for beginning teachers or blended group work where veteran teacher students might coach the beginners. While students’ demographics are beyond program control, such groups should be targeted from the beginning of their studies. Support in the form of workshops, consultations, and blended face-to-face classes with veteran teachers modeling best educational strategies are possibilities.

Third, although students overall reported considerable confidence in their level of professional preparation at the end of the program (all 10 standards at or above a mean of 4.07 on a 5-point scale), there was some variation across the standards. In particular, Standards 1, 5, 8, and 10 were lower (means ranging from 4.07 to 4.15), Standards 2, 4, 6, 7,
and 9, higher (means from 4.19 to 4.26) while Standard 3 (mean = 4.47) had the highest level. Instructors with this knowledge can pay particular attention to these professional quality indicators according to these findings. Possibly additional guided practices could help students master all of these standards at similar high levels.

Finally, the students in the MAE in Special Education and MAE in Secondary Education indicated lower levels of professional preparation. Even more troubling, the MAE in Special Education strand findings indicated improvements in their teaching practices were not significant upon program completion (the only strand for which this was true). Although these quantitative data do not explain why this is the case, surveying students during the educational process could provide more information on the areas where improvement is needed (the current study was at the end of the program). Program administrators might add classes or practices to the MAE in Special Education Program as corresponding content modifications based on additional qualitative survey results. A professional meeting organized and guided by program administrators where students from different program strands can share their achievements and express concerns might also be helpful.

**Future Research**

The study investigated the WKU MAE in Teacher Leadership since its inception until the current time. The research serves as a partial program evaluation, allowing WKU to improve the quality of teacher education and make students’ voice heard, consistent with the U.S. Department of Education (2011) initiative, *Our Future, Our Teachers*, which emphasizes the quality of teacher education and the importance of teacher leaders in school success. Several suggestions follow, focused on future research in the area of teacher education in general and the investigation of this program (MAE in Teacher Leadership) in particular.
First, additional research is needed as the current program will progress and accumulate history. The population for this study consisted of only the first two cohorts to graduate due to the fact that the program started in 2010. Thus the study should be replicated for subsequent cohorts.

Second, master’s programs in teacher leadership need further investigations generally as no studies have been done to assess the quality of these programs from the students’ point of view. The survey instrument for this study, created in accordance to the Kentucky EPSB Advanced Teacher Standards, could be used in colleges and universities across Kentucky for a broader and more general program evaluation. The study can be replicated state-wide for teacher leader programs and the results of such study can be compared with the data from a single regional study. The trends emerged in respect to students’ population could be used in program marketing as well as addressing the needs of the specific groups of students. The comparison crosswalk of student self-reported perceptions of their professional preparation by program strands can provide the insights toward what was a low confidence of the MAE in Special Education group specific to a regional university only. Similar research is needed for statewide data on how content/pedagogy and professional affiliation by grade level can be related to students’ professional confidence. The survey instrument could also be modified to other states’ teaching standards and used in their program evaluations as well. These findings will allow comparing teacher leader preparation programs across the country and providing necessary adjustments toward program improvements as needed.

As of this writing (Fall, 2015), the author’s research model and instrument have been selected for a statewide program evaluation of Kentucky EPSB-sanctioned master’s programs in teacher leadership. That study is currently in progress.
Third, some particular findings need to be researched further as they have implications of the program’s current weakness. In particular, Special Education and Secondary Education teachers reported that their professional preparation is lower compared to the Elementary and Middle Grades. As noted under Policy and Practice above, this is even more problematic for the Special Education strand where improvements from the beginning to end of the program were not significant (the only strand where that was the case). Additional research on those particular stands, perhaps related to qualitative surveys focused on why this was the case could increase understanding of the professional implications related to program improvement.

Fourth, there were some variations in level of professional preparation across the 10 standards. Thus qualitative studies could aid in understanding the relationship between the program’s current curricular emphasis and differential levels of success across the respective content of the 10 standards.

Fifth, the small sample size restricts both the statistical procedures that could be utilized and the power for those that were. A larger sample size would allow researchers to address these deficiencies.

Sixth, the study was retrospective, i.e. students evaluated their perceptions at the end of the program, giving their perceptions of their level of professional preparation on the 10 standards at the beginning and currently, at the end of the program. This issue was addressed in detail in the Limitations section of Chapter I. For a true longitudinal study, future researchers should collect data from students twice: at the beginning and again at the end of the program.

Seventh, the psychometric evaluation of construct validity of the 10 strands was restricted to the most rudimentary measure (Cronbach’s alpha) because of the small sample
size. With larger and more representative samples, a more thorough validation of the extent that the substandards for each standard represent a unitary whole could be completed (neither KDE nor the Kentucky EPSB has done this).

Eighth, this study was conducted at the graduate level. A similar format and approach could be utilized to examine the quality of undergraduate programs in reaching the standards for that level.

Finally, as Kentucky is implementing a new teacher evaluation system (the Professional Growth and Evaluation System, PGES), there is a possibility that the EPSB may change their teacher standards to be consistent with the new PGES system. These new standards should be evaluated in a new study parallel to the current research as the statewide teacher evaluation program evolves.

Conclusions

Teacher leadership has become a necessity in schools due to recent educational reforms. “The reform movement put a spotlight on school leadership, highlighted its importance for school success, made student achievement the measure of school performance, and demanded accountability from leaders for results” (Levine, 2005, p. 17). According to Burns (1978), transformational leadership enables leaders to inspire and motivate their followers and improve the working climate in their communities. Brandt (1992), Hord (1997), Silva et al. (2000) researched the constructivist approach to educational leadership. They emphasized the importance of collaboration in professional learning communities. Thus, teacher leadership is an important tool of success in schools.

Although researchers have found that teacher leadership is a foundation of reform implementation, preparation for teacher leaders has just recently become the focus of the nation’s policymakers. “The task before us is to redesign teacher education for a new era--to
produce a greater number of high-quality teachers with the skills and knowledge necessary to raise student achievement to the highest in history level” (Levine, 2006, p. 12).

Numerous educational initiatives have raised the question of teacher leader professional preparation. “Teacher education has taken on a special urgency because the United States needs to raise both the quality and quantity of our teacher force” (Levine, 2006, p. 5). Answering the nation’s call for school improvement, colleges and universities have implemented significant changes in their programs of education (Manious, 2012). Research shows that teacher leaders bring positive changes to learning communities (Cohron, 2009; Danielson, 2006; Elmore, 2000; Little & Miller, 2007). One of the steps toward improving teacher preparation was including teacher leadership classes in the core curriculum for future teachers of America (Manious, 2012).

Despite the recent emphasis on teacher leadership in colleges of education, consistent with the calls for improvement in this area as noted above, there has been very little actual research on these new teacher leader programs. Manious (2013) examined teacher leader professional preparation programs across United States with a mixed methods approach, but this study was macro in scope, i.e., to what extent are teacher leadership programs being developed across the nation. To the author’s knowledge, the micro equivalent, i.e., the actual effects of teacher leadership programs on teacher quality is unknown because quantitative research on teacher leader preparation programs has not been conducted.

The current study research addresses this deficit. The purpose of this study was to examine the perceptions of the students in the Western Kentucky University MAE in Teacher Leadership, i.e., the effects of the program on their level of professional preparation. Because the WKU MAE in Teacher Leadership is a new program, this study
serves as a partial program evaluation of this local setting. But the analysis also represents
the first set of quantitative data on the effectiveness of teacher leadership programs
generally. In that regard, the study serves as a model for how other programs or even
statewide evaluations could be conducted. In fact, the author’s research model and
instrumentation are currently being utilized for a statewide evaluation of the master’s
programs in teacher leadership in Kentucky.

