The Relationship Between Pre-Service Benchmarks and Student Teaching Performance

Alexis Carlson

University of Rhode Island, alexiscarlson@uri.edu

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THE RELATIONSHIP BETWEEN PRE-SERVICE
BENCHMARKS AND STUDENT TEACHING
PERFORMANCE

BY

ALEXIS CARLSON

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
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OF

ALEXIS CARLSON

APPROVED:

Thesis Committee:

Major Professor        Diane Kern
                      Julie Coiro
                      Jay Fogleman
                      Stephen M. Barber
                      Nasser H. Zawia
                      DEAN OF THE GRADUATE SCHOOL

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ABSTRACT

From K-12 schools to higher education institutions, policy makers, parents, teachers, and other education stakeholders are concerned about the state of our nation’s public schools. Issues of reform, accountability, retention, paths to licensure, and preparation of teachers populate education news and research. In the era of accountability, it is important for teacher preparation programs to look within themselves to ensure the structure and requirements of their program help prepare teacher candidates for student teaching and careers. While some insist on raising admission requirements, such as grade point averages (GPAs), others are concerned about the role of high stakes admission and licensure requirements in teacher preparation programs.

The focus of this thesis was to examine one Secondary English Language Arts teacher preparation program within a large, Research I institution in the northeast. A correlational study was conducted to determine the relationships between the various pre-service benchmarks and candidates’ student teaching performance. Regression models were used to determine if any of the pre-service benchmarks were predictors of other pre-service benchmarks or predictors of student teaching performance.

Findings from this study reinforce existing literature on correlational relationships between pre-service benchmarks. Findings from the regression models add to the literature in the field. The results and implications of this study offer similar programs potential areas of reform.
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DEDICATION

To my first teachers: Dad, Mom, Erik, and Kristen
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CHAPTER 1

INTRODUCTION

Teacher preparation programs have been subject to skepticism and reform since their inception. There are growing concerns among parents, teachers, and policymakers about the quality of schools and the teachers within them (Ingersoll & Collins, 2017; Klein, 2017). Policy makers are quick to conclude teacher preparation programs need to be reinvented to address these concerns (Hayes, 2002). The teacher retention problem contributes to these concerns. Riggs (2013) notes 9.5% of teachers will leave the field before the end of their first year. Broadening the scope, Ingersoll (2012) adds 40% and 50% of teachers leave the classroom within the first five years of their career. The large percentage of teachers leaving the field directly relates to the concerns about the quality of schools and teachers in them. In a school with a high turnover rate, administrators are stuck in a revolving cycle of continuously searching for new teachers (Zhang & Zeller, 2016).

A report from the National Council for Accreditation of Teacher Education (NCATE) notes the solution to address these concerns is to “reform teaching so that more who enter will stay in the school building rather than be propelled back out the revolving door” (Wise, 2005, p. 2). These reports indicate an interest in reforming education to allow more invested teacher candidates into the field. Ironically, the solution many departments of education at the state and national level call for is to raise the standards candidates must meet in order to be admitted into a teacher
preparation program or receive licensure, thus eliminating a wide range of potential teacher candidates. This phenomenon is part of a growing focus on accountability and reform efforts to improve the processes for admitting teacher candidates into teacher preparation programs (Jamil, Sabol, Hamre, & Pianta, 2015).

Researchers and college faculty are rightfully concerned about the role of high-stakes admission and licensure in undergraduate education (Moser, 2014; Petchauer, 2012; Thomas & Loadman, 2001; Warren & Curley, 1998; Watras, 2006). As a result of these concerns, educational institutions are interested in the level of preparedness, effectiveness, and quality of teacher candidates (Williams & Alawiye, 2001). From the initial requirements for admittance into a teacher preparation program to the final licensure testing requirements and successful completion of student teaching, some education policymakers insist higher test scores for teacher candidates will produce high quality teachers. The higher cut scores on tests impact education majors immediately since the initial requirements for admittance into a teacher preparation program are often the first to rise.

In this era of accountability, it is essential for policy makers, university faculty, and other stakeholders to reexamine teacher education programs. Those concerned with educational accountability and reform must understand what aspects of teacher education programs lead to the development of successful student teachers who, after completing their program, enter the teaching workforce highly qualified (Leathwood & Phillips, 2000). Therefore, it is important for teacher preparation programs to look within themselves to better understand the needs of their teacher candidates (Kornfeld, Marker, Rudel, 2003). By doing so, teacher preparation programs can understand the
relationship between aspects of their own program and the development of highly qualified teachers.

Current concerns about teacher education and the researcher’s experiences as an undergraduate teacher candidate inspired the concept of this study. Throughout this thesis, independent variables are referred to as “pre-service benchmarks.” This title was chosen because it accurately captures both the timeline and nature of the assessments I used in this study.

This study explores the relationship between pre-service teacher benchmarks and student teaching performance. The purpose of this study is twofold. First, the purpose is to determine if there is a relationship between the various requirements undergraduate education majors must meet. Second, this study aims to determine if the various requirements are predictive of effective student teaching performance. The results of this study will be shared with the School of Education faculty and administrators so they may be better able to determine which variables indicate greater student teaching success, which will inform teacher candidate advising and program revision.

Limitations

There are several limitations to this study the researcher recognizes. First, the convenience sampling from only one institution in the state and country is not necessarily generalizable. The researcher will attempt to address this concern by comparing data points to national averages, when possible. Another limitation of the study is the exclusion of other content areas (e.g. History/Social Studies, Mathematics, Sciences). The students of other disciplines have different cut scores for their Praxis
content tests. Thus, the findings of this study may not be applicable to students of other content areas. Addressing such a concern is beyond the scope of this study, but future research should investigate pre-service benchmarks and successful student teaching for other content areas. Though a few issues around reform are mentioned in the introduction, this research only looks at the preparation of teacher candidates. Further research should include: qualitative information addressing how educational stakeholders would reform programs, a longitudinal study about the effectiveness of a program’s student teachers throughout their career, the number of teacher program graduates who remain in the field after three, five, and seven years, and the relationship of pre-service benchmarks and teacher performance in non-traditional or alternative teacher licensure program.

*Significance*

The main audience for this research will be faculty teaching in English teacher education programs, although this study may also be of interest to additional groups, such as the university, the School of Education, faculty and staff within the program, teacher education candidates, curriculum reformers, and even policy makers. Due to the clinical nature of the teacher education program in this study, the results may impact public schools in the state, where teacher candidates complete pre-professional field experiences and student teaching. Should the results of this study find relationships between pre-service benchmarks and student teaching performance, program faculty might revise the nature of the student teaching experience and relationship with local schools. If a relationship is found, teacher education programs might place more emphasis on field experiences, which would affect local public
schools and their students. Further research would need to be done to determine the impact teacher candidates have on student achievement in public school classrooms. If relationships are found, program faculty and policy makers might revise the structure of their program in order to better prepare teacher candidates to be successful student teachers or rethink the purpose of pre-service benchmarks which may be obstructing students from student teaching experiences.

A correlational study by Wilson and Robinson (2012) notes standardized test scores do not relate to success in teaching and are thus unreliable in helping identify low-performing candidates. If the results of this study indicate there is no relationship between the pre-service benchmarks and successful student teaching, the results may be important at both the program and state level regarding admission and licensure. Such findings would add to the existing field of research regarding teacher candidate programs and their components. Further, findings might inspire teacher candidate programs to reflect on the value of some pre-service benchmarks in preparing teacher candidates for successful student teaching.

If there is a relationship between one or more of the variables considered to be a pre-service benchmarks and successful student teaching, the results may be important for professors within the program to understand about how to better serve their teacher candidates.
CHAPTER 2

REVIEW OF LITERATURE

The expectations teacher candidates must meet during their programs have a strong research history. Many aspects of student teaching have been researched as well. Literature relevant to the pre-service benchmarks under analysis and student teaching performance mentioned below informed and inspired this thesis.

*Pre-Service Benchmarks*

Efforts to increase teacher quality and preparedness have focused on increasing admission and graduation standards for students in teacher preparation programs (Hall & West, 2011). The pressure to raise standards for teacher candidates impacts education majors from the start of their undergraduate study. The position of these exams establishes the education major as “fundamentally different from others because students must test into it” (Petchauer, 2012, p. 252). Though the use of admission tests is unique to education majors, the use of high-stakes standardized testing to determine admittance and even graduation is not. It is common for many majors and programs (e.g., medical school, pharmacy, nursing) to use grade point averages as a way to ensure the quality of their students. Some policymakers and educational program administrators believe a passing score on a content area test, such as English or mathematics, is enough to be a qualified and effective teacher (Goldhaber, 2007).
A review of 123 studies by D’Agostino and Powers (2009) indicates standardized test scores did not strongly relate to teaching performance. Two prior studies (Ferguson & Womack, 1993; Guyton & Farokhi, 1987) note education coursework to be a better predictor of teaching success than other benchmarks such as content area coursework and overall GPAs. In an era of teaching influenced by continued efforts to raise standards and high-stakes assessments, it is appropriate to question the evidence supporting these changes and review the literature surrounding this issue (Wilson & Robinson, 2012).

A report from Ferguson and Womack (1993) offers an overview of the pressure teacher preparation programs face. In the 1980s, the debate between subject matter and education coursework was strengthened when academic and political interest groups united to “secure the adaptation of accreditation standards and legislative mandates prescribing increased content preparation at the expense of education coursework” (p. 55). Reform documents such as A Nation at Risk (1983) echoed these concerns. While there is little evidence to defend the idea of placing more importance on subject matter preparation to increase teacher performance, research and reports show evidence that education coursework has a positive effect on teaching performance (Ashton & Crocker, 1987; Darling-Hammond, 1991; Everston, Hawley, & Zlotnik, 1985; Ferguson & Womack, 1993, p. 55). Ferguson and Womack (1993) found education coursework, of the variables they measured, to be the strongest predictor of teaching performance. Conversely, they found a teacher candidate’s subject area grade point average was not a significant predictor of teaching performance (p. 60). Ferguson and Womack (1993) call for an assessment of existing
evidence on the effect of education and subject matter coursework on “teaching performance and student learning and further research on the subject” (p. 55). This study answers that call and adds to the field of literature on this subject.

A summary report from Wilson, Floden, and Ferrini-Mundy (2001) notes prior research has explored the relative importance of pre-service benchmarks in regard to teacher preparation, and further research needs to be done to explore the “relationship between components of pedagogical preparation and teacher effectiveness” (p. 17). Since then, researchers have begun to explore the relationship between different assessment measures teacher candidates must pass throughout their program. Whether admission scores, education or content area grade point averages (GPAs), Praxis scores, or student teaching outcomes, studies have found mixed results in relationships between variables. Casey and Childs (2011) note few international studies have examined the relationship of admission criteria to teacher candidate preparedness to teach at the end of their program. Their report calls for further research to determine if entering GPAs have predictive value for successful student teaching performance. This thesis may help fill the gap in the research.

