An analysis of teacher candidate success as measured by admission requirements

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ABSTRACT

There has been little to no data indicating that candidate scores on the Nelson Denny Reading Assessment, entrance GPA, and basic skills were effective measures for success in educator preparation programs. This study contributed to the body of knowledge by evaluating whether candidate scores on the Nelson Denny Reading Assessment, entrance GPA, and basic skills assessments scores predicted candidate success in the educator preparation program as measured by final GPA. A multiple linear regression analysis was conducted and the results of this analysis indicated that the combined entrance grade point average and various assessments accounted for a significant amount of the teacher candidates' success, but only Admission GPA contributed significantly to the equation.

Key Words: educator preparation programs, assessment, Nelson Denny Reading Assessment, entrance GPA, basic skills, multiple linear regression

INTRODUCTION

Traditional undergraduate teacher preparation programs across Texas have been scrutinized for their low standards of admission and inconsistencies regarding entrance requirements. Currently an educator preparation program at a university in south Texas uses the Nelson Denny Reading Assessment, basic skills assessments for reading, writing, and math using Accuplacer, THEA or other approved assessment tools, and minimum 2.75 GPA as admissions requirements. However, there is no data indicating that these requirements are effective measures for success in the program.

This problem impacts educator preparation programs, students and school districts as higher education institutions are responsible for the preparation of future teachers. This study will contribute to the body of knowledge needed to address this problem by evaluating whether candidate scores on the Nelson Denny Reading Assessment, entrance GPA, and basic skills assessments scores predict candidate success in the educator preparation program as measured by final GPA.

REVIEW OF LITERATURE

Research on the quality of applicants to teacher preparation programs have found that "on average, entering teachers today have substantially lower academic qualifications (in terms of test scores and the selectivity of their undergraduate institutions) than they did a generation ago" (National Research Council, 2010, p. 55). Labaree (2004) reviews various concerns of the "lowly status" of schools of education. Contributors to this unfavorable reputation include low admission standards, poor perception of the value in the teaching profession, and a perceived weakness in research. According to the National Council on Teacher Quality (2014), candidates in teacher preparation programs are more likely to graduate with honors than their peers who are pursuing other degree fields. Results of an analysis of all graduates across 509 institutions found that 44% of all students graduating with honors stem from teacher preparation programs or colleges of education. These results add insult to injury, where despite the challenges of the profession, there is public perception that getting a degree in education is easy. (National Council on Teacher Quality, 2014). To increase the quality of teachers entering the profession, it is important that preparation programs attract and select high caliber students who have the potential to be good teachers. (National Research Council, 2010). Thus, an educator preparation program's level of attractability is enhanced by its potential to effectively meet the needs of aspiring teachers. Unfortunately, Darling-Hammond (2006) finds that educator preparation program curriculum does not meet the needs of teachers. In fact, research-based concerns about deficiencies in teacher preparation and its inability to connect theory with practice are abundant (Melnick & Meister, 2008; Panesar, 2010; Barrett-Kutcy & Schulz, 2006).

Strong educator preparation programs operate with a clear and consistent vision of effective teaching, continuous program improvement, a focus on child development and student learning, and extended and comprehensive practical experiences in realistic settings (Darling-Hammond, 2006; Ball & Forzani, 2009). These strong programs however are few and far between. According to Zeichner and Beir (2013), there are approximately 1400 colleges and universities offering teacher preparation in the United States. Among them, research finds that a majority are struggling to effectively prepare teachers for real classroom experiences (Panesar, 2010). Darling-Hammond explains that these programs suffer from inadequate time for

comprehensive preparation of its future teachers, traditional views of schooling and instructional practice which fail to adequately addressing diverse learning styles, and haphazard field and student teaching placements which fail to provide students with realistic classroom experiences.

In contrast, robust teacher preparation programs share the following characteristics: sound instruction infuses all courses, practice and performance are both well-defined and evaluated, curricula is extensive including child development, field experiences, study strategies, student-faculty relationships, and real life applications using case study methods (Ball & Forzani, 2009, Darling-Hammond, 2006). Research has indicated that graduates of these robust teacher preparation programs perceived an increase in self-efficacy and level of preparation in areas of communication with parents, instructional strategies, and promoting student achievement (Darling-Hammond, 2006).