Building on the work of Javidi (2011), who did a similar assessment of early
childhood (NAYEC) Program Standards, this study examined students’ perceptions of their
level of professional preparation on the WKU MAE in Teacher Leadership program
standards. (These 10 standards are the same as the Kentucky Advanced Teacher Standards
that contain 45 substandards spread across the 10 standards, representing the knowledge and
competencies for which all Kentucky teachers are held accountable, by statute. The 10
standards and 45 substandards are listed in Appendix C.)

Students from the first two cohorts to finish the new WKU program were invited to
complete the survey at the end of their last semester (an action research class). The survey
included a demographic section containing two blocks: **Personal Identity** (gender, race, and
age) and **Educational Identity** (grade level taught, content area, and teaching experience)
and identification of which of the five program strands they were in (MAE in Early
Childhood Education, MAE in Elementary Education, MAE in Middle Grades Education,
MAE in Secondary Education, or MAE in Special Education). The main part of the survey
was a dual matrix of 5-point Likert-type responses from 1 = *Very Unprepared* to 5 = *Very
Prepared*. Specifically the dual response matrix asked for students’ level of professional
preparation at the beginning and at the end of the program, answered for each of the 45
substandards.
Results (detailed above in this Chapter) were organized around **Descriptive Statistics**, **Psychometric Analysis**, and the three research questions. The 46 students with usable surveys represented 43% of the population (those who completed the coursework for the first two cohorts ending in Fall, 2013 and Spring, 2014 semesters). The background of students in the program was consistent with students working on a master’s in education in a regional university in a rural state: 74% female; 93% White; mean age of 31 years; 6 years of teaching experience; a distribution across grade level of approximately 40, 20, 40 for elementary, middle, and secondary, respectively; and content area spreading across the curriculum generally consistent with the make-up of local schools. Among the survey respondents, only four of the five program strands were represented; no students were enrolled in the MAE in Early Childhood Education. The elementary, middle, secondary, and special education strands comprised 30, 15, 33, and 22 percent, respectively.

Psychometric analysis validated scale reliability and a rudimentary construct validity for each of 10 Standards and corresponding substandards by computing Cronbach’s alpha (ranging from .88 to .95, very strong). To the author’s knowledge, neither the Kentucky Education Professional Standards Board nor the Kentucky Department of Education had conducted any such prior validity research on the Kentucky Advanced Teacher Standards which are the same as the WKU MAE Program Standards.

The first research question asks: what is the perceived level of educational preparation, overall, and for each program strand, at the end of the coursework for the 10 program standards. Overall, students reported that they feel well prepared to teach according to the 10 WKU MAE Standards, with means between 4.07 (Standard 8) and 4.47 (Standard 3) on a 5-point Lykert-type scale at the end of the program. Some variation in perceived educational preparation existed strand by strand as well as the differences noted across the
10 standards. The elementary and middle grades students reported overall means around 4.3 while the secondary and special education means were lower (around 4.0).

The second research question addressed changes in the level of perceived educational preparation on the 10 standards from the beginning to the end of the program, both overall and strand by strand. Here, the positive results from Research Question 1 (means for all 10 standards above 4 on a 5-point scale) are again repeated. Paired sample $t$ tests examining the differences in perceptions from beginning to end revealed improvements from .71 to .80 on the 5-point scale for nine of the Standards. The remaining Standard 3 had only a .47 increase, but this was due to a ceiling effect as this was the only content area which reached 4.0 at the beginning of the program and was the highest of the 10 at the program’s end. All of these overall improvements were statistically significant.

The study also examined changes from beginning to program completion for these MAE in Teacher Leadership students by strand. All four levels reported improvement in all 10 standards. For Elementary, Middle Grades, and Secondary students, paired sample $t$ tests calculated on these changes revealed that the improvement was statistically significant for all 10 standards. In contrast, the MAE in Special Education students also reported improvement, but the changes were not significant.

Research Question 3 examined whether the demographic factors were related to students’ perceived level of educational preparation on the 10 program standards. Only Age and Teaching experience were significantly related (younger and inexperienced teachers perceived lower educational preparation on approximately half of the 10 standards).

This study provides evidence that upon completion of the WKU MAE in Teacher Leadership program, students perceived a high level of preparation according to the program standards, i.e., the Kentucky EPSB Advanced Teacher Standards. The students also reported
statistically significant improvement (from beginning to the end of the program) in their professional confidence to handle the content and engage the skills embedded in these 10 EPSB standards. This is a truly significant finding as seldom is there empirical evidence on the effectiveness of a teacher educational program. In this case, the evidence comes directly from the students’ own evaluation. Beyond the overall positive findings, the study also highlights some particular program weakness, such as the need for additional support for younger and less experienced teachers. As well, there were differences in quality across the program strands. In particular, the secondary education and special education strands reported lower perceived preparation than the elementary and middle grades strands and the improvements made by the students in the Special Education strand were not significant (improvements in the other strands were significant).

Thus, the overall success of this program in teacher preparation is remarkable even as the data point to areas of future program improvement. The WKU MAE in Teacher Leadership Program not only aims to bring excellence to education; it truly does so. Ultimately the greatest benefit should be the considerable potential for a significant impact on these working teachers’ own students’ learning.
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APPENDIX A: WKU PROFESSIONAL UNITS BELIEFS

Belief 1: All children can learn at high levels.

Belief 2: All children have a right to a quality education that empowers them to meet high expectations for learning as defined by a democratic society.

Belief 3: Diversity in our schools adds richness to the learning environment and provides enhanced opportunities and possibilities for teaching and learning.

Belief 4: Highly effective education professionals require high levels of ability, rigorous training, and on-going development of teaching/leadership skills that include reflective decision-making.

Belief 5: Highly effective education professionals know, apply, and reflect on the effectiveness of a variety of theories, models and strategies in order to produce maximum learning for all students in all types of school contexts and cultures.

Belief 6: Highly effective education professionals interact with the home and/or community of their students to facilitate teaching and learning.

Belief 7: Highly effective education professionals have strong content knowledge, sound pedagogical knowledge and skills, and essential dispositions for facilitating learning and functioning as team members in schools.

Belief 8: Highly effective education professionals utilize technology for teaching and learning, assessment management, and research to the greatest extent possible.

Belief 9: Highly effective education professionals hold themselves accountable for their own performance by collecting, analyzing, and reporting learning results and using this information to improve performance and programs.

Belief 10: Highly effective education units develop and maintain assessment systems that follow the continuous progress of candidates toward the achievement of high standards-based performance expectations that are clearly defined and publicly communicated.
APPENDIX B: WKU MAE PROGRAMS VISION AND MISSION

Mission
The professional education unit of Western Kentucky University recruits, prepares, and supports school practitioners and education leaders who can facilitate the learning of all children and empower them to achieve at high levels as they become life-long learners and productive citizens in a global society.

Vision
The professional education unit aspires to become a nationally recognized community of scholars who apply the best that theory, research, and experience can contribute to teaching and learning and create new knowledge that makes teaching, learning, and the operation of schools more efficient and effective.
WKU MAE Program Standards are the same as the Advanced Level Kentucky EPSB Teacher Standards.

**Standard 1** – Content Knowledge: Demonstrates a current and sufficient knowledge of certified content areas to develop student knowledge and performance in those areas.