Hall and West (2011) analyzed relationships between variables such as GPA, American College Testing (ACT) scores, and Praxis exam scores. Their analysis found GPA and Praxis scores correlated significantly and positively with student teaching performance scores (Hall & West, 2011). A multiple regression model consisting of Praxis scores and GPA variables explained sixteen percent of the variance in participants’ student teaching performance scores. Hall and West (2011) acknowledge these results can support the movement to raise standards in teacher education.
programs, they note the current model leaves eighty-five percent of variance in student teaching performance unexplained. Hall and West (2011) argue raising standards might not lead to more prepared teacher candidates. While these efforts have occurred in an attempt to better prepare teachers, there is little empirical evidence to support these efforts (Zumwalt & Craig, 2005).

Previous studies have found relationships between program requirements and student teaching performance, but with contradicting results. Guyton and Farokhi (1987) found GPA at the sophomore (typically the second year of college for a traditional undergraduate student) and upper level (usually checked prior to student teaching) were significantly correlated with teaching success. The researchers also found sophomore and upper level GPAs correlated significantly with teacher certification test scores and subject matter knowledge tests. However, their study showed subject matter test (like the Praxis II content test) scores were not correlated with teacher performance. Ferguson and Womack (1993) found education coursework accounted for 48% of the variance in teaching performance. Additionally, research found academic criteria including GPA and ACT scores failed to predict future student teacher performance (Byrnes, Kiger, & Shechtman, 2003).

Furthermore, the Praxis series of tests, developed by Educational Testing Service (ETS), is one of the most widely used certification tests in the country. The Praxis I Core tests, which assess basic skills in reading, writing, and mathematics, are often used by teacher preparation programs as an admission requirement. After a few years in the program, teacher candidates must then pass the more advanced content knowledge and pedagogical knowledge tests. In programs like the one used in this
study, teacher candidates must meet certain cut scores in order to advance in their program. These cut scores are determined by policymakers in each state. Often, they raise these cut scores in an attempt to strengthen the quality of their teachers. Schuls and Trivitt (2015) argue these policies operate under the assumption that a teacher candidate who “fails the exam by one question is not fit to teach, while the individual who earns a score equal to the cut score is deserving of a teaching certificate” (p. 653). However, evidence from Goldhaber (2007) contradicts this belief. In a study, Goldhaber (2007) found the state of North Carolina would lose more effective teachers if they raised their cut scores to match Connecticut’s. Surprisingly, he found no improvement in the quality of North Carolina’s teachers after increasing the cut score. Shuls and Trivitt (2015) point out that though the cut scores are determined by states to “weed out lower performing individuals” such scores provide “little information to future employers on the ability of prospective teachers” (p. 653). Yet, of all the collectable data, teacher licensure exam scores are among the most cited as having a positive relationship with teacher effectiveness” (p. 653-654). Though this study does not include Praxis I or other admission test scores, this study does use the subject Praxis II test scores as well as the pedagogical knowledge test scores for teacher candidates. Further research should include the use of admission test scores to determine the relationship between those scores and student teaching performance.

Much like this English subject-specific study, Clotfelter, Ladd, and Vigdor (2010) conducted a study and found math subject test scores are significantly and positively correlated with teacher performance. While it is beyond the scope of this study to gather data from the students of the program’s student teachers, it is important
to note that Clotfelter et al. (2010) found licensure exams for English teachers had a significant negative relationship with student achievement in English. Further research should continue to explore the relationships across subject specific teacher programs.

*Student Teaching Performance*

Studies show both veteran and new teachers consider clinical experiences in classrooms as a key component of teacher preparation (Wilson et al, 2001). Experiences while enrolled in a traditional teacher preparation program help develop teacher candidates prior to and during student teaching. A report from Darling-Hammond, Chung, & Frelow, (2002) indicates experiences help prepare teacher candidates to teach their content area, develop curriculum, and handle classroom management.

Cooperating teachers, teacher candidates, and university supervisors all play a role in the development of effective teachers. There is ample research exploring the influence of teacher education programs on the development of their teacher candidates. Adams and Krockover (1997) found beginning teachers attribute their knowledge of student-centered instruction, general pedagogical knowledge, and pedagogical content knowledge to their teacher education program. Furthermore, courses in teacher education provided candidates with a framework with which to organize, understand, and reflect on their experiences in classrooms. Such reflection contributes to the development of successful teachers while in their program and after. Grossman and Richert (1988) found prospective teachers cite education coursework and fieldwork as influential elements of their teacher preparation program, noting fieldwork as an aide in the development of their teaching practices.
Existing research on clinical experiences provides an understanding of the qualities of effective teachers (Darling-Hammond, 2006; Darling-Hammond, 2010; Wilson et al, 2001; Scheerens & Blömeke, 2016). Various studies provide findings regarding teacher preparation program assessment and teacher candidate effectiveness (Barnes, 2006; Boe, Shin, & Cook, 2007; DiObilda, Bolay, & Foster, 1990; Hayes, 2002; Morin 1996; Moser 2014; Pettus & Smith, 1991; Thomas & Loadman, 2001). The development of effective teachers is a central goal of a teacher preparation program. These above reports provide research regarding the qualities and dispositions of effective teachers.

Existing studies regarding student teacher perceptions of teacher training programs and student teaching experiences provide insight into teacher candidates’ opinions and beliefs about their development over the course of the program (Hayes, 2002; Morin, 1996; Pettus and Smith, 1991; Thomas & Loadman, 2001; William & Alewife, 2001). However, little research was found that analyzed existing data from cooperating teachers in the context of program and teacher candidate evaluation and with the goal of determining the qualities of effective teacher candidates. By understanding how teacher candidates are evaluated in schools by their cooperating teachers and university supervisors, teacher preparation programs can develop a sense of how their student teachers perform. These evaluations can offer critical insight from cooperating teachers or university supervisors to not only help a teacher candidate develop, but can be used to review the preparedness of teacher candidates in general, or in specific key areas of development such as classroom management. While such research would likely produce fascinating results, it is beyond the scope of this study.
Further research should determine the qualities and characteristics current teachers believe effective students teachers possess.

One goal of this study is to determine which pre-service benchmarks predict student teaching performance, an area of exploration that will contribute and expand upon existing research.

The following research questions guide this study:

1. Is there a relationship between the following pre-service benchmarks: education course grade point averages, content area course grade point averages, Principles of Learning and Teaching (PLT) Praxis II scores, Praxis II subject exam scores, and effective student teaching performance?

2. To what extent do the above pre-service benchmarks predict student teaching performance?

Data analysis expands upon the existing research in this field and may provide implications for teacher preparation programs.
CHAPTER 3

METHODOLOGY

Existing studies provided the inspiration and foundation for this methodology. Wilson and colleagues (2001) argue research reports should explicitly explore the relationship of “teacher knowledge, skill, and practice that are thought important for effective teaching” (p. 33). Existing research on pre-service benchmarks provided the foundation for the research design of this study (Wilson & Robinson, 2012; Hall & West, 2011; Sandholtz et al, 2015). In many ways, this research was inspired by a report by Ferguson and Womack (1993) which sought to determine the extent to which “education and subject matter coursework predict the teaching performance of student teachers” (p. 59). The study by Ferguson and Womack (1993) inspired the research questions regarding the relationships between pre-service benchmarks and student teaching and the predictability of those benchmarks on student teaching performance. If there is a relationship between one or more of the variables considered to be a pre-service benchmarks and successful student teaching, the results may be important for professors within the program to understand about how to better serve their teacher candidates.

Setting

This study was conducted on a dataset from the School of Education at a large, public, Research I institution in the Northeastern region of the United States.
Study Population

The study population was 2013-2016 program completers from the Secondary English Language Arts program at this public university. A complete dataset was available for a total of fifty-three program completers. This was a purposive convenience sample. Purposeful sampling was used to identify only students in the Secondary Education and English major since other content area students (such as Mathematics or Social Studies/History) have different requirements for Praxis exams. Secondary Education and English majors were the target population for whom the results of this study may impact. Participants were selected by using Filemaker to run a query pulling only the sampling and data needed for this study (see Appendix A, Table 1). One limitation of this study was the use of a convenience sample. Further research should draw on a larger random sample of Secondary Education and English Language Arts teacher candidates.

Only data of students who successfully completed the program were used for this study since the independent variable under consideration was student teaching performance, which is required for program completion and for teaching licensure. Since the researcher had no contact with participants or the current cohort of student teachers, participants had minimal to no risk. To protect the anonymity and confidentiality of the participants, the researcher’s major professor de-identified the data and generated pseudonyms before data were made available to the researcher. The total number of participants was fifty-three (n = 53).

In this area, the researcher had two concerns related to the confirmability of this study. It is important to note as a graduate of this program the researcher does have a
relationship with some of the participants in the study, especially those in the 2015 cohort of which the researcher was a member. Another concern was the researcher’s own information was included in the data collected. To address these concerns, a School of Education faculty member generated the queries and the researcher’s major professor de-identified the data. These actions greatly reduced any potential risk to participants since their anonymity was protected.

**Procedure**

1. **IRB approval:** The proposal for this study was submitted to the University of Rhode Island Institutional Review Board and was approved. Since the study is limited to analysis of de-identified existing data, it was not necessary to complete the full IRB application. Rather, a Secondary Data Analysis Worksheet was submitted to the IRB and approved.

2. **Data collection:** A request to access the data was approved by the Director of the School of Education. Next, the researcher’s major professor accessed data available to her and also requested a query from the School of Education Outcomes Assessment Office (data located in TaskStream) and the Office of Teacher Education (data located in Filemaker). The researcher’s major professor de-identified the dataset and shared data in an Excel file format.

3. **Dataset description:** The quantitative data included eight variables. Six independent variables were collected regarding pre-service benchmarks, and three variables were collected and combined to create one sum score regarding student teaching, the dependent variable. The following six pre-service benchmarks functioned as independent variables: 1) grade point averages for
English courses at the time of admission, 2) grade point averages for Education courses at the time of admission, 3) Principles of Learning and Teaching (PLT) Praxis II scores, 4) subject area Praxis II scores, 5) grade point averages for English courses prior to student teaching, 6) grade point averages for Education courses prior to student teaching (see Appendix A, Table 2). The quantitative data collected regarding student teaching performance (the dependent variable) includes a sum score of rubric scores collected from both cooperating teachers and university supervisors using a common rubric (see Appendix B). Student teachers are formally observed by their cooperating teachers three times during the student teaching semester and by their university supervisor for three times during the student teaching semester. Both cooperating teachers and university supervisors complete a final evaluation for each student teacher. The scores from the final evaluations completed by the cooperating teacher(s) and university supervisors were added together to create a sum score for student teaching performance.

4. **Instruments:** The grade point averages (GPA) used in this study for both Education and English courses are on a 4.0 scale. For Education GPAs at the time of admission, students typically have one to two education courses completed. Prior to student teaching, Education majors complete a minimum of eight courses which are reflected in their Education GPA prior to student teaching. Participants in this study were required to maintain a 2.5 GPA in their Education courses, content major courses, and overall GPA. Due to changing standards and mandates from state and national accrediting agencies,
this requirement is changing to a minimum 2.75 GPA. English grade point averages at the time of admission typically reflect two to three completed courses. Prior to student teaching, most Secondary Education and English majors have completed their required thirty-six credits in English coursework.