Educator preparation programs around the country, while serving the same purpose, differ from one another in the components that make up their programs. A common component of educator preparation programs is to successfully prepare students in becoming successful teachers for K-12 schools. The following components are all shared by educator preparation programs; recruitment and selection, general education, professional foundations, instructional knowledge, field experiences and clinical practice, and program evaluation (Sarach & Spodek, 2003).

A study by Darling-Hammond (2000) indicates that teachers with a better preparation in teaching are more confident and successful with students. In addition, other studies indicate that an effective educator preparation program has an impact on the quality of schools and influences the students' developmental outcomes (Saracho, 2013). The process of recruitment and selection of teacher candidates is an important component of preparation programs because the quality and nature of these programs depends on the competence and characteristics of these candidates (Saracho, 2013). In addition, these programs are exceptional in higher education because of the dual role of the applicants in the consideration of equity in both admissions to the teacher preparation program and for the children they will be teaching (Childs, et al., 2011, p. 2).

Research by Pohan & Ward discovered that since 1975 many teachers lacked overall confidence in preparation and certification across the United States (2011). Accountability measures for K-12 and institutions of higher education changed in 2001 after the passing of No Child Left Behind (Pohan & Ward, 2011). Due to the changes in accountability measures, educator preparation programs began to use standardized measures to ensure the academic qualifications of prospective teacher candidates. Some standardized measures included: grade point average, scholastic achievement test, and national teachers' exams (Pohan & Ward, 2011). The Nelson Denny Reading Assessment and the various basic skills assessments serve the purpose of screening incoming educator preparation candidates for their level of reading, writing, and math skills areas that research indicates can help teacher candidates be successful in college (Fike, Fike & Natale, 2014).

It has been stated that using GPAs as criterion for students entering an educational setting, is indicative of the ability to succeed (Casey & Childs, 2011). According to the National Center for Education Statistics (NCES) (2005), students with GPAs above a 2.93 will more likely teach once graduated than students graduating with a GPA below 2.75 (as cited in Watkins & Watkins, 2011). Also, the National Center for Education Information survey indicates that more than 75 percent of the 1,287 teacher education programs in the United States that responded to this survey indicated that they used college GPA as criteria for admission (Casey & Childs, 2011).

In a study using GPA as a predictor of teacher candidate success in developing a Capstone project, it was found that while GPA did not result in higher scores within the project, it had relevance to predictability (Watkins & Watkins, 2011). It was also demonstrated that knowledge of a subject was not as good a predictor of success as GPA was and that using GPA for predicting student success is reliable (Watkins & Watkins, 2011). As stated by Doyle and Amador-Watson (2011), it is not only important that universities use GPA for determining admission into teacher-education programs, but that multiple measures be used as well. These measures include test scores known as "hard data" (Doyle & Amador-Watson, 2011).

High school GPA and standardized test scores have previously been shown to be the best predictors of college success, it needs to be ascertained if other variables would be helpful in determining future student success in an educator preparation program. According to Tinto (1993) an indicator of student success may rely on their level of integration both academically and socially. Delving further into this topic, to be successful in college, a student will need to achieve a level of commitment to the career they choose as well as to their academic goals and institution they attend (as cited in Sparkman, Maulding & Roberts, 2012).

PURPOSE OF THE STUDY

The purpose of this quantitative study is to determine whether the Nelson Denny Reading Assessment, basic skills assessments for Reading, Writing, and Math, and minimum 2.75 GPA predicts candidate success in the educator preparation program as measured by final GPA. The predictor variables are the Nelson Denny Reading Assessment, basic skills assessments for Reading, Writing, and Math, and minimum 2.75 GPA. The criterion variables are the candidate's success as measured by final GPA. The study was guided by the following research question:

Do candidate scores on the Nelson Denny Reading Assessment, entrance GPA, and basic skills assessment scores predict candidate success in the educator preparation program as measured by final GPA?