1.1 Accurately and effectively communicates an in-depth understanding of concepts, processes, and/or knowledge in ways that contribute to the learning of all students.
1.2 Effectively connects content to students’ life experiences including, when appropriate, prior learning in the content area or other content areas.
1.3 Consistently uses instructional strategies that are appropriate for content and contribute to the learning of all students.
1.4 Regularly guides students to understand content from appropriate diverse, multicultural, or global perspectives.
1.5 Consistently anticipates misconceptions related to content and addresses them by using appropriate instructional practices.

**Standard 2** – Designs/Plans: Designs/plans instruction and learning climates that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

2.1 Develops challenging and appropriate learning objectives that are aligned with local/state/national standards and are based on students’ needs, interests and abilities.
2.2 Plans and designs instruction that is based on significant contextual and pre-assessment data.
2.3 Develops well-designed assessments that align with learning objectives, guide instruction, and measure learning results.
2.4 Plans a learning sequence using instructional strategies and activities that build on students’ prior knowledge and address learning objectives.
2.5 Plans a learning sequence using strategies and activities that foster the development of higher-order thinking.

**Standard 3** – Learning Climate: Creates a learning climate that supports the development of student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

3.1 Consistently sets significant and challenging behavioral and learning expectations for all students and communicates confidence in their ability to achieve those expectations.
3.2 Maintains a fair, respectful, and productive classroom environment conducive to learning.
3.3 Consistently uses appropriate and responsive instructional strategies that address the
needs of all students.

3.4 Consistently treats all students with respect and concern and actively encourages students to treat each other with respect and concern.

3.5 Maintains a classroom environment that is both emotionally and physically safe for all students.

**Standard 4** – Implements/Manages: Introduces/implements/manages instruction that develops student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

4.1 Consistently provides a well-planned sequence of appropriate instructional strategies that actively engage students in meeting learning objectives.

4.2 Implements instruction based on contextual information and assessment data, adapting instruction to unanticipated circumstances.

4.3 Makes thoughtful choices about the organization and implementation of both instructional and non-instructional tasks to maximize time for student learning.

4.4 Makes optimal use of classroom space and uses a variety of instructional resources and technologies to enhance student learning.

4.5 Consistently uses a variety of appropriate strategies to facilitate higher-order thinking.

**Standard 5** – Assessment: Assesses learning and communicates results to students and others with respect to student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

5.1 Consistently uses student baseline data from appropriate pre-assessments to promote the learning of all students.

5.2 Consistently uses appropriate summative assessments aligned with the learning objectives to measure student achievement.

5.3 Consistently describes, analyzes, and evaluates student performance data to determine student progress, identify differences among student groups, and inform instructional practice.

5.4 Clearly communicates to students and parents in a timely manner the evidence of student performance and recommends future actions.

5.5 Clearly communicates to students and parents in a timely manner the evidence of student performance and recommends future actions.

**Standard 6** – Technology: Uses technology to support instruction; access and manipulate data; enhance professional growth and productivity; communicate and collaborate with colleagues, parents, and the community; and conduct research.

6.1 Uses appropriate technology to design and plan instruction that supports and extends learning of all students.

6.2 Designs and implements research-based, technology-infused instructional strategies to support learning of all students.
6.3 Provides varied and authentic opportunities for all students to use appropriate technology to further their learning.
6.4 Uses technology to assess student learning, manage assessment data, and communicate results to appropriate stakeholders.
6.5 Provides and maintains a safe, secure, and equitable classroom environment that consistently promotes discerning and ethical use of technology.

**Standard 7** – Reflection: Reflects on and evaluates specific teaching/learning situations and/or programs.

7.1 Uses formative and summative performance data to determine the learning needs of all students.
7.2 Uses performance data to conduct an in-depth analysis and evaluation of instructional practices to inform future teaching.
7.3 Reflects on the evaluations of student learning and instructional practices to identify and develop plans for professional growth.

**Standard 8** – Collaboration: Collaborates with colleagues, parents, and other agencies to design, implement, and support learning programs that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

8.1 Describes an on-going process for identifying situations in which student learning could be enhanced by collaboration.
8.2 Designs a plan that involves parents, colleagues, and others in a collaborative effort to enhance student learning.
8.3 Explains how the collaboration to enhance student learning has been implemented.
8.4 Uses appropriate student performance data to describe, analyze, and evaluate the impact of the collaborative activities on student learning and to identify next steps.

**Standard 9** – Professional Development: Evaluates his/her overall performance with respect to modeling and teaching Kentucky's learning goals, refines the skills and processes necessary, and implements a professional development plan.

9.1 Thoroughly and accurately assesses current performance related to the Kentucky Teacher Standards and any school/district professional development initiatives.
9.2 Reflects on data from multiple sources (i.e., self-assessment, student performance, feedback from colleagues, school/district initiatives) and identifies priority areas for growth.
9.3 Designs a clear, logical professional growth plan that addresses all priority areas.
9.4 Shows clear evidence of the impact of professional growth activities on instructional effectiveness and student learning.

**Standard 10** – Leadership: Provides professional leadership within the school, community, and education profession to improve student learning and well-being.
10.1 Identifies leadership opportunities that enhance student learning and/or professional environment of the school.
10.2 Develops a plan for engaging in leadership activities.
10.3 Implements a plan for engaging in leadership activities.
10.4 Analyzes data to evaluate the results of planned and executed leadership efforts.
APPENDIX D: PERMISSION TO USE SURVEY INSTRUMENT

From: Mauzy, Evgenia [mailto:evgenia.mauzy@hardin.kyschools.us]
Sent: Monday, April 29, 2013 9:40 AM
To: Farhad Javidi
Cc: ric.keaster@wku.edu
Subject: RE: my dissertation and a survey instrument

Dr. Javidi,

Thank you very much for the permission. I will cc your letter to my chair, Dr. Ric Keaster, to let him know that I obtained your permission. I will send you a copy of my dissertation after the defence.

Jane Mauzy

From: Farhad Javidi [Farhad.Javidi@cpcc.edu]
Sent: Sunday, April 28, 2013 7:18 PM
To: Mauzy, Evgenia
Subject: RE: my dissertation and a survey instrument

Hi Evgenia,
You are welcome to use my instrument. I’d love to read your dissertation once it has been approved.
Good luck and thank you.
Farhad
Dr. Farhad Javidi
Professor, Information Technologies
Chair, Student Welfare, College Senate
Central Piedmont Community College, IT Division
farhad.javidi@cpcc.edu | http://www.cpcc.edu/it

From: Mauzy, Evgenia [mailto:evgenia.mauzy@hardin.kyschools.us]
Sent: Tuesday, April 09, 2013 11:02 AM
To: Farhad Javidi
Subject: my dissertation and a survey instrument

Dr. Javidi,

I am a Doctorate student at Western Kentucky University. I am currently working on my dissertation. The title of the dissertation is STUDENTS’ PERCEPTIONS OF a TEACHER LEADER MASTERS’ PROGRAM. My goal is to see how the students perceive a newly implemented Master of Education Program.

During Literature review process I came across your dissertation STUDENTS’ PERCEPTIONS OF EARLY CHILDHOOD PROGRAM QUALITY ACCORDING TO THE
The goal of your dissertation was two-folded: to develop the survey instrument for the future educational use and to study the students' perceptions. I would like to use the survey instrument you developed in 2011 since it matched the purpose of my research questions. I will have to modify the survey instrument since I will use the Western Kentucky University Masters of Education Program Standards. There are ten standards, and they match Kentucky Education Professional Standard Board Standards. I attached the above mentioned standards to this letter.