The Principles of Learning and Teaching Praxis Exam (Grades 7-12) is comprised of seventy selected-response questions and four constructed-response questions. The five subcategories of questions are: i) Students and Learners, ii) Instructional Process, iii) Assessment, iv) Professional Development, Leadership, and Community, v) Analysis of Instructional Scenarios. Scores are out of a possible 200 points (Educational Testing Service, 2017, p.5). The 2015-2016 Understanding Your Praxis score report showed there were 28,337 test takers in the United States with an average performance range between 167-183, a median score of 175, a standard error of measurement of 5.7, and standard error for scoring of 2.5 (Educational Testing Service, 2016, p. 6). The minimum required for certification in Rhode Island is 157 (Educational Testing Service, 2017, Rhode Island Test Requirements).

The English Language Arts Content Knowledge Exam is comprised of 130 selected-response questions and two constructed-response questions. The three subcategories of scores are: i) Reading, ii) Language Use and Vocabulary, and iii) Writing, Speaking, and Listening. Scores are out of a possible 200 points (Educational Testing Service, 2017, p. 5). The 2015-2016 Understanding Your Praxis score report showed there were 2,812 test takers
with an average performance range between 167-181, a median score of 174, a standard error of measurement of 4.8, and a standard error of scoring of 2.3 (Educational Testing Service, 2016, p. 4). The minimum required score for certification in Rhode Island is 168 (Educational Testing Service, 2017, Rhode Island Test Requirements).

Student teaching evaluations are scored in multiple ways. Each candidate is observed by their cooperating teacher(s) and university supervisors three times each. For the purposes of this study, only the final evaluations from each evaluator was used. Each evaluator uses a common rubric to score student teachers out of a total of 145 points each. The questions evaluators answer on a one to five Likert scale (see Appendix B). For the analysis using student teaching as a sum score, teacher candidates who completed student teaching at the middle and high school level could earn a possible 435 points, including the university supervisor evaluation. For students who completed student teaching at a high school only, their high school cooperating teacher final evaluation was added to the university supervisor final evaluation for a possible total of 290 points.

Data Analysis

To analyze the quantitative data, the researcher used Statistical Package for Social Science (SPSS) software version 24 to run correlations and regression analysis. Correlational data analysis was conducted to determine relationships between the different independent variables (six pre-service benchmarks). Pearson $r$ correlation coefficients were calculated to determine the association among pre-service
benchmarks and student teaching performance at the specific school level (i.e. high school and middle school). Correlational data analysis was conducted to determine relationships between the pre-service benchmarks and student teaching performance (as the sum score and as individual variables).

The researcher ran a series of regression models to determine the predictability of pre-service benchmarks and student teaching performance. The data were analyzed through Pearson $r$ correlation coefficients, descriptive and frequency statistics. Data were also analyzed through Enter method, forward, backward, and step-wise regression models. Data analysis occurred through LSD, Tukey HSD, Bonferroni, Tamhane, Dunnett T3, and Games-Howell procedures for multiple comparisons to test for significant differences between group means.

This analysis helped researcher understand the extent to which each independent variable predicts student teaching performance. Correlational analysis aided in the researcher’s understanding of the relationships between pre-service benchmarks and student teaching performance. The results of this data analysis are discussed in the next chapter. Findings may be significant for teacher preparation programs.
Various combinations of variables were analyzed using SPSS to answer the research questions. The first approach was to separate student teaching variables into three scores—high school cooperating teacher final evaluations, middle school cooperating teacher final evaluations—and university supervisor final evaluations. Though this method did not acknowledge student teaching performance as one variable, it offered insight into the more specific relationships between pre-service benchmarks and student teaching performance at the individual level.

The researcher must address variables used in this study are not normally distributed (see Appendix O) and have a high level of skewness. Highly skewed variables might make regression models inappropriate to interpret in any meaningful way. Given skewness, the findings are hypothetical patterns that might be indicative of different kinds of relationships.

Is There a Relationship Between Pre-Service Benchmarks and Student Teaching Performance?

The data were input into SPSS to run a correlation model (Appendix I, Table 20) to determine if there were any relationships between pre-service benchmarks and student teaching performance, considered as three separate variables (high school cooperating teacher’s final evaluation scores, middle school cooperating teacher’s final evaluation scores, and university supervisor’s final evaluation scores).
Correlational analysis showed multiple significant relationships among the pre-service benchmarks. Descriptive statistics were run to provide further insight into the performance of this program’s teacher candidates (see Appendix H, Table 19). Frequency statistics were run to determine the number of participants per cohort (see Appendix A, Table 1).

*Pre-Service Benchmarks*

Education GPA at admission and English GPA at admission correlated \((r = .486, p = .000)\). Education GPA at admission and Education GPA before student teaching correlated \((r = .520, p = .000)\). Education GPA at admission and English GPA before student teaching correlated \((r = .370, p = .006)\). Lastly, Education GPA at admission correlated \((r = .317, p = .021)\) with teacher candidates’ highest English Praxis content score. Education GPA did not significantly correlate with any student teaching performance variables.

English GPA and Education GPA at admission correlated \((r = .486, p = .000)\). English GPA at admission and Education GPA prior to student teaching correlated \((r = .520, p = .000)\). English GPA at admission significantly correlated with English GPA prior to student teaching \((r = .778, p = .000)\). English GPA at admission correlated with teacher candidates’ highest PLT score \((r = .539, p = .000)\) and with teacher candidates highest English Praxis content score \((r = .583, p = .000)\).

Education GPA prior to student teaching correlated with both Education and English GPA at admission \((r = .520, p = .000)\). Education GPA prior to student teaching significantly correlated with English GPA prior to student teaching \((r = .683, p = .000)\). Education GPA prior to student teaching correlated with teacher candidates’
highest PLT score \( (r = .362, p = .008) \). Lastly, Education GPA prior to student teaching correlated with teacher candidates’ highest English Praxis content score \( (r = .362, p = .008) \).

Teacher candidates’ highest Principles of Learning and Teaching (PLT) Praxis exam score correlated with Education GPA at admission \( (r = .539, p = .000) \). Teacher candidates’ highest PLT exam score correlated with Education GPA before student teaching \( (r = .362, p = .008) \). Teacher candidates’ highest PLT exam score correlated with English GPA prior to student teaching \( (r = .584, p = .000) \). Teacher candidates’ highest PLT exam score significantly correlated with highest English Praxis content score \( (r = .625, p = .000) \).

Teacher candidates’ highest English Praxis score correlated with Education GPA at admission \( (r = .317, p = .021) \), English GPA at admission \( (r = .583, p = .000) \), Education GPA prior to student teaching \( (r = .362, p = .008) \), English GPA prior to student teaching \( (r = .616, p = .000) \), and with PLT scores \( (r = .625, p = .000) \).

Though Education GPA at admission and prior to student teaching had a significant relationship, Education GPA at admission did not have a strong relationship with PLT scores. However, Education GPA before student teaching did have a significant relationship with PLT scores (see Appendix J, Table 22).

English GPA at admission had a strong relationship with English GPA prior to student teaching and a significant relationship with English Praxis scores. English GPA prior to student teaching has a stronger relationship with English Praxis scores than English GPA at admission (see Appendix K, Table 24).
High school cooperating teacher final evaluations had a strong relationship with middle school cooperating teacher final evaluations and university supervisor final evaluations. The strongest relationship was between high school and middle school cooperating teacher final evaluations (see Appendix L, Table 26).

Correlational Analysis with Student Teaching Performance as Three Separate Variables

Correlational analysis revealed none of the pre-service benchmarks had a significant relationship with student teaching performance when considered as three separate variables (high school cooperating teacher final evaluation, middle school cooperating teacher final evaluation, and university supervisor final evaluation). However, significant relationships were found among the student teaching performance variables.

High school cooperating teacher final evaluations were correlated with middle school cooperating teacher final evaluations ($r = .443, p = .002$) and with university supervisor final evaluations ($r = .391, p = .004$).

Middle school cooperating teacher final evaluations were correlated with high school cooperating teacher final evaluations ($r = .443, p = .002$) and with university supervisor final evaluations ($r = .417, p = .004$).

University supervisor evaluations were correlated with high school cooperating teacher final evaluations ($r = .391, p = .004$) and with middle school cooperating teacher final evaluations ($r = .417, p = .004$).

Correlational Analysis with Student Teaching Performance as a Sum Score
To determine if there were any relationships between pre-service benchmarks and student teaching performance as a sum score, a correlational analysis was run. Since the six pre-service benchmarks remained the same in this analysis, the significant correlations between them are reflected above. However, correlational analysis showed there were no significant relationships between pre-service benchmarks and student teaching performance as a sum score (see Appendix M, Table 27).

**To What Extent do the Pre-Service Benchmarks Predict Student Teaching Performance?**

A series of regression models were run to determine the predictability of pre-service benchmarks and student teaching performance. The Enter Method was used to input all independent variables and then one dependent variable. The Enter Method was used multiple times to create a few different reports. First, the six pre-service benchmarks as the independent variables and high school cooperating teacher final evaluation as the dependent variable (see Appendix D, Table 4). Results showed pre-service benchmarks accounted for two percent of the variance in student teaching performance at the high school level. Second, the six pre-service benchmarks were entered into the model as the independent variables and middle school cooperating teacher final evaluation as the dependent variable, when applicable since not every teacher candidate completes the middle level student teaching experience (see Appendix E, Table 4). Results from this analysis found pre-service benchmarks accounted for fifteen percent of the variance in student teaching performance at the middle school level. Third, the six pre-service benchmarks were entered into the
model as the independent variables and university supervisor final evaluation as the dependent variable (see Appendix F). Results from this analysis accounted for nine percent of the variance in student teaching performance as evaluated by university supervisors (see Appendix F, Table 5).

Enter Method was used with the six pre-service benchmarks as the independent variables and the sum score of the evaluations as the dependent variable (see Appendix G). The Enter Method models showed the pre-service benchmarks used in this study were not statistically significant predictors of student teaching performance. The results of this method accounted for eight percent of variance (see Appendix G, Table 16).

For this particular test, forward, stepwise, and backward regression models were also attempted. SPSS would not produce a model for forward regression because the results were not statistically significant. Similarly, SPSS would not produce a model using the stepwise method. The researcher also ran a backward regression, which did not produce a model to determine the predictability of pre-service benchmarks and student teaching performance.

Interestingly, when SPSS produced the backward regression model and removed English GPA before student teaching, the variance did not change at all. Furthermore, when SPSS removed variables there was no change in the r2 value. Stepwise selection method was attempted but SPSS did not produce a model.

Enter method was used to determine if Education GPA at admission and prior to student teaching were predictive of Principles of Learning and Teaching (PLT) Praxis exam scores. Results showed Education grade point averages accounted for
thirteen percent of variance in PLT scores (see Appendix N, Table 29). The Education GPA at admission was not a significant predictor ($p = .968$). However, Education GPA prior to student teaching was a significant predictor of PLT exam scores ($p = .024$) (see Appendix N, Table 31).