The study further tested the hypothesis that there is no significant relationship between the predictor variables of candidate scores on the Nelson Denny Reading Assessment, entrance GPA, and basic skills assessments scores and the criterion variable, candidate success in the educator preparation program, as measured by final GPA.
Methodology

DESIGN

The research design utilized a quantitative ex post facto study. A multiple linear regression analysis (MLR) was used. Multiple linear regression analysis is used to analyze how a given dependent variable is simultaneously affected by multiple independent variables (Babbie 2007, 455). This statistical method was used to analyze the data, and to determine whether the hypothesis was supported or rejected. This study was comprised of five predictor variables: admission GPA, Nelson Denny Reading Assessment Score, Reading assessment score for admission, math assessment score for admission, and writing assessment score for admission and one criterion variable, final program GPA.

Sample

The sampling method used in this study was random sampling, a technique whereby each individual in a population has an equal opportunity to be selected to be part of the sample so that the sample is representative of the population. The population for this study included students who have graduated from the undergraduate educator preparation program. The sample included 30 records for analysis. Due to the random sampling, this can be considered an experimental study.

Instruments

Existing records for analysis included students' admission applications. Each admission application lists the candidate's GPA at the time of admission based on at least 60 semester credit hours, scores on each of the required basic skills assessments in reading, writing, and math, as well as the student's score on the Nelson Denny reading assessment. Admission GPA and all assessment scores were recorded for this analysis. At the point of graduation, the student's final transcript is also submitted for record keeping. The transcript provides the student's final GPA which was also required for this regression analysis.

Procedure

In order to maintain confidentiality of student identities, the researchers requested only data pertinent to scores on admissions examinations, admission GPA and final GPA for 30 students selected at random. Program staff provided to the researchers a spreadsheet containing the requested data. All raw scores for basic skills assessments were then converted to percentiles. Data was then entered into the Statistical Package for Social Sciences (SPSS) and saved in a password protected computer. A multiple linear regression analysis was then performed.

RESULTS

A multiple linear regression analysis was conducted to predict teacher candidate success in educator preparation programs from entrance grade point averages and various assessments. The results of this analysis indicated that the combined entrance grade point average and various assessments accounted for a significant amount of the teacher candidates' success, $F(5, 20) = 12.92$, $p < .01$. The sample multiple correlation coefficient was .87, indicating that approximately 70% of the variance of the teacher candidate success in the sample can be accounted for by the combined assessments. The regression equation is as follows:

Final GPA = 1.386 -.05(Denny) +.70(Admission GPA) +.00(Reading) -.00(Writing) + 00(Math)

In Table 1, indices are presented to indicate the relative strength of the individual predictors of teacher candidate success. Two of the bivariate correlations between the educator preparation program admission assessments were negative, and only Entrance GPA was statistically significant ($p < .05$). On the basis of these correlational analyses, one can conclude that the entrance grade point average was the only significant predictor for teacher candidate success in education preparation program. It alone accounted for 70% ($.70^2 = .70$) of the variance of teacher candidate success.

Table 1
The Standardized Regression Coefficients and Significance of the Predictors of Teacher Candidate Success

Predictors	Standardized Regression Coefficients	Significance
Nelson Denny	-.052	.158
Entrance GPA	.702	.000
Reading	.000	.924
Writing	-.002	.184
Math	.001	.619

DISCUSSION

Educator preparation program admission requirements have recently been at the center of state-level rule revision conversation. On the tail of a law passed in the 83rd legislative session calling for an evaluation of educator preparation program admission standards in 2013, a proposal was made to the State Board for Educator Certification to increase the minimum admission GPA from 2.5 to 2.75. This was met with mixed positions from educator preparation stakeholders. A vote in favor of the increase by the State Board for Educator Certification caused programs to update their requirements boosting GPA admission requirements to the stated 2.75 minimum or higher. However, due to concerns of aiding teacher shortages and a lack of data confirming that higher GPA improved the quality of teacher candidates, the State Board for Education vetoed