Thank you for your time.

Sincerely,

Evgenia Mauzy
WKU EDLD student
ESL teacher for Hardin County
Informed Consent/Preamble

Dear Student:

You are invited to participate in a dissertation research project by completing the following survey about students’ perceptions of the Master of Arts in Education (MAE) Teacher Leader program. This study is being conducted by Evgenia Mauzy, English as a Second Language teacher at North Hardin High School and a student in the Western Kentucky University Educational Leadership Doctoral Program. Dr. Stephen Miller in the Department of Educational Administration, Leadership and Research is the faculty sponsor for this study. The survey is being completed online (Qualtrics). Students have been given access through a link to the survey provided through the Instructors for TCHL 560, Action Research. The purpose of this study is to provide program evaluation data on the quality of the Teacher Leader Master's Program and pinpoint the areas of concern if any. Specifically, the study examines students’ perceptions of differences in the level of professional preparation on the 10 Kentucky Teacher Standards from the beginning to the end of the program.

In this study, you will be asked to answer items on a questionnaire. Directions are provided at the beginning of the survey. The survey should take approximately 20-30 minutes to complete. You may skip the questions that make you uncomfortable. You may stop answering the survey questions at any time.

There are no foreseeable risks in answering the questions on this survey. The benefits of this study are providing feedback for program enhancements and improvement via program evaluation on the quality of the MAE Teacher Leader program. There is no compensation for participation. Qualtrics allows for complete anonymity of the data, although total confidentiality cannot be guaranteed if you were to provide responses that could link back to your identity. However, your confidentiality will be protected to the extent permitted by law. The data may be published; however your identity will not be disclosed.

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty. You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

If you have any question or concerns, please contact the faculty sponsor Dr. Stephen Miller at 502-593-3595, the researcher Evgenia Mauzy at 270-312-6453 or the WKU Institutional Review Board at 270-745-2129.

Sincerely,

Evgenia Mauzy          Stephen Miller, Ph.D.

Continuing to the next page and answering the survey questions implies your consent.
Please click next to continue and begin with the brief section on demographics.
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW
BOARD

Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129
INSTITUTIONAL REVIEW BOARD
OFFICE OF RESEARCH INTEGRITY

DATE: December 3, 2013
TO: Evgenia Mauzy
FROM: Western Kentucky University (WKU) IRB
PROJECT TITLE: [426877-1] Dissertation: STUDENTS’ PERCEPTIONS OF A TEACHER LEADER MASTER’S PROGRAM
REFERENCE #: IRB 14-213
SUBMISSION TYPE: New Project
ACTION: APPROVED
APPROVAL DATE: December 3, 2013
REVIEW TYPE: Exempt from Full Board Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt from Full Board Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by an implied consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure. All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or irb@wku.edu. Please include your project title and reference number in all correspondence with this committee.
This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Western Kentucky University (WKU) IRB’s records.

Generated on IRBNet
APPENDIX F: SURVEY INSTRUMENT

Letter of Sponsorship for Evgenia Mauzy Dissertation Study

Dear Students in TCHL 560 Action Research for Teach Leaders Courses:

As Program Representative for the WKU MAE Teacher Leader Program, I am writing to encourage you to participate in a dissertation research project conducted by Evgenia (Jane) Mauzy, a student in the WKU Educational Leadership doctoral program. This letter signifies sponsorship of this study because it will provide data for a partial program evaluation of the revised WKU Teacher Leader Master’s program. Specifically, I have collaborated with Ms. Mauzy and her doctoral committee to ensure that it will represent feedback useful to the WKU College of Education and Behavioral Sciences.

Consistent with all research on human subjects, this study has been reviewed by the WKU Institutional Review Board (IRB) to ensure compliance with all federal regulations. You will note that the Preamble/Informed Consent says, among other information, that participation is voluntary and that you may stop during any point in the survey.

While that is true (for this and all research on human subjects), I am asking you to participate in this study because a high response rate (percentage completion) provides better data for improving the quality of the current program. Like all new programs, improvement to the MAE Teacher Leader Program is possible. Your perceptions about your experience are crucial to that process.

The survey has two parts: (a) a brief section on socio-demographic background; and (b) your sense of how much your level of professional preparation for teaching has improved during your MAE study. This section asks for your perceptions about your preparation on a dual response 5-point matrix (from very unprepared to very prepared), at the beginning of the program and now at the end of the program). The statements for this dual response are taken from the advanced level of the ten Kentucky Teacher Standards (a total of 45 sub-standards are rated).

The survey is online using Qualtrics. You will be given a link to the study, provided in the email that will be sent to each student enrolled in TCHL 560, the capstone course for the MAE Teacher Leader Program. This software has the capability of complete anonymity. When you click “submit” at the end of the survey, all identifying information is removed and your data become simply a row of data (one row for each respondent) that adds to the overall data collection.

It is impossible for the researcher or the professors to trace which student has submitted that particular line of data.

Again, I encourage you to complete this survey. The data will help Ms. Mauzy complete her dissertation, but more importantly from the perspective of a program representative for the College, those data will facilitate the program faculty in planning and implementing enhancements to the still newly revised MAE Teacher Leader Program. I realize that time
is precious, but your assistance with this survey will help ensure that future WKU Master’s students receive the highest quality in their educational experiences.

Thank you in advance for your participation.

Sincerely,

Dr. Lisa Murley

Program Representative, WKU MAE Teacher Leader Program
Letter to Potential Participants

Survey Instrument

Dear Students,

My name is Evgenia Mauzy, a WKU doctoral student and researcher. I am inviting you to participate in a study that is my dissertation, *Students’ Perceptions of a Teacher Leader Master’s Program*. The study also serves as part of a program evaluation for the College of Education and Behavioral Sciences at Western Kentucky University, specifically the level of effectiveness of the new MAE Teacher leader program.

Your participation will help me complete my doctorate. But it will also provide valuable diagnostic information to the CEBS that can be used for program improvement. You will note that the Program Representative for the MAE Teacher Leader Program, Dr. Lisa Murley, has written a letter of sponsorship for this study. Further, the College is permitting me access to the Capstone class (TCHL 560, Action Research) for the program so that all students who finish the MAE program can complete the attached survey.

The survey has two parts: a demographics section and a dual response 5-point Likert-type matrix (from Very Unprepared to Very Prepared) comparing the student’s preparation at the beginning of the program to the end of the program. In this second section you are rating your level of professional preparation for teaching according to the MAE professional standards, which are the same as the advanced level of the ten Kentucky Teacher Standards. Participation in this survey is anonymous and voluntary. The survey should take from no more than 20-30 minutes to complete.

There are no known risks or ethical issues associated with the survey. Much of the information is this cover letter is repeated in the Preamble/Informed Consent that precedes the survey itself, consistent with all research on human subjects.

Although your participation is voluntary, a high percentage return is important because **WKU will benefit from your responses**: feedback about the quality of the program will be used for program enhancements and improvement.

If you have any questions or concerns, you can contact the researcher, Evgenia Mauzy, at 270-312-6453, or my faculty adviser, Dr. Stephen Miller, at 502-593-3595. Thank you in advance for your assistance.