Enter method was used to determine if English GPA at admission and prior to student teaching were predictive of English content Praxis exam scores. Results showed English GPA accounted for forty percent of the variance in English content Praxis exam scores (see Appendix N, Table 33). The English GPA at admission was not a significant predictor ($p = .137$) but the English GPA prior to student teaching was ($p = .021$)(see Appendix N, Table 35).
CONCLUSION

In the educational era of accountability, it is now more important than ever for teacher preparation programs to look within themselves to determine if the requirements students must meet are necessary to prepare for successful student teaching experiences and beyond. The expectations teacher candidates must meet in order to continue through their program should prepare them for successful student teaching. Efforts to increase teacher quality and preparedness have focused on increasing admission and graduation requirements for teacher candidates (Hall & West, 2011, p.145). While outside pressure for raising standards continues, it is appropriate to turn the lens inward to teacher preparation programs. However, it is important to keep existing research in mind while reviewing programs. A study by Ferguson and Womack (1993) indicates teacher preparation program improvements “will not be achieved by raising requirements beyond the existing floor of quality point average (2.5 out of 4.0)” (p. 61). However, the Rhode Island Department of Education has raised GPA standards for undergraduate teacher preparation programs to 2.75 out of 4.0 and for graduate students a 3.0 out of 4.0 (RIDE, 2013).

This thesis was prepared to determine if there were relationships between pre-service benchmarks and student teaching performance and if pre-service benchmarks were predictive of student teaching performance.
Existing research shows mixed results in answering these research questions. A review of 123 studies by D’Agostino and Powers (2009) indicates standardized test scores did not strongly relate to teaching performance. Correlational analysis in this study found similar findings, as neither the PLT Praxis exam nor the English Language Arts Praxis exam had significant relationships with student teaching performance.

Ferguson and Womack (1993) and Guyton and Farokhi (1987) found education coursework to be a better predictor of teaching success than other benchmarks such as content area coursework and overall GPAs. Other research echoes the conclusion that education coursework has a positive effect on teaching performance (Ashton & Crocker, 1987; Darling-Hammond, 1991; Evertson, Hawley, & Zlotnik, 1985; Ferguson & Womack, 1993, p. 55). Ferguson and Womack (1993) found education coursework, of the variables they measured, to be the strongest predictors of teaching performance. Whereas the subject area GPA was not a significant predictor of teaching performance (p.60). Similar variables were used in this study and did not produce significant results to add to these findings regarding pre-service benchmarks and student teaching performance.

Hall and West (2011) found GPA and Praxis scores correlated significantly and positively with student teaching performance scores. The results of this study add to their findings as correlational analysis found significant relationships between education GPAs at admission and English Language Arts (ELA) Praxis scores, English GPAs at admission and both the PLT and ELA Praxis scores. Further, correlational analysis found both Education and English GPAs prior to student
teaching had significant relationships with the PLT and the ELA Praxis. While Hall and West’s (2011) multiple regression model consisting of Praxis scores and GPA variables explained sixteen percent of the variance in participants’ student teaching performance scores, this study found pre-service benchmarks explained eight percent of student teaching performance scores.

Though teacher licensure exam scores are among the most cited as having a positive relationship with teacher effectiveness, analysis in this study determined there were no significant relationships between licensure exams and student teaching performance. However, regression analysis did find Education GPAs prior to student teaching were significant predictors of PLT scores and accounted for thirteen percent of the variance in PLT scores \((p = .024)\). Regression analysis also found English GPAs prior to student teaching were significant predictors of English Language Arts content exam scores and accounted for forty percent of variance on the Praxis exam \((p = .021)\). These findings are logical since Education courses and English courses are designed to prepare students for their licensure exams.

Interestingly, admission GPAs in both Education and English were not significant predictors of later licensure exam scores. Therefore, the role of admission GPAs as gatekeepers preventing students from entering the major should be reconsidered by teacher preparation programs. These findings are consistent with research from Henry et al. (2013) who noted “new and better indicators of candidates’ strengths on entry and performance during the program will be needed to guide reform and continuous improvement of teacher preparation programs” (p. 440). Further, these test and GPA requirements may be contributing to the lack of diverse teaching candidates since Lee
(2002) has conducted research on racial, ethnic, and economic gaps in test performance and has shown that with the exception of Asian students, students of color and students in low socioeconomic households score worse on these tests than their White and economically advantaged peers.

Interestingly, this study found there was a stronger relationship between English GPA at admission and PLT scores \( (r = .539, p = .000) \) than Education GPA at admission and PLT scores \( (r = .193, p = .166) \). The strongest correlational relationship this study found was between English GPA the time of admission and English GPA before student teaching \( (r = .778, p = .000) \). These findings contradict the researcher’s hypothesis that there would be a stronger relationship between Education grade point averages and the Principles of Learning and Teaching Exam since the PLT exam assess students’ knowledge of educational theories, practices, etc.

The results of this study indicate the pre-service benchmarks collected at strategic points throughout the program are not significant predictors of student teaching performance. While significant relationships were found between the various pre-service benchmarks, there were no significant relationships between any pre-service benchmark and student teaching performance. While significant correlational relationships were found between student teaching performance as evaluated by the high school cooperating teacher, middle school cooperating teacher, and university supervisor, these student teaching performance variables had no significant relationship with any of the pre-service benchmarks. Henry et al. (2013) note current indicators of progress and performance do not predict later effectiveness. Thus, “new and better indicators of candidates’ strengths on entry and performance during the
program will be needed to guide reform and continuous improvement” of teacher preparation programs (p. 440).

The development of successful teachers is a central goal of a teacher preparation program. Looking within at student teaching performance is one way to help determine if programs are developing successful teachers. Grossman and Richert (1988) found prospective teachers cite education coursework and fieldwork as influential elements of their teacher preparation program. By understanding how teacher candidates are evaluated in schools by their cooperating teachers and university supervisors, teacher preparation programs can develop a sense of how their student teachers perform. These evaluations can offer critical insight from cooperating teachers or university supervisors can be used to review the preparedness of teacher candidates in general, or in specific key areas of development such as classroom management.

Research from Shulman (1986, 1987) on content-specific pedagogical knowledge and research from (Mishra & Koehler, 2006) on technological pedagogical content knowledge have been incorporated into the necessary skills student teachers must possess. The teacher preparation program in this study does not currently have an assessment for content-specific pedagogical knowledge or technological pedagogical content knowledge. Teacher preparation programs should consider the use of assessments on these areas to help ensure their teacher candidates are developed and able to perform. Correlational analysis in this study found significant relationships between teacher candidates’ performance as evaluated by their high school cooperating teacher, middle school cooperating teacher, and university supervisor.
Further research may provide valuable information for teacher preparation programs in this area.

Measures of professional dispositions, or the collections of behaviors, attitudes, and teaching qualities have been seen as critical components of teacher preparation programs (Flowers, 2006). Currently, the Council for the Accreditation of Educator Preparation, (CAEP, 2013) requires teacher preparation programs to assess their candidates’ content knowledge, pedagogical content knowledge, and pedagogical skills as well as professional knowledge, skills, and dispositions necessary to “advance the learning of all students” (p.1). Future research should determine if a valid and reliable dispositions assessment could be a significant predictor of student teaching performance.

Flexible program changes in these requirements may bring more passionate, capable, and diverse teacher candidates into the field. The findings may inspire teacher candidate programs to reflect on the value of some pre-service benchmarks in preparing teacher candidates for student teaching. Further research should determine if dispositions assessments are significant predictors of student teaching performance.

Future research should expand upon this study to include participants from other institutions to have a more representative sample. Research should interview current teachers, teacher candidates, and administrators to determine the essential knowledge, skills, and dispositions required for successful teaching performance.

Limitations

The researcher recognizes there are several limitations to this study. First, the convenience sampling from only one institution in the state and country is not
necessarily generalizable. The researcher attempted to address this concern by comparing data points to national averages, when possible. Another limitation of the study was the exclusion of other content areas (e.g. History/Social Studies, Mathematics, Sciences). The students of other disciplines have different cut scores for their Praxis content tests. Thus, the findings of this study may not be applicable to students of other content areas. Addressing such a concern was beyond the scope of this study, but future research should investigate pre-service benchmarks and successful student teaching for other content areas.

Highly skewed variables might make regression models inappropriate to interpret in any meaningful way. Readers should take caution in using the results of this study to guide reform. The student teaching evaluation rubrics may not be valid assessments since evaluators commonly rate students between three and five since giving a student a one or two pulls them from student teaching.

Further research should include: qualitative information addressing how educational stakeholders would reform programs, a longitudinal study about the effectiveness of a program’s student teachers throughout their career, the number of teacher program graduates who remain in the field after three, five, and seven years, and the relationship of pre-service benchmarks and teacher performance in non-traditional or alternative teacher licensure program. Also, further research should explore the use of dispositions assessments in teacher preparation programs. Further research should also explore the use of content pedagogical knowledge assessments and technological content pedagogical knowledge in teacher preparation programs.
APPENDICES

Appendix A

Table 1: Participants per Student Teaching Cohort

| Student Teaching Cohort Year | n  |
|------------------------------|----|
| 2013                         | 15 |
| 2014                         | 12 |
| 2015                         | 15 |
| 2016                         | 11 |
| N = 53                       |    |

Table 2: Pre-Service Benchmarks

| Education courses GPA: At time of admission into School of Education (typically 2 courses) | English courses GPA At time of admission into School of Education (typically 2-3 courses) | PLT Praxis II Scores: Overall score can range from 100-200 points |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Education courses GPA: Prior to student teaching semester (typically 8 courses)      | English courses GPA: Prior to student teaching semester (typically completed 36 required credits) | Subject Area Praxis Scores: Overall score can range from 100-200 points |
Appendix B

This appendix includes a completed example of the common rubric evaluators use to score student teaching performance. Identifying information has been removed.
### Standards

**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

especially used technology to tap into student interests.

### 1.2 USING A VARIETY OF INSTRUCTIONAL STRATEGIES AND RESOURCES TO RESPOND TO STUDENTS' DIVERSE NEEDS

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|-----------------------------|-----------------------|-----------------------|-----------------------------|
| Uses a few instructional strategies. Delivers instruction with available materials and resources. | Varies instruction to increase student participation. Selects | Elicits student participation through a variety of instructional strategies | Uses a repertoire of strategies and resources. Selects and differentiates | Uses extensive repertoire of strategies to meet students’ diverse needs |
| Standards |
|-----------|

**CRITERION SCORE:** 4.00

**1.3 FACILITATING LEARNING EXPERIENCES THAT PROMOTE AUTONOMY, INTERACTION, AND CHOICE**

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|-----------------------------|-----------------------|-----------------------|---------------------------|
| Directs learning experiences through whole group and individual work with possibilities for interaction and choice. | Varies learning experiences to include work in large groups and small groups, with student choice within learning activities. | Provides learning experiences utilizing individual and group structures to develop autonomy and group participation skills. Students make choices about and within their work. | Uses a variety of learning experiences to assist students in developing independent working skills and group participation skills. Supports student in making appropriate choices for learning. | Integrates a variety of challenging learning experiences that develop students’ independent learning, collaboration, and choice. |
### Standards

**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

- used student goal setting as a mechanism for promoting autonomy.

### 1.4 Engaging Students in Problem Solving, Critical Thinking, and Other Activities That Make Subject Matter Meaningful

#### 1. Little Evidence

Directs learning experiences and monitors student progress within a specific lesson. Assistance is provided as requested by students.

#### 2. Approaching the Standard

Provides some opportunities for students to monitor their own work and to reflect on progress and process.

#### 3. Meets the Standard

Supports students in developing skills needed to monitor their own learning. Students have opportunities to reflect on and discuss progress and process.

#### 4. Above the Standard

Structures learning activities that enable students to set goals and develop strategies for demonstrating, monitoring, and reflecting on progress and process.

#### 5. Well Above the Standard

Facilitates students to initiate learning goals and set criteria for demonstrating and evaluating work. Students reflect on progress/process as a regular part of learning experiences.
# 2.1 Creating a Physical Environment That Engages All Students

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|-----------------------------|-----------------------|-----------------------|---------------------------|
| Arranges room for teacher accessibility to or visibility of students. | Arranges and manages room for easy movement and access to resources. Room displays represent current topics of study. | Designs movement patterns and access to resources to promote individual and group engagement. Room displays are used in learning activities. | Designs and manages room and resources to accommodate students’ needs and involvement in learning. Displays are integral to learning activities. | Uses total physical environment as a resource to promote individual and group learning. Students are able to contribute to the changing design of the environment. |

## Standards

**CRITERION SCORE:**

4.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Often focused on and reflective of the classroom environment

---

# 2.2 Establishing a Climate That Promotes Fairness and Respect

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|-----------------------------|-----------------------|-----------------------|---------------------------|
| Establishes rapport with individual students. | Builds caring, friendly rapport with most | Promotes caring and respectful interactions. | Maintains caring, respectful, and equitable | Fosters a safe, inclusive, and equitable learning |
**Acknowledges some incidents of unfairness and disrespect.**

- Models equitable and respectful relationships.
- Has some strategies to respond to unfairness and disrespect.

**Responds to incidents of unfairness and disrespect equitably.**

- Encourages students to respect differences.
- Responds to students’ relationships with students.
- Supports students in developing skills to respond to inequity and disrespect.

**Community. Students participate in maintaining a climate of equity, caring and respect and may initiate creative solutions to conflicts.**

**Standards**

**CRITERION SCORE:**

5.00

### 2.3 PROMOTING SOCIAL DEVELOPMENT AND GROUP RESPONSIBILITY

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|-----------------------------|-----------------------|-----------------------|---------------------------|
| Encourages student responsibility for self. Creates opportunities for individual students to have classroom responsibilities. | Uses some strategies and activities to develop students’ individual responsibility and recognition of others’ rights and needs. Students share in classroom responsibilities. | Promotes positive student interactions as members of large and small groups. Provides some opportunities for student leadership within the classroom. | Engages students in individual and group work that promotes responsibility to the classroom community. Supports students to take initiative in classroom leadership. | Facilitates an environment in which students take initiative socially and academically. Promotes and supports student leadership beyond the classroom. |

**Standards**

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### 2.4 Establishing and Maintaining Standards for Student Behavior

| 1. Little Evidence | 2. Approaching the Standard | 3. Meets the Standard | 4. Above the Standard | 5. Well Above the Standard |
|--------------------|------------------------------|----------------------|-----------------------|--------------------------|
| Communicates rules and consequences. Responds to disruptive behavior. Focuses on presenting lessons. | Establishes expectations and consequences for student behavior. Responds appropriately to disruptive behavior and promotes some positive behaviors. | Uses strategies that prevent or lessen disruptive behavior and reinforce expectations for behavior. Monitors behavior while teaching and during student work time. | Equitably reinforces expectations and consequences and supports students to monitor their own behavior and each other's in a respectful way. | Facilitates a positive environment in which students are guided to take a strong role in maintaining and monitoring behavior. |

### 2.5 Planning and Implementing Classroom Procedures and Routines That Support Student Learning

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(taskstream)
### 1. LITTLE EVIDENCE

Establishes some procedures to support student learning. Students are aware of the procedures.

### 2. APPROACHING THE STANDARD

Develops and guides students to learn routines and procedures for most activities.

### 3. MEETS THE STANDARD

Identifies, supports, and monitors students in following routines and procedures that are appropriate and efficient for the learning activities.

### 4. ABOVE THE STANDARD

Uses strategies to assist students in developing and maintaining equitable routines and procedures. Students show ownership of routines and procedures.

### 5. WELL ABOVE THE STANDARD

Assists all students in developing and internalizing equitable routines and procedures. Students show ownership of routines and procedures.

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### CRITERION SCORE:

5.00

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### 2.6 USING INSTRUCTIONAL TIME EFFECTIVELY

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|-----------------------|-----------------------|--------------------------|
| Pacing reflects too much or too little time for learning activities, classroom business, and transitions. | Provides time for students to complete learning activities. Develops some routines for classroom business and most | Provides adequate time for presentation and for completion of learning activities. Paces instruction | Paces instruction to include ongoing review and closure of lessons to connect them to future lessons. | Presents, adjusts, and facilitates instruction and daily activities so all students have time for learning, are continually... |
transitions are timely. Uses strategies to pace and adjust instruction to ensure continual engagement. and classroom business to maintain engagement. Uses transitions to support engagement of all students. Classroom business and transitions are efficient and integrated into learning activities. engaged, and have opportunities for reflection and assessment. Supports students to self-monitor time on task.

**Standards**

**CRITERION SCORE:**
5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

- used every moment of class
- could to productively engage students.

### 3.1 DEMONSTRATING KNOWLEDGE OF SUBJECT MATTER CONTENT AND STUDENT DEVELOPMENT

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|----------------------|-----------------------|----------------------------|
| Has a basic knowledge of subject matter and student development. Promotes an understanding of key concepts. | Uses knowledge of subject matter to identify key concepts and associated skills. | Communicates key concepts, skills, and themes in an accurate, clear, and coherent manner. Builds on instruction with students’ cognitive and linguistic abilities in | Uses expanded knowledge of subject matter to support student understanding of key concepts, themes, multiple perspectives, and | Flexibly uses comprehensive knowledge of subject matter and student development to ensure that all students understand key concepts, themes, multiple perspectives, and |
### Standards

**CRITERION SCORE:**
5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**
- Used content-specific vocabulary and contemporary examples to build understanding.

| 3.2 ORGANIZING CURRICULUM TO SUPPORT STUDENT UNDERSTANDING OF SUBJECT MATTER |
|---|---|---|---|---|
| **1. LITTLE EVIDENCE** | **2. APPROACHING THE STANDARD** | **3. MEETS THE STANDARD** | **4. ABOVE THE STANDARD** | **5. WELL ABOVE THE STANDARD** |
| Demonstrates some knowledge of curriculum to support student understanding. | Uses knowledge of subject matter to promote students’ understanding of key concepts, skills, and standards taught. May connect key concepts to standards and frameworks. | Identifies key concepts, skills, and units/themes to facilitate student understanding and reflect standards and frameworks. | Organizes and sequences subject matter to coordinate core curriculum and content standards within and across subject matter as appropriate. | Designs and adapts subject matter to demonstrate a consistent in-depth student understanding of content and relationships among various concepts and themes. Content standards are... |
**Standards**

**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Extensive scaffolding.

### 3.3 INTERRELATING IDEAS AND INFORMATION WITHIN AND ACROSS SUBJECT MATTER AREAS

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|------------------------------|-----------------------|----------------------|---------------------------|
| Focuses on core curriculum and skills. Attempts to relate content to prior lessons within the subject matter. | Identifies key concepts and skills in core curriculum and standards and connects lessons to previous learning. | Connects key concepts, skills, and themes within subject matter to the standards. Builds on prior lessons and students’ backgrounds. | Integrates key concepts, skills and underlying themes within and across curriculum to support standards. Capitalizes on opportunities to make connections while teaching. | Connects key concepts and underlying themes within and across the curriculum to extend in-depth learning for all students. Supports students’ application of cross-curricular learning. |

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**Standards**

**CRITERION SCORE:**

4.00
## 3.4 Developing Student Understanding through Instructional Strategies That Are Appropriate to the Subject Matter

| 1. Little Evidence | 2. Approaching the Standard | 3. Meets the Standard | 4. Above the Standard | 5. Well Above the Standard |
|---------------------|----------------------------|----------------------|----------------------|---------------------------|
| May use a few instructional strategies to make the content accessible to students. | Matches one or more appropriate strategies to subject matter to effectively communicate concepts. | Matches strategies appropriate to subject matter to encourage student understanding and critical thinking. Strategies utilize students’ interests and backgrounds. | Develops and uses multiple strategies that challenge all students. Assists students to individually construct their own knowledge and think critically. | Uses a repertoire of instructional strategies that are appropriate to subject matter. Utilizes strategies that challenge and support all students to independently apply and think critically about the subject matter. |

### Standards

**Criterion Score:**

5.00
| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD |
|---------------------|-----------------------------|-------------------|-----------------------|
| Uses available instructional materials, resources, and technologies for specific lessons to support student learning. | Uses instructional materials, resources, and technologies to present concepts and skills. Some materials and resources reflect students’ diversity. Develops some systems to provide equitable access to resources. | Selects and utilizes appropriate relevant instructional materials, resources, and technologies to present concepts and skills. Materials reflect linguistic diversity of students. Resources are made available to all students. | Selects, adapts, and creates a range of relevant instructional materials, resources, and technologies to enrich learning, to reflect linguistic and cultural diversity of students, and to provide for equal access. |

**Standards**

**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Use of phones, white board, computer, etc.

4.1 DRAWING ON AND VALUING STUDENTS’ BACKGROUND, INTERESTS, AND DEVELOPMENTAL LEARNING NEEDS
| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|----------------------------|----------------------|---------------------|--------------------------|
| Uses available materials and resources for academic lessons with some attention to students' interests and learning needs. | Develops and gathers materials to supplement available resources. Most lessons acknowledge students' prior knowledge, interests, and learning needs. | Develops lessons that incorporate students' prior knowledge, interests, instructional and linguistic learning needs. | Uses a wide range of materials to access and build upon students' prior knowledge, interests, instructional and linguistic needs, to extend student understanding. | Designs instruction to build on students' prior knowledge, instructional needs, linguistic needs and diversity to challenge all students. |

**Standards**

**CRITERION SCORE:**

5.00

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**4.2 ESTABLISHING AND ARTICULATING GOALS FOR STUDENT LEARNING**

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|----------------------------|----------------------|---------------------|--------------------------|
| Goals for lessons may be identified for students. Activities for lessons are explained. | Communicates expectations for student learning in most lessons. | Articulates and links goals to instructional activities. Maintains high expectations when setting goals for students. | Ensures that students understand short- and long-term learning goals. Goals reflect high expectations and challenge | Articulates short- and long-term goals with high expectations for learning. Designs activities so that students |
## Standards

### CRITERION SCORE:
5.00

### 4.3 DEVELOPING AND SEQUENCING INSTRUCTIONAL ACTIVITIES AND MATERIALS FOR STUDENT LEARNING

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|----------------------|----------------------|---------------------------|
| Develops lessons to address a particular concept or skill utilizing available resources. | Develops most concepts and skills through a series of lessons that connect and consider student linguistic and instructional needs. | Plans appropriately sequenced instruction and use of materials to promote student understanding of basic concepts and skills and considers linguistic and instructional needs. | Develops and sequences lessons appropriate to subject matter complexity and interrelatedness to ensure student learning. | Sequences instruction to help students synthesize and apply new knowledge and make connections within and across subject matter areas. |