Sincerely,

Jane Mauzy
WKU Doctoral Student
THE MAE TEACHER LEADER PROGRAM:
SURVEY OF STUDENTS’ PERCEPTIONS

Informed Consent/Preamble

Dear Student:

You are invited to participate in a dissertation research project by completing the following survey about students' perceptions of the Master of Arts in Education (MAE) Teacher Leader program. This study is being conducted by Evgenia Mauzy, English as a Second Language teacher at North Hardin High School and a student in the Western Kentucky University Educational Leadership Doctoral Program. Dr. Stephen Miller in the Department of Educational Administration, Leadership and Research is the faculty sponsor for this study. The survey is being completed online (Qualtrics). Students have been given access through a link to the survey provided through the Instructors for TCHL 560, Action Research.

The purpose of this study is to provide program evaluation data on the quality of the Teacher Leader Master's Program and pinpoint the areas of concern if any. Specifically, the study examines students’ perceptions of differences in the level of professional preparation on the 10 Kentucky Teacher Standards from the beginning to the end of the program.

In this study, you will be asked to answer items on a questionnaire. Directions are provided at the beginning of the survey. The survey should take approximately 20-30 minutes to complete. You may skip the questions that make you uncomfortable. You may stop answering the survey questions at any time.

There are no foreseeable risks in answering the questions on this survey. The benefits of this study are providing feedback for program enhancements and improvement via program evaluation on the quality of the MAE Teacher Leader program. There is no compensation for participation. Qualtrics allows for complete anonymity of the data, although total confidentiality cannot be guaranteed. However, your confidentiality will be protected to the extent permitted by law. The data may be published; however your identity will not be disclosed.

Participation in this study is voluntary. You may choose not to participate at all. If you decide not to be in this study or if stop taking part at any time during the survey, you will not be punished or lose any benefits for which you may qualify.

If you have any question or concerns, please contact the faculty sponsor Dr. Stephen Miller at 502-593-3595, the researcher Evgenia Mauzy at 270-312-6453 or the WKU Human Subjects Review Board at 270-745-4652.

(Please continue to the next page)
Sincerely,

Evgenia Mauzy               Stephen Miller, Ph.D.

Continuing to the next page and answering the survey questions implies your consent. Please click next to continue and begin with the brief section on demographics.
Part 1

For these questions on demographic factors and program background, please CHECK the appropriate answer:

1. My gender is
   __a. Female
   __b. Male

2. My race/ethnicity is
   __a. African American
   __b. Asian
   __c. Latino/Hispanic
   __d. Native American
   __e. White/Caucasian
   __f. Other

3. What is your age? ____

4. The MAE Teacher Leader program has five areas of Advanced Certification.
   Please, CHECK the one that you are taking:
   __MAE in Interdisciplinary Early Education
   __MAE in Elementary Education
   __MAE in Middle Grades Education
   __MAE in Secondary Education
   __MAE in Special Education

5. Please, CHECK your primary grade responsibilities for your current teaching position
   __Preschool
__Elementary (K-5)  
__Middle (6-8)  
__Secondary (9-12)  

*Note:* For *preschool* and *elementary* teachers, answer Question 6. For *middle* or *high* school teachers, answer Question 7.

6. For preschool or elementary teachers, my grade level/content area is (Please select the option that most closely fits your circumstances)
   __a. Preschool  
   __b. Primary K-3  
   __c. Upper Elementary 4-5  
   __d. Related Arts (Music, Art, Library, Physical Education, Health, etc.)  
   __e. Remedial Services (Title I, ELL, Reading Assistance, etc.)  
   __f. Special Education  
   __g. Teacher leader/Effectiveness coach/Curriculum coordinator (or similar duties)  
   __h. Counselor

7. For middle school or high school teachers, my primary content area is
   __a. Math  
   __b. Language Arts  
   __c. Social Studies  
   __d. Science  
   __e. Foreign Language  
   __f. Related Arts (Music, Art, Library, Physical Education, Health, etc.)  
   __g. Remedial Services (Title I, ELL, Reading Assistance, etc.)  
   __h. Special Education
__i. Teacher leader/Effectiveness coach/Curriculum coordinator (or similar duties)
__j. Counselor

8. How many years have you taught?

0

1

2

3

4

5

other (list) _____

Please, continue to the next page
Part 2

This survey explores students’ perceptions regarding the quality of the MAE Teacher Leader Program. The 10 Kentucky Teacher Standards, which are also the 10 MAE program standards, are rated for level of preparation from very unprepared to very prepared.

In the following sections please rate your level of professional preparation toward the 10 MAE program standards. Please mark your responses on the two dimensions that measure your level of professional preparation: at the beginning of the program and currently.

The 5-point response scales for Part 2 are listed below. When you mark the items on the Qualtrics online survey, you will fill in the circle that corresponds to the five levels of response options for your level of professional preparation where being prepared is a combination of dispositions, values, beliefs, skills, and knowledge.

Please mark the appropriate response for each standard using the scales below:

<table>
<thead>
<tr>
<th>At the beginning of the program</th>
<th>Currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Very Unprepared (VU)</td>
<td>1 = Very Unprepared (VU)</td>
</tr>
<tr>
<td>2 = Unprepared (U)</td>
<td>2 = Unprepared (U)</td>
</tr>
<tr>
<td>3 = Medium Prepared (MP)</td>
<td>3 = Medium Prepared (MP)</td>
</tr>
<tr>
<td>4 = Prepared (P)</td>
<td>4 = Prepared (P)</td>
</tr>
<tr>
<td>5 = Very Prepared (VP)</td>
<td>5 = Very Prepared (VP)</td>
</tr>
</tbody>
</table>

Thank you for your time!
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

<table>
<thead>
<tr>
<th>Standard 1 — Content Knowledge: Demonstrates a current and sufficient knowledge of certified content areas to develop student knowledge</th>
<th>Level of preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the beginning of the program</strong></td>
<td><strong>Current</strong></td>
</tr>
<tr>
<td></td>
<td>VU</td>
</tr>
<tr>
<td>1.1 Accurately and effectively communicates an in-depth understanding of concepts, processes, and/or knowledge in ways that contribute to the learning of all students.</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Effectively connects content to students’ life experiences including, when appropriate, prior learning in the content area or other content areas.</td>
<td>1</td>
</tr>
<tr>
<td>1.3 Consistently uses instructional strategies that are appropriate for content and contribute to the learning of all students</td>
<td>1</td>
</tr>
<tr>
<td>1.4 Regularly guides students to understand content from appropriate diverse, multicultural, or global perspectives.</td>
<td>1</td>
</tr>
<tr>
<td>1.5 Consistently anticipates misconceptions related to content and addresses them by using appropriate instructional practices.</td>
<td>1</td>
</tr>
</tbody>
</table>
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

<table>
<thead>
<tr>
<th>Standard 2 – Designs/Plans: Designs/plans instruction and learning climates that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.</th>
<th>Level of preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Develops challenging and appropriate learning objectives that are aligned with local/state/national standards and are based on students’ needs, interests and abilities.</td>
<td>At the beginning of the program</td>
</tr>
<tr>
<td></td>
<td>VU</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2.2 Plans and designs instruction that is based on significant contextual and pre-assessment data.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2.3 Develops well-designed assessments that align with learning objectives, guide instruction, and measure learning results.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2.4 Plans a learning sequence using instructional strategies and activities that build on students’ prior knowledge and address learning objectives.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2.5 Plans a learning sequence using strategies and activities that foster the development of higher-order thinking.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

<table>
<thead>
<tr>
<th>Standard 4 – Implements/Manages: Introduces/implements/manages instruction that develops student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge</th>
<th>Level of preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Consistently provides a well-planned sequence of appropriate instructional strategies that actively engage students in meeting learning objectives.</td>
<td>At the beginning of the program</td>
</tr>
<tr>
<td>4.2 Implements instruction based on contextual information and assessment data, adapting instruction to unanticipated circumstances.</td>
<td></td>
</tr>
<tr>
<td>4.3 Makes thoughtful choices about the organization and implementation of both instructional and non-instructional tasks to maximize time for student learning.</td>
<td></td>
</tr>
<tr>
<td>4.4 Makes optimal use of classroom space and uses a variety of instructional resources and technologies to enhance student learning.</td>
<td></td>
</tr>
<tr>
<td>4.5 Consistently uses a variety of appropriate strategies to facilitate higher-order thinking.</td>
<td></td>
</tr>
</tbody>
</table>
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

| Standard 5 – Assessment: Assesses learning and communicates results to students and others with respect to student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge. | Level of preparation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.1 Consistently uses student baseline data from appropriate pre-assessments to promote the learning of all students. | At the beginning of the program | Current |
| 5.2 Consistently uses appropriate summative assessments aligned with the learning objectives to measure student achievement. | | |
| 5.3 Consistently describes, analyzes, and evaluates student performance data to determine student progress, identify differences among student groups, and inform instructional practice. | | |
| 5.4 Clearly communicates to students and parents in a timely manner the evidence of student performance and recommends future actions. | | |
| 5.5 Provides on-going opportunities for students to assess and reflect on their own performance in order to identify strengths and areas for future learning. | | |
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)  
2 = Unprepared (U)  
3 = Medium Prepared (MP)  
4 = Prepared (P)  
5 = Very Prepared (VP)

| Standard 6 – Technology: Uses technology to support instruction; access and manipulate data; enhance professional growth and productivity; communicate and collaborate with colleagues, parents, and the community; and conduct research. | Level of preparation |
|---|---|---|---|---|---|---|
| | At the beginning of the program | Current |
| | VU | U | MP | P | VP | VU | U | MP | P | VP |
| 6.1 Uses appropriate technology to design and plan instruction that supports and extends learning of all students. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 6.2 Designs and implements research-based, technology-infused instructional strategies to support learning of all students. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 6.3 Provides varied and authentic opportunities for all students to use appropriate technology to further their learning. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 6.4 Uses technology to assess student learning, manage assessment data, and communicate results to appropriate stakeholders. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 6.5 Provides and maintains a safe, secure, and equitable classroom environment that consistently promotes discerning and ethical use of technology. | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

<table>
<thead>
<tr>
<th>Standard 7 – Reflection: Reflects on and evaluates specific teaching/learning situations and/or programs.</th>
<th>Level of preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At the beginning of the program</td>
</tr>
<tr>
<td></td>
<td>VU 1</td>
</tr>
<tr>
<td>7.1 Uses formative and summative performance data to determine the learning needs of all students.</td>
<td>1</td>
</tr>
<tr>
<td>7.2 Uses performance data to conduct an in-depth analysis and evaluation of instructional practices to inform future teaching.</td>
<td>1</td>
</tr>
<tr>
<td>7.3 Reflects on the evaluations of student learning and instructional practices to identify and develop plans for professional growth.</td>
<td>1</td>
</tr>
</tbody>
</table>
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

<table>
<thead>
<tr>
<th>Standard 8 – Collaboration: Collaborates with colleagues, parents, and other agencies to design, implement, and support learning programs that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge</th>
<th>Level of preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At the beginning of the program</td>
</tr>
<tr>
<td></td>
<td>VU</td>
</tr>
<tr>
<td>8.1</td>
<td>1</td>
</tr>
<tr>
<td>Describes an on-going process for identifying situations in which student learning could be enhanced by collaboration.</td>
<td>1</td>
</tr>
<tr>
<td>8.2</td>
<td>1</td>
</tr>
<tr>
<td>Designs a plan that involves parents, colleagues, and others in a collaborative effort to enhance student learning.</td>
<td>1</td>
</tr>
<tr>
<td>8.3</td>
<td>1</td>
</tr>
<tr>
<td>Explains how the collaboration to enhance student learning has been implemented.</td>
<td>1</td>
</tr>
<tr>
<td>8.4</td>
<td>1</td>
</tr>
<tr>
<td>Uses appropriate student performance data to describe, analyze, and evaluate the impact of the collaborative activities on student learning and to identify next steps.</td>
<td>1</td>
</tr>
</tbody>
</table>
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

<table>
<thead>
<tr>
<th>Standard 9 – Professional Development: Evaluates his/her overall performance with respect to modeling and teaching Kentucky's learning goals, refines the skills and processes necessary, and implements a professional development plan.</th>
<th>Level of preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At the beginning of the program</td>
</tr>
<tr>
<td></td>
<td>VU 1</td>
</tr>
<tr>
<td>9.1</td>
<td>Thoroughly and accurately assesses current performance related to the Kentucky Teacher Standards and any school/district professional development initiatives.</td>
</tr>
<tr>
<td>9.2</td>
<td>Reflects on data from multiple sources (i.e., self-assessment, student performance, feedback from colleagues, school/district initiatives) and identifies priority areas for growth.</td>
</tr>
<tr>
<td>9.3</td>
<td>Designs a clear, logical professional growth plan that addresses all priority areas.</td>
</tr>
<tr>
<td>9.4</td>
<td>Shows clear evidence of the impact of professional growth activities on instructional effectiveness and student learning.</td>
</tr>
</tbody>
</table>
Please mark the appropriate response to indicate your level of preparation with the following standards using this scale:

1 = Very Unprepared (VU)
2 = Unprepared (U)
3 = Medium Prepared (MP)
4 = Prepared (P)
5 = Very Prepared (VP)

### Standard 10 – Leadership: Provides professional leadership within the school, community, and education profession to improve student learning and well-being.

<table>
<thead>
<tr>
<th>Standard 10.1</th>
<th>Identifies leadership opportunities that enhance student learning and/or professional environment of the school.</th>
<th>Level of preparation</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VU 1 U 2 MP 3 P 4 VP 5</td>
<td>VU 1 U 2 MP 3 P 4 VP 5</td>
</tr>
<tr>
<td>10.2</td>
<td>Develops a plan for engaging in leadership activities.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10.3</td>
<td>Implements a plan for engaging in leadership activities.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10.4</td>
<td>Analyzes data to evaluate the results of planned and executed leadership efforts.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
APPENDIX G: PROCEDURES: LETTERS OF COMMUNICATION WITH PARTICIPATING PROFESSORS AND STUDENTS

Letter to TCHL 560 Class Students from the Dissertation Chair Dr. Miller
December 13, 2014
Students in my TCHL 560 class,
As noted previously, Evgenia (Jane) Mauzy, a doctoral student here at WKU, is doing her dissertation on the level of preparation of MAE Teacher Leader graduates, at the beginning and end of our program. All students in the Action Research capstone course are being asked to participate because the data will also serve as a partial program evaluation of the new MAE Teacher Leader course of study.
The research is being sponsored by WKU because the data will be used as feedback to help improve our program.
Please participate.
Jane’s introductory letter, with the link to the survey, is copied below. Once you click on the link, you will go to the survey, which begins with the letter of sponsorship from Dr. Lisa Murley, Program Representative for the MAE in Teacher Leadership.
Thanks in advance for your participation with this study.
Dr. Steve Miller

December 13, 2013
Letter to Potential Participants
Dear Students:
My name is Evgenia Mauzy, a WKU doctoral student and researcher. I am inviting you to participate in a study, Students’ Perceptions of a Teacher Leader Master’s Program. The study will serve as: (a) part of a program evaluation for the College of Education and Behavioral Sciences at Western Kentucky University, specifically the level of effectiveness of the new MAE Teacher Leader Program, and (b) my doctoral dissertation.
The survey is online using Qualtrics. This letter contains a link to the study, provided to each student enrolled in TCHL 560, Action Research, the capstone course for the MAE Teacher Leader Program. The survey should take no more than 15-30 minutes to complete.
(Survey link inserted).
The Qualtrics survey includes a letter of sponsorship from Dr. Lisa Murley, Program Representative for the MAE Teacher Leader Program, explaining details of the study and encouraging you to participate.
Thank you in advance for your participation.
Sincerely,
Evgenia Mauzy
WKU Doctoral Student
APPENDIX H: REMINDER E – MAIL LETTERS TO PARTICIPANTS

December 13, 2013

Dr. Cribbs, Dr. Gandy, and Dr. Pereira,

Thank you very much for your support in my research project. I have attached a complete letter—mine to the students combined with the draft Dr. Miller completed for you to send to the students.

The anonymous link to the survey has been inserted into this complete letter. Please, send this letter to your students as an email (NOT an attachment—they are less likely to open an attachment).

Please email it to your students three times: (a) now, (b) one week later, and (c) two weeks later. This letter encourages them to participate.

I spent an unforgettable four years of studies at WKU, and my research is my final step in completing my dissertation. Thank you again for helping me achieve my dream and receive a doctoral degree in education.

Jane Mauzy
EDLD Doctoral student

PS. Please don’t forget to add your name at the end of the letter Dr. Miller drafted for you (immediately prior to my letter to the students that contains the link).

PPS. Please do NOT use the link in the email.

If you want to see the survey, go to www.qualtrics.com

and log in.

Instead use the “Look and feel” option so that when you check the survey, you do not accidentally add your response to the dataset as a student!

Attachment to the Letter
Students in my TCHL 560 class,

As noted previously, Evgenia (Jane) Mauzy, a doctoral student here at WKU, is doing her dissertation on the level of preparation of MAE Teacher Leader graduates, at the beginning and end of our program. All students in the Action Research capstone course are being asked to participate because the data will also serve as a partial program evaluation of the new MAE Teacher Leader course of study.
The research is being sponsored by WKU because the data will be used as feedback to help improve our program.

Please participate.

Jane’s introductory letter, with the link to the survey, is copied below. Once you click on the link, you will go to the survey, which begins with the letter of sponsorship from Dr. Lisa Murley, Program Representative for the MAE in Teacher Leadership.

Thanks in advance for your participation with this study.

December 13, 2013
Letter to Potential Participants
Dear Students:
My name is Evgenia Mauzy, a WKU doctoral student and researcher. I am inviting you to participate in a study, Students’ Perceptions of a Teacher Leader Master’s Program. The study will serve as: (a) part of a program evaluation for the College of Education and Behavioral Sciences at Western Kentucky University, specifically the level of effectiveness of the new MAE Teacher Leader Program, and (b) my doctoral dissertation. The survey is online using Qualtrics. This letter contains a link to the study, provided to each student enrolled in TCHL 560, Action Research, the capstone course for the MAE Teacher Leader Program. The survey should take no more than 15-30 minutes to complete. https://wku.qualtrics.com/SE/?SID=SV_1WUu1raNEG9CWQ5
The Qualtrics survey includes a letter of sponsorship from Dr. Lisa Murley, Program Representative for the MAE Teacher Leader Program, explaining details of the study and encouraging you to participate.
Thank you in advance for your participation.
Sincerely,
Evgenia Mauzy
WKU Doctoral Student
APPENDIX I:

The data illustrated in Tables I-1 through I-10 represent internal reliability and item characteristics for the beginning data on the WKU MAE Program. The survey data are based on students’ perceptions of their educational preparation for the 10 Kentucky EBSP Advanced Level Teacher Standards for the WKU MAE Teacher Leadership Program degree. The letter b stands for beginning and refers to student data from the dual response matrix (at the beginning of the program). The numbers in the first column indicate the substandards (from 3-5 for the 10 different standards). The data for current perceptions (at the end of the program) are given in Tables 1-10 in Chapter IV. The wording for the full standard and specific substandards is located in Appendix C.
Table I-1

*Internal Reliability and Item Characteristics for Standard 1, Beginning Values (N = 46)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>α - d&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1b</td>
<td>3.58</td>
<td>.81</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>1.2b</td>
<td>3.58</td>
<td>.92</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.85</td>
</tr>
<tr>
<td>1.3b</td>
<td>3.53</td>
<td>.84</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.82</td>
</tr>
<tr>
<td>1.4b</td>
<td>3.22</td>
<td>.77</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>1.5b</td>
<td>3.38</td>
<td>.75</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.44</td>
<td>.67</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.88&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

<sup>a</sup>α - d = alpha with item deleted.

<sup>b</sup>Values for Total are based on separate substandards summed and divided by the total N across all of the substandards for that standard.

<sup>c</sup>Value for α - d for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-2

*Internal Reliability and Item Characteristics for Standard 2, Beginning Values (N = 46)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha$ - d$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1b</td>
<td>3.54</td>
<td>.84</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.93</td>
</tr>
<tr>
<td>2.2b</td>
<td>3.43</td>
<td>.93</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>2.3b</td>
<td>3.26</td>
<td>.95</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.88</td>
</tr>
<tr>
<td>2.4b</td>
<td>3.54</td>
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<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>2.5b</td>
<td>3.33</td>
<td>.90</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.87</td>
</tr>
<tr>
<td>Total$^b$</td>
<td>3.42</td>
<td>.78</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.91$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

$^a\alpha$ - d = alpha with item deleted.

$^b$Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

$^c$Value for $\alpha$ - d for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-3

*Internal Reliability and Item Characteristics for Standard 3, Beginning Values (N = 46)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha - d^a$</th>
</tr>
</thead>
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<tr>
<td>3.1b</td>
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<td>3</td>
<td>.89</td>
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<tr>
<td>3.2b</td>
<td>4.09</td>
<td>.94</td>
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<td>5</td>
<td>3</td>
<td>.84</td>
</tr>
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<td>3.3b</td>
<td>3.70</td>
<td>.79</td>
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<td>5</td>
<td>3</td>
<td>.92</td>
</tr>
<tr>
<td>3.4b</td>
<td>4.22</td>
<td>.73</td>
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<td>5</td>
<td>3</td>
<td>.86</td>
</tr>
<tr>
<td>3.5b</td>
<td>4.20</td>
<td>.83</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>.85</td>
</tr>
<tr>
<td>Total$^b$</td>
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<td>.69</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.90$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

$^a\alpha - d = \text{alpha with item deleted.}$

$^b\text{Values for Total are based on separate substandards summed and divided by the total } N \text{ across all of the substandards for that standard.}$

$^c\text{Value for } \alpha - d \text{ for Total is Cronbach's coefficient alpha for the entire scale.}$
Table I-4

*Internal Reliability and Item Characteristics for Standard 4, Beginning Values (N = 46)*

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<tr>
<th>Standard</th>
<th>$M$</th>
<th>$SD$</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>$\alpha$ - d$^a$</th>
</tr>
</thead>
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<tr>
<td>4.1b</td>
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<td>3</td>
<td>.85</td>
</tr>
<tr>
<td>4.2b</td>
<td>3.31</td>
<td>.76</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.86</td>
</tr>
<tr>
<td>4.3b</td>
<td>3.44</td>
<td>.76</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td>4.4b</td>
<td>3.53</td>
<td>.97</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>4.5b</td>
<td>3.53</td>
<td>.76</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.86</td>
</tr>
<tr>
<td>Total$^b$</td>
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<td>1</td>
<td>5</td>
<td>4</td>
<td>.88$^c$</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

$^a$ $\alpha$ - d = alpha with item deleted.

$^b$ Values for Total are based on separate substandards summed and divided by the total $N$ across all of the substandards for that standard.

$^c$ Value for $\alpha$ - d for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-5

*Internal Reliability and Item Characteristics for Standard 5, Beginning Values (N = 45)*

<table>
<thead>
<tr>
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<th></th>
<th></th>
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<th></th>
</tr>
</thead>
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<td>5.1b</td>
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<td>5</td>
<td>4</td>
</tr>
<tr>
<td>5.2b</td>
<td>3.60</td>
<td>.86</td>
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<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5.3b</td>
<td>3.24</td>
<td>.86</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>5.4b</td>
<td>3.44</td>
<td>.92</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5.5b</td>
<td>3.20</td>
<td>.89</td>
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<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Totalb</td>
<td>3.56</td>
<td>.77</td>
<td>1</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Note. Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

aα - d = alpha with item deleted.

bValues for Total are based on separate substandards summed and divided by the total N across all of the substandards for that standard.

cValue for α - d for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-6

*Internal Reliability and Item Characteristics for Standard 6, Beginning Values (N = 45)*

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<tr>
<th>Standard</th>
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<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>(\alpha - d^{a})</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1b</td>
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<td>.87</td>
<td>2</td>
<td>5</td>
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<td>.87</td>
</tr>
<tr>
<td>6.2b</td>
<td>3.45</td>
<td>.90</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>6.3b</td>
<td>3.34</td>
<td>.81</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.88</td>
</tr>
<tr>
<td>6.4b</td>
<td>3.39</td>
<td>.92</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.92</td>
</tr>
<tr>
<td>6.5b</td>
<td>3.82</td>
<td>.92</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.90</td>
</tr>
<tr>
<td>Total(^b)</td>
<td>3.55</td>
<td>.78</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>.91(^c)</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\alpha - d = \alpha \) with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total N across all of the substandards for that standard.

\(^c\)Value for \(\alpha - d\) for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-7

*Internal Reliability and Item Characteristics for Standard 7, Beginning Values (N = 45)*

<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>α - d&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1b</td>
<td>3.56</td>
<td>.99</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.94</td>
</tr>
<tr>
<td>7.2b</td>
<td>3.33</td>
<td>.95</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.91</td>
</tr>
<tr>
<td>7.3b</td>
<td>3.38</td>
<td>.98</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.92</td>
</tr>
<tr>
<td>Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.42</td>
<td>.93</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.95&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

<sup>a</sup>α - d = alpha with item deleted.

<sup>b</sup>Values for Total are based on separate substandards summed and divided by the total N across all of the substandards for that standard.

<sup>c</sup>Value for α - d for Total is Cronbach’s coefficient alpha for the entire scale.
### Table I-8

*Internal Reliability and Item Characteristics for Standard 8, Beginning Values (N = 45)*

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<thead>
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<th>( SD )</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>( \alpha - d^a )</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1b</td>
<td>3.36</td>
<td>.96</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.94</td>
</tr>
<tr>
<td>8.2b</td>
<td>3.24</td>
<td>.91</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93</td>
</tr>
<tr>
<td>8.3b</td>
<td>3.22</td>
<td>1.00</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93</td>
</tr>
<tr>
<td>8.4b</td>
<td>3.31</td>
<td>1.04</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93</td>
</tr>
<tr>
<td>Total(^b)</td>
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<td>5</td>
<td>4</td>
<td>.95(^c)</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\)\( \alpha - d \) = alpha with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total \( N \) across all of the substandards for that standard.

\(^c\)Value for \( \alpha - d \) for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-9

*Internal Reliability and Item Characteristics for Standard 9, Beginning Values (N = 45)*

<table>
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<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>α - da</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1b</td>
<td>3.53</td>
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<td>1</td>
<td>5</td>
<td>4</td>
<td>.92</td>
</tr>
<tr>
<td>9.2b</td>
<td>3.51</td>
<td>.79</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.92</td>
</tr>
<tr>
<td>9.3b</td>
<td>3.58</td>
<td>.97</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.89</td>
</tr>
<tr>
<td>9.4b</td>
<td>3.47</td>
<td>.92</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.90</td>
</tr>
<tr>
<td>Totalb</td>
<td>3.52</td>
<td>.82</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.93c</td>
</tr>
</tbody>
</table>

*Note.* Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

α - d = alpha with item deleted.

Values for Total are based on separate substandards summed and divided by the total N across all of the substandards for that standard.

Value for α - d for Total is Cronbach’s coefficient alpha for the entire scale.
Table I-10

Internal Reliability and Item Characteristics for Standard 10, Beginning Values (N = 45)

<table>
<thead>
<tr>
<th>Standard</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>( \alpha - d^a )</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1b</td>
<td>3.39</td>
<td>.95</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.97</td>
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<tr>
<td>10.2b</td>
<td>3.39</td>
<td>.97</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.97</td>
</tr>
<tr>
<td>10.3b</td>
<td>3.36</td>
<td>.99</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.97</td>
</tr>
<tr>
<td>10.4b</td>
<td>3.27</td>
<td>1.04</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.98</td>
</tr>
<tr>
<td>Totalb</td>
<td>3.38</td>
<td>.97</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>.98(^c)</td>
</tr>
</tbody>
</table>

Note. Standards and substandards are listed in the document, *WKU Program Standards* (Appendix C).

\(^a\)\(\alpha - d = \) alpha with item deleted.

\(^b\)Values for Total are based on separate substandards summed and divided by the total \( N \) across all of the substandards for that standard.

\(^c\)Value for \( \alpha - d \) for Total is Cronbach’s coefficient alpha for the entire scale.
CURRICULUM VITAE

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SUMMARY STATEMENT

Looking for a teaching or administrative position in education.

EDUCATION

Kremenchug Medical College, Kremenchug, Ukraine. Bachelor of Science Degree, RN. 1989

Kaliningrad State University, Kaliningrad, Russia. Master of Arts Degree with a major in Education, Applied Linguistics, Russian Language and Literature, 2004

Western Kentucky University, Bowling Green, Kentucky. Educational Leadership, Postsecondary Education, ABD, expected date of graduation 2014.

EMPLOYMENT HISTORY

599 Rogersville Rd  
Radciff, KY 40160, phone 270- 351-2999

400 Brown Street, Vine Grove, KY 40175, phone 270-877-2100

65 W. A. Jenkins Rd Elizabethtown, KY 42701, phone 270-769-8800

2007-present time –Hardin County Schools, Elizabethtown, KY-ESL teacher.  
65 W. A. Jenkins Rd Elizabethtown, KY 42701, phone 270-769-8800

1101 Woodland Drive Elizabethtown, KY 42701, Phone 270-765-6106

LICENSES / CERTIFICATION

2006. Kentucky ESL Teacher License, K-12, all grades

2006. Kentucky Russian Language Teacher License, K-12, all grades
2009. Kentucky RN License

SKILLS / INTERESTS

Speak five languages: Russian—native language; Ukrainian—fluent, graduated high school in Ukraine; English—fluent; Swedish and Polish—intermediate level.

Interests include reading, travelling, running, research in linguistics.