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### 4.4 Designing Short-Term and Long-Term Plans to Foster Student Learning

| Little Evidence | Approaching the Standard | Meets the Standard | Above the Standard | Well Above the Standard |
|-----------------|--------------------------|--------------------|--------------------|-------------------------|
| Plans for daily lessons and activities based on available materials, curriculum outlines, and student content standards. | Plans for daily and weekly lessons with attention to unit/short-term goals and student content standards. | Develops short-term and long-term plans that organize and link goals with learning activities and student content standards. | Designs and sequences short-and long-term plans appropriate to the content. Plans integrate goals, student content standards, and learning activities. |

### 4.5 Modifying Instructional Plans to Adjust for Student Needs

| Little Evidence | Approaching the Standard | Meets the Standard | Above the Standard | Well Above the Standard |
|-----------------|--------------------------|--------------------|--------------------|-------------------------|
| Follows lessons as planned. | Adjust lessons based on informal assessment of student understanding and performance from previous lesson, having taken note of student confusions. | Adjusts plans in advance to accommodate levels of ability and interests of most students. Makes modifications during lessons to address confusions and individual student performance. | Uses assessments to inform modifications of lessons in advance. Throughout the learning activity, assessments of student understanding are used to influence changes in instruction. | Uses a wide range of assessments to inform modifications of lessons in advance. Makes appropriate modifications for students during lessons and supports students in monitoring and communicating their own understanding. |

**Standards**

**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Made changes based on student performance and reflections.

### 5.1 ESTABLISHING AND COMMUNICATING LEARNING GOALS FOR ALL STUDENTS

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|----------------------------|----------------------|-----------------------|---------------------------|
| Uses available textbooks, resources, and curriculum guidelines to develop learning goals. Goals are identified. Learning goals for lessons utilizing student content standards. | Articulates goals based on student content standards. Clearly communicates learning goals. | Establishes clear and appropriate goals based on student content standards, with integrated learning goals into all learning activities. Establishes, reviews, and revises. |
communicated to students and families. Consideration of students’ learning needs. Involves students and families in developing individual goals to support learning.

### Standards

**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Up front transparency by providing unit plan to students.

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### 5.2 Collecting and Using Multiple Sources of Information to Assess Student Learning

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|---------------------|-----------------------------|----------------------|-----------------------|---------------------------|
| Uses one or two sources of information to assess student learning and monitor student progress. | Uses several assessments to monitor student progress. | Develops strategies to use assessment tools for monitoring student progress and informing instruction. | Uses a variety of assessment tools. Collects, selects, and reflects upon evidence to guide short- and long-term plans and support student learning. | Embeds a wide range of ongoing assessments in instructional activities to provide consistent guidance for planning and instruction. |
### 5.3 INVOLVING AND GUIDING ALL STUDENTS IN ASSESSING THEIR OWN LEARNING

| Standards | 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|-----------|--------------------|-----------------------------|----------------------|-----------------------|----------------------------|
| CRITERION SCORE: | Checks and monitors work in progress. Communicates student progress through school mandated procedures. | Provides students with feedback on work in progress, as well as completed tasks. Some student involvement in correcting work. | Presents guidelines for assessment to students. Assists students in reflecting on and assessing their own work. | Integrates student self-assessment and reflection into the learning activities. Students engage in some peer assessment of work against criteria. | Engages all students in self-and peer assessment and in monitoring their progress and goals over time. |

### Standards

| CRITERION SCORE: | 5.00 |
|------------------|------|

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Regular use of self-reflection based on standards.
| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|----------------------------|----------------------|-----------------------|-----------------------------|
| Administers required assessments. Recognizes student confusion and re-teaches material primarily using the same technique. | Use information from some assessments to plan learning activities. Checks for understanding with a few students while teaching and addresses confusions. | Uses formal and informal assessments to plan lessons. Regularly checks for understanding from a wide variety of students to identify student needs and modify instruction. | Includes assessments as a regular part of instruction to plan and revise lessons. Identifies student understanding during the lesson using a variety of methods and adjusts teaching to meet student needs. | Uses a wide range of assessments to guide planning and make adjustments to teaching. Embeds broad-based checking for understanding in instruction and is able to modify and redesign lessons as needed. |

**CRITERION SCORE:**

5.00

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**5.5 COMMUNICATING WITH STUDENTS, FAMILIES, AND OTHER AUDIENCES ABOUT STUDENT PROGRESS**

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|----------------------------|----------------------|-----------------------|-----------------------------|
| With cooperating teacher | With cooperating teacher | With cooperating teacher | With cooperating teacher | With cooperating teacher |
provides students and families with information about their progress through school mandated procedures.

provides students with information about their current progress as they engage in learning activities. Families and support personnel are contacted as needed.

provides students with information about their current progress and how to improve their work. Establishes communication with families and support personnel.

engages students, families, and support personnel in regular discussions regarding student progress and improvement plans. Ongoing information is provided from a variety of sources for students, families, and support personnel.

involves students, families, and support personnel as partners in the assessment process. Provides comprehensive information about students’ progress and improvement plans to students, families, and support personnel.

## Standards

**CRITERION SCORE:**

4.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Provided student feedback regularly.

### 6.1 Reflecting on Teaching Practice and Planning Professional Development

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|----------------------|-----------------------|---------------------------|
| Reflects on elements of teaching (e.g., pacing, instruction) | Reflects on instructional successes and dilemmas | Reflects on the relationship of teaching | Analyzes and reflects on teaching and learning based on student needs | Integrates analysis and reflection into daily practice |
procedures, discipline, movement, materials, etc.).

Plans professional development to add to instructional strategies and knowledge of student learning.

practice and student learning. Plans professional development based on reflections.

on evidence gathered regularly. Plans professional development based on reflections and other resources.

Based on a wide variety of evidence in relationship to professional growth and student learning. Plans draw on a wide variety of resources to expand knowledge.

**Standards**

**CRITERION SCORE:**

5.00

6.2 ESTABLISHING PROFESSIONAL GOALS AND PURSUING OPPORTUNITIES TO GROW PROFESSIONALLY

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|-----------------------|-----------------------|---------------------------|
| Does not develop goals through required processes. Attends required in-service trainings. | Develops goals through required processes. Attends required in-service trainings. | Sets goals considering self-assessment and other feedback. Expands knowledge and skills through available professional development opportunities. | Sets short-term professional goals based on self-assessment of effectiveness, student learning, and feedback. Seeks out opportunities to realize professional growth and feedback from a variety of sources. Actively engages in and | Sets and modifies short- and long-term goals considering self-assessment and feedback from a variety of sources.
6.3 WORKING WITH COLLEAGUES TO IMPROVE PROFESSIONAL PRACTICE

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|----------------------|----------------------|---------------------------|
| Establishes a positive working relationship with few to no colleagues. Interacts infrequently with colleagues to gather resources. Rarely seeks out trusted colleagues to consider solutions to problems with students. | Establishes a positive working relationship with a few colleagues. Interacts with colleagues to gather resources. Seeks out trusted colleagues to consider solutions to problems with students. | Expands positive working relationships with colleagues and support staff. Collaborates to plan curriculum, coordinate resources, and solve problems. | Works constructively with colleagues and support staff to improve student learning and reflect on practice. | Engages staff in dialogue and reflection to support student learning and teacher growth in responsive and appropriate ways. |
### Standards

**CRITERION SCORE:**

4.00

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#### 6.4 BALANCING PROFESSIONAL RESPONSIBILITIES AND MAINTAINING MOTIVATION

| 1. LITTLE EVIDENCE | 2. APPROACHING THE STANDARD | 3. MEETS THE STANDARD | 4. ABOVE THE STANDARD | 5. WELL ABOVE THE STANDARD |
|--------------------|-----------------------------|----------------------|-----------------------|---------------------------|
| Has a positive attitude in the classroom. Develops an understanding of professional responsibilities. | Maintains positive attitude, demonstrates understanding of professional responsibilities, and seeks support to balance professional responsibilities with personal needs. | Maintains a positive attitude through the year, demonstrates professional integrity, and balances professional responsibility with personal needs. | Maintains motivation and commitment to all students, demonstrates professional integrity, and challenges self intellectually and creatively. | Maintains motivation and commitment to all students and the professional community, demonstrates professional integrity, and challenges self intellectually and creatively throughout career. |

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**CRITERION SCORE:**

5.00

**COMMENTS ON THIS CRITERION (OPTIONAL):**

Demonstrated personal commitment to the growth of students as well as her own growth each and every day.
December 7, 2016

Dear Alex,

Thank you for your letter requesting access to data collected by the School of Education. You have done well to explain how you will protect the anonymity of former students. As the director of the School of Education, I hereby grant you permission to this data.

Sincerely,

[Signature]

Dr. David Byrd
Appendix D

Table 3: Variables Entered/Removed\(^a\) with HS CT Evaluation as Dependent Variable

### Variables Entered/Removed\(^a\)

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
| 1     | Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching\(^b\) | . | Enter |

\(^a\) Dependent Variable: HS CT Final (145)

\(^b\) All requested variables entered.

Table 4: Model Summary Enter Method with HS CT Evaluation as Dependent Variable

### Variable

| Model Summary | Adjusted R Square | Std. Error of the Estimate |
|---------------|-------------------|----------------------------|
| Model | R | R Square | Square |  |
| 1 | .163\(^a\) | .026 | -.101 | 19.181 |

\(^a\) Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching

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**Table 5: ANOVA Enter Method with HS CT Evaluation as Dependent Variable**

ANOVA<sup>a</sup>

| Model      | Sum of Squares | df | Mean Square | F   | Sig.  |
|------------|----------------|----|-------------|-----|-------|
| 1 Regression | 460.084        | 6  | 76.681      | .208| .972<sup>b</sup> |
| Residual   | 16923.916      | 46 | 367.911     |     |       |
| Total      | 17384.000      | 52 |             |     |       |

a. Dependent Variable: HS CT Final (145)

b. Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching

**Table 6: Coefficients<sup>a</sup> Enter Method with HS CT Evaluation as Dependent Variable**

Coefficients<sup>a</sup>

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|------|
|       |                             |                           |   |      |
| 1     | (Constant)                  |                           |   |      |
|       | 61.897                      | 76.953                    | .804 | .425 |
| EDC GPA @ Admit | -1.568                     | 10.406                    | -.028 | -.151 | .881 |
| ENG GPA @ Admit | 3.919                      | 12.988                    | .077 | .302 | .764 |
| EDC GPA before Student teaching | 1.031                      | 13.234                    | .017 | .078 | .938 |
| ENG GPA before Student teaching | -6.692                     | 16.247                    | -.124 | -.412 | .682 |
| Highest PLT Praxis Score | .311                       | .393                      | .158 | .790 | .433 |
| Highest ENG Praxis Score | .083                       | .547                      | .032 | .152 | .880 |

a. Dependent Variable: HS CT Final (145)
Appendix E

Table 7: Variables Entered/Removed\textsuperscript{a} Enter Method with MS CT Evaluation as Dependent Variable

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
| 1     | Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching\textsuperscript{b} | . | Enter |

\textsuperscript{a} Dependent Variable: MS CT Final (145)

\textsuperscript{b} All requested variables entered.

Table 8: Model Summary Enter Method with MS CT Evaluation as Dependent Variable

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|---------------------------|
| 1     | .392\textsuperscript{a} | .153 | .023 | 17.4922 |

\textsuperscript{a} Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching
Table 9: ANOVA Enter Method with MS CT Evaluation as Dependent Variable

ANOVA<sup>a</sup>

| Model       | Sum of Squares | df  | Mean Square | F      | Sig.  |
|-------------|----------------|-----|-------------|--------|-------|
| Regression  | 2162.011       | 6   | 360.335     | 1.178  | .338<sup>b</sup> |
| Residual    | 11933.103      | 39  | 305.977     |        |       |
| Total       | 14095.114      | 45  |             |        |       |

<sup>a</sup> Dependent Variable: MS CT Final (145)

<sup>b</sup> Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching

Table 10: Coefficients<sup>a</sup> Enter Method with MS CT Evaluation as Dependent Variable

Coefficients<sup>a</sup>

| Model       | Unstandardized Coefficients | Standardized Coefficients | t     | Sig.  |
|-------------|-----------------------------|---------------------------|-------|-------|
|             | B                           | Std. Error                | Beta  |       |       |
| 1 (Constant)| 58.005                      | 71.344                    | .813  | .421  |
| EDC GPA at  | -.102                       | 10.173                    | -.002 | -.010 | .992  |
| Admission   |                             |                           |       |       |
| ENG GPA at  | 8.324                       | 13.602                    | .157  | .612  | .544  |
| Admission   |                             |                           |       |       |
| EDC GPA     | 19.554                      | 13.519                    | .310  | 1.446 | .156  |
| before Student teaching |         |                           |       |       |
| ENG GPA     | -13.525                     | 16.869                    | -.238 | -.802 | .428  |
| before Student teaching |       |                           |       |       |
| Highest PLT | .662                        | .403                      | .365  | 1.644 | .108  |
| Praxis Score|                             |                           |       |       |
| Highest ENG | -.627                       | .533                      | -.251 | -1.175| .247  |
| Praxis Score|                             |                           |       |       |

<sup>a</sup> Dependent Variable: MS CT Final (145)
Appendix F

Table 11: Variables Entered/Removed* Enter Method with US Evaluation as Dependent Variable

| Variables Entered/Removed* | Variables Entered | Variables Removed | Method |
|----------------------------|-------------------|-------------------|--------|
| 1                          | Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching |           | Enter |

a. Dependent Variable: US Final Eval (145)
b. All requested variables entered.

Table 12: Model Summary Enter Method with US Evaluation as Dependent Variable

Model Summary

| Model | R   | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|----------|-------------------|---------------------------|
| 1     | .309a | .096     | -.022             | 16.6972                   |

a. Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching
### Table 13: ANOVA Enter Method with US Evaluation as Dependent Variable

**ANOVA**

| Model   | Sum of Squares | df | Mean Square | F     | Sig.  |
|---------|----------------|----|-------------|-------|-------|
| Regression | 1357.834        | 6  | 226.306     | .812  | .566  |
| Residual   | 12824.684       | 46 | 278.797     |       |       |
| Total      | 14182.519       | 52 |             |       |       |

a. Dependent Variable: US Final Eval (145)
b. Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching

### Table 14: Coefficients Enter Method with US Evaluation as Dependent Variable

**Coefficients**

| Model   | Unstandardized Coefficients | Standardized Coefficients | t      | Sig.  |
|---------|----------------------------|---------------------------|--------|-------|
| (Constant) | 25.425                     |                           | .380  | .706  |
| EDC GPA at Admission | 6.156                      | .122                      | .680  | .500  |
| ENG GPA at Admission    | -2.134                     | -.046                     | -.189 | .851  |
| EDC GPA before Student teaching | 4.660                     | .087                      | .405  | .688  |
| ENG GPA before Student teaching | -7.071                     | -.145                     | -.500 | .619  |
| Highest PLT Praxis Score | .614                       | .345                      | 1.79  | .079  |
| Highest ENG Praxis Score | -.103                      | -.043                     | -.216 | .830  |

a. Dependent Variable: US Final Eval (145)
Appendix G

Table 15: Variables Entered/Removed* Enter Method with Sum Score of Evaluations as Dependent Variable

Variables Entered/Removed*

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
| 1     | Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching | . | Enter |

a. Dependent Variable: Sum Score

b. All requested variables entered.

Table 16: Model Summary Enter Method with Sum Score of Evaluations as Dependent Variable

Model Summary

| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|---------------------------|
| 1     | .288* | .083     | -.037             | 73.3704                   |

a. Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching
Table 17: ANOVA Enter Method with Sum Score of Evaluations as Dependent Variable

| Model   | Sum of Squares   | df  | Mean Square | F    | Sig. |
|---------|------------------|-----|-------------|------|------|
| 1       | Regression       | 22420.351 | 6 | 3736.725 | .694 | .655b |
|         | Residual         | 247628.130 | 46 | 5383.220 |     |     |
|         | Total            | 270048.481 | 52 |     |     |      |

a. Dependent Variable: Sum Score
b. Predictors: (Constant), Highest ENG Praxis Score, EDC GPA at Admission, EDC GPA before Student teaching, Highest PLT Praxis Score, ENG GPA at Admission, ENG GPA before Student teaching

Table 18: Coefficientsa Enter Method with Sum Score of Evaluations as Dependent Variable

| Model          | Unstandardized Coefficients | Standardized Coefficients | t     | Sig.  |
|----------------|----------------------------|---------------------------|-------|-------|
| 1 (Constant)   | -59.415                    | -.202                     | .841  |       |
| EDC GPA at     | -22.362                    | -.102                     | .562  | .577  |
| Admission      |                            |                           |       |       |
| ENG GPA at     | 23.084                     | .115                      | .465  | .644  |
| Admission      |                            |                           |       |       |
| EDC GPA before | 27.738                     | .118                      | .548  | .586  |
| Student teaching |                          |                           |       |       |
| ENG GPA before | -2.476                     | -.012                     | .040  | .968  |
| Student teaching |                         |                           |       |       |
| Highest PLT    | .958                       | .123                      | .637  | .527  |
| Praxis Score   |                            |                           |       |       |
| Highest ENG    | .676                       | .065                      | .323  | .748  |
| Praxis Score   |                            |                           |       |       |

a. Dependent Variable: Sum Score
### Appendix H

**Table 19: Descriptive Statistics for Each Variable**

| Descriptive Statistics                          | N   | Minimum | Maximum | Mean  | Std. Deviation |
|------------------------------------------------|-----|---------|---------|-------|----------------|
| EDC GPA at Admission                            | 53  | 2.65    | 4.00    | 3.7370| .32832         |
| ENG GPA at Admission                            | 53  | 2.72    | 4.00    | 3.5457| .35969         |
| EDC GPA before Student teaching                | 53  | 2.64    | 4.00    | 3.7217| .30738         |
| ENG GPA before Student teaching                | 53  | 2.51    | 4.00    | 3.4789| .33771         |
| Highest PLT Praxis Score                       | 53  | 158     | 197     | 174.98| 9.283          |
| Highest ENG Praxis Score                       | 53  | 166     | 192     | 176.11| 6.963          |
| HS CT Final (145)                              | 53  | 84      | 145     | 119.50| 18.284         |
| MS CT Final (145)                              | 46  | 69.0    | 145.0   | 118.054| 17.6982        |
| US Final Eval (145)                            | 53  | 88.5    | 145.0   | 122.934| 16.5149        |
| Sum Score                                      | 53  | 195.0   | 427.0   | 320.019| 72.0641        |
| Valid N (listwise)                             | 46  |         |         |       |                |
### Appendix I

#### Table 20: Correlations between Pre-Service Benchmarks and Student Teaching Variables

|                    | EDC GPA @ Admit | ENG GPA @ Admit | EDC GPA @ before Student teaching | ENG GPA @ before Student teaching | PLT Score | ENG Praxis Score | HS CT Final (145) | MS CT Final (145) | US Final (145) |
|--------------------|-----------------|-----------------|----------------------------------|-----------------------------------|-----------|-------------------|-------------------|-------------------|----------------|
| **EDC GPA at**     |                 |                 |                                  |                                   |           |                   |                   |                   |                |
| Admission          | Pearson Correlation | 1               | .486**                          | .520**                            | .370**    | .193              | .317**            | .013              | .138            | .144           |
| Sig. (2-tailed)    | .000            | .000            | .006                            | .166                              | .021      | .926              | .361              | .303              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **ENG GPA at**     |                 |                 |                                  |                                   |           |                   |                   |                   |                |
| Admission          | Pearson Correlation | .486**          | 1                               | .520**                            | .778**    | .539**            | .583**            | .080              | .189            | .106           |
| Sig. (2-tailed)    | .000            | .000            | .000                            | .000                              | .000      | .571              | .208              | .449              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **EDC before**     |                 |                 |                                  |                                   |           |                   |                   |                   |                |
| Student teaching   | Pearson Correlation | .520**          | .520**                          | 1                                 | .683**    | .362**            | .362**            | .027              | .282            | .137           |
| Sig. (2-tailed)    | .000            | .000            | .000                            | .008                              | .008      | .848              | .057              | .329              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **ENG before**     |                 |                 |                                  |                                   |           |                   |                   |                   |                |
| Student teaching   | Pearson Correlation | .370**          | .778**                          | .683**                            | 1         | .584**            | .616**            | .049              | .173            | .099           |
| Sig. (2-tailed)    | .006            | .000            | .000                            | .000                              | .000      | .725              | .249              | .482              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **Highest PLT Praxis Score** |               |                 |                                  |                                   |           |                   |                   |                   |                |
| Pearson Correlation | .193            | .539**          | .362**                          | .584**                            | 1         | .625**            | .148              | .249              | .263           |
| Sig. (2-tailed)    | .166            | .000            | .008                            | .000                              | .000      | .291              | .095              | .057              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **Highest ENG Praxis Score** |               |                 |                                  |                                   |           |                   |                   |                   |                |
| Pearson Correlation | .317            | .583**          | .362**                          | .616**                            | .625**    | 1                 | .096              | .055              | .126           |
| Sig. (2-tailed)    | .021            | .000            | .008                            | .000                              | .000      | .492              | .718              | .367              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **HS CT Final (145)** |               |                 |                                  |                                   |           |                   |                   |                   |                |
| Pearson Correlation | .013            | .080            | .027                            | .049                              | .148      | .096              | 1                 | .443**            | .391**          |
| Sig. (2-tailed)    | .926            | .571            | .848                            | .725                              | .291      | .492              | .002              | .004              |                |
| N                  | 53              | 53              | 53                              | 53                                | 53        | 53                | 53                | 46                | 53             |
| **MS CT Final (145)** |               |                 |                                  |                                   |           |                   |                   |                   |                |
| Pearson Correlation | .138            | .189            | .282                            | .173                              | .249      | .055              | .443**            | 1                 | .417**          |
| Sig. (2-tailed)    | .361            | .208            | .057                            | .249                              | .095      | .718              | .002              | .004              |                |

**Notes:**
- **R** values are significant at the .05 level.
- **R** values are significant at the .01 level.
|                | N  | 46  | 46  | 46  | 46  | 46  | 46  | 46  | 46  |
|----------------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| US Final Eval  |    |     |     |     |     |     |     |     |     |
| Pearson Correlation | 0.144 | 0.106 | 0.137 | 0.099 | 0.263 | 0.126 | 0.391** | 0.417** | 1     |
| Sig. (2-tailed) |    |     |     |     |     |     |     |     |     |
|               | 0.303 | 0.449 | 0.329 | 0.482 | 0.057 | 0.367 | 0.004 | 0.004 |     |
| N             | 53 | 53  | 53  | 53  | 53  | 53  | 53  | 46  | 53  |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Appendix J

Table 21: Descriptive Statistics of Education Grade Point Averages and Principles of Learning and Teaching Praxis Scores

**Descriptive Statistics**

|                          | Mean   | Std. Deviation | N  |
|--------------------------|--------|----------------|----|
| EDC GPA at Admission     | 3.7370 | .32832         | 53 |
| EDC GPA before Student teaching | 3.7217 | .30738        | 53 |
| Highest PLT Praxis Score | 174.98 | 9.283          | 53 |

Table 22: Correlations between Education Grade Point Averages and Principles of Learning and Teaching Praxis Scores

**Correlations**

|                          | EDC GPA at Admission | EDC GPA before Student teaching | PLT Praxis Score |
|--------------------------|----------------------|-------------------------------|-----------------|
| EDC GPA at Admission     | Pearson Correlation  | .520**                        | .193            |
| Sig. (2-tailed)          | .000                 |                               |                 |
| N                        | 53                   | 53                            | 53              |
| EDC GPA before Student teaching | Pearson Correlation | .520**                        | .362**          |
| Sig. (2-tailed)          | .000                 |                               | .008            |
| N                        | 53                   | 53                            | 53              |
| PLT Praxis Score         | Pearson Correlation  | .193                          | 1               |
| Sig. (2-tailed)          | .166                 |                               | .008            |
| N                        | 53                   | 53                            | 53              |

**. Correlation is significant at the 0.01 level (2-tailed).
Appendix K

Table 23: Descriptive Statistics of English Grade Point Averages and English Language Arts Praxis Score

**Descriptive Statistics**

|                          | Mean   | Std. Deviation | N  |
|--------------------------|--------|----------------|----|
| ENG GPA at Admission     | 3.5457 | .35969         | 53 |
| ENG GPA before Student teaching | 3.4789 | .33771         | 53 |
| Highest ENG Praxis Score | 176.11 | 6.963          | 53 |

Table 24: Correlations between English Grade Point Averages and English Language Arts Praxis Score

**Correlations**

|                          | ENG GPA at Admission | ENG GPA before Student teaching | ENG Praxis Score |
|--------------------------|----------------------|--------------------------------|------------------|
| ENG GPA at Admission     | Pearson Correlation  | Sig. (2-tailed)                 | N                |
|                          | 1                    | .778**                         | .000             |
|                          |                      |                                 | 53               |
| ENG GPA before Student teaching | Pearson Correlation | Sig. (2-tailed)                 | N                |
|                          | .778**               | 1                              | .616**           |
|                          |                      |                                 | 53               |
| ENG Praxis Score         | Pearson Correlation  | Sig. (2-tailed)                 | N                |
|                          | .583**               | .616**                         | 1                |
|                          |                      |                                 | 53               |

**. Correlation is significant at the 0.01 level (2-tailed).**
## Appendix L

### Table 25: Descriptive Statistics of Student Teaching Variables

|                          | Mean | Std. Deviation | N  |
|--------------------------|------|----------------|----|
| HS CT Final (145)        | 119.50 | 18.284       | 53 |
| MS CT Final (145)        | 118.054 | 17.6982     | 46 |
| US Final Eval (145)      | 122.934 | 16.5149     | 53 |

### Table 26: Correlations of Student Teaching Variables

|                          | HS CT Final (145) | MS CT Final (145) | US Final Eval (145) |
|--------------------------|-------------------|-------------------|---------------------|
| HS CT Final (145)        | Pearson Correlation | .443**            | .391**              |
|                          | Sig. (2-tailed)   | .002              | .004                |
|                          | N                 | 53                | 46                  | 53                  |
| MS CT Final (145)        | Pearson Correlation | .443**            | .417**              |
|                          | Sig. (2-tailed)   | .002              | .004                |
|                          | N                 | 46                | 46                  | 53                  |
| US Final Eval (145)      | Pearson Correlation | .391**            | .417**              |
|                          | Sig. (2-tailed)   | .004              | .004                |
|                          | N                 | 53                | 46                  | 53                  |

**. Correlation is significant at the 0.01 level (2-tailed).
### Appendix M

#### Table 27: Correlations with Sum Score of Evaluations

|                  | EDC GPA at Admission | ENG GPA at Admission | Praxis Score | Sum Score |
|------------------|----------------------|----------------------|--------------|-----------|
| EDC GPA at Admission | **.520**              | **.500**             |              |           |
| ENG GPA at Admission  | .000                 | .000                 |              |           |
| Praxis Score       | .000                 | .000                 |              |           |
| Sum Score          | .000                 | .000                 |              |           |

**N = 53**

|                  | EDC GPA before Student teaching | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|---------------------------------|--------------|-----------|
| EDC GPA before Student teaching | .520**                          | .593**                          |              |           |
| ENG GPA before Student teaching  | **.778**                         | .683**                          |              |           |
| Praxis Score       | .088                            | .093                            |              |           |
| Sum Score          | .000                            | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .066                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .088                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .088                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .088                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .088                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .088                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

|                  | ENG GPA before Student teaching | Praxis Score | Sum Score |
|------------------|---------------------------------|--------------|-----------|
| Praxis Score     | .088                            |              |           |
| Sum Score        | .000                            |              |           |

**N = 53**

**Correlation is significant at the 0.01 level (2-tailed).**

**Correlation is significant at the 0.05 level (2-tailed).**
Table 28: Variables Entered/Removed<sup>a</sup> with PLT Praxis Score as Dependent Variable

Variables Entered/Removed<sup>a</sup>

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
| 1     | EDC GPA before Student teaching, EDC GPA at admission<sup>b</sup> | . | Enter |

<sup>a</sup> Dependent Variable: Highest PLT Praxis Score
<sup>b</sup> All requested variables entered.

Table 29: Model Summary with PLT Praxis Score as Dependent Variable

Model Summary

| Model | R  | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|----|----------|-------------------|---------------------------|
| 1     | .362<sup>a</sup> | .131     | .096              | 8.824                     |

<sup>a</sup> Predictors: (Constant), EDC GPA before Student teaching, EDC GPA at admission

Table 30: ANOVA<sup>a</sup> with PLT Praxis Score as Dependent Variable

ANOVA<sup>a</sup>

| Model | Sum of Squares | df  | Mean Square | F     | Sig.  |
|-------|----------------|-----|-------------|-------|-------|
| 1     | Regression     | 587.535 | 2 | 293.767 | 3.773 | .030<sup>b</sup> |
|       | Residual       | 3893.447 | 50 | 77.869 |       |       |
|       | Total          | 4480.981 | 52 |         |       |       |

<sup>a</sup> Dependent Variable: Highest PLT Praxis Score
<sup>b</sup> Predictors: (Constant), EDC GPA before Student teaching, EDC GPA at admission
Table 31: Coefficients\textsuperscript{a} with PLT Praxis Score as Dependent Variable

\textit{Coefficients}\textsuperscript{a}

| Model   | Unstandardized Coefficients | Standardized Coefficients | Sig. |
|---------|-----------------------------|---------------------------|------|
|         | B                           | Std. Error                | Beta | t    |     |
| 1 (Constant) | 133.993                    | 16.555                    | 8.094 | .000 |
|         | EDC GPA at admission        | .176                      | 4.364 | .006 | .040 | .968 |
|         | EDC GPA before Student teaching | 10.836                 | 4.661 | .359 | 2.325 | .024 |

\textsuperscript{a} Dependent Variable: Highest PLT Praxis Score

Table 32. Variables Entered/Removed\textsuperscript{a} with ENG Praxis Score as Dependent Variable

\textit{Variables Entered/Removed}\textsuperscript{a}

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
| 1     | ENG GPA before Student teaching, ENG GPA at admission | . | Enter |

\textsuperscript{a} Dependent Variable: Highest ENG Praxis Score
\textsuperscript{b} All requested variables entered.

Table 33: Model Summary with ENG Praxis Score as Dependent Variable

\textit{Model Summary}

| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|---------------------------|
| 1     | .638\textsuperscript{a} | .406     | .383              | 5.471                      |

\textsuperscript{a} Predictors: (Constant), ENG GPA before Student teaching, ENG GPA at admission
### Table 34: ANOVA\(^a\) with ENG Praxis Score as Dependent Variable

\emph{ANOVA}\(^a\)

| Model        | Sum of Squares | df | Mean Square | F     | Sig.  |
|--------------|----------------|----|-------------|-------|-------|
| Regression   | 1024.788       | 2  | 512.394     | 17.119| .000\(^b\) |
| Residual     | 1496.533       | 50 | 29.931      |       |       |
| Total        | 2521.321       | 52 |             |       |       |

\(^a\) Dependent Variable: Highest ENG Praxis Score
\(^b\) Predictors: (Constant), ENG GPA before Student teaching, ENG GPA at admission

### Table 35: Coefficients\(^a\) with ENG Praxis Score as Dependent Variable

\emph{Coefficients}\(^a\)

| Model                | Unstandardized Coefficients | Standardized Coefficients | t    | Sig.  |
|----------------------|-----------------------------|---------------------------|------|-------|
|                      | B                           | Std. Error                | Beta |       |
| 1 (Constant)         | 128.568                     | 8.161                     |      | .000  |
| ENG GPA at admission | 5.069                       | 3.356                     | .262 | .137  |
| ENG GPA before       | 8.501                       | 3.574                     | .412 | .021  |
| Student teaching     |                             |                           |      |       |

\(^a\) Dependent Variable: Highest ENG Praxis Score
### Table 36: Descriptive Statistics Skewness of Variables

| Statistics        | EDC GPA at Admission | ENG GPA at Admission | EDC GPA before Student Teaching | ENG GPA before Student Teaching | PLT Praxis Score | ENG Praxis Score | HS CT Final (145) | MS CT Final (145) | US Final (145) |
|-------------------|----------------------|----------------------|---------------------------------|---------------------------------|------------------|------------------|-------------------|-------------------|----------------|
| N Valid           | 53                   | 53                   | 53                              | 53                              | 53               | 53               | 53                | 53                | 53             |
| Missing           | 0                    | 0                    | 0                               | 0                               | 0                | 0                | 0                 | 7                 | 0              |
| Std. Deviation    | .32832               | .35969               | .30738                          | .33771                          | 9.283            | 6.963            | 18.284            | 17.6982           | 16.5149         |
| Skewness          | -1.534               | -.465                | -1.741                          | -.374                           | .138             | .560             | -.475             | -.302             | -.929           |
| Std. Error of     | .327                 | .327                 | .327                            | .327                            | .327             | .327             | .327              | .350              | .327            |
| Kurtosis          | 2.039                | -.716                | 3.028                           | -.023                           | -.725            | -.731            | -.1102            | -.180             | -.400           |
| Std. Error of     | .644                 | .644                 | .644                            | .644                            | .644             | .644             | .644              | .688              | .644            |
| Minimum           | 2.65                 | 2.72                 | 2.64                            | 2.51                            | 158              | 166              | 84                | 69.0              | 88.5            |
| Maximum           | 4.00                 | 4.00                 | 4.00                            | 4.00                            | 197              | 192              | 145               | 145.0             | 145.0           |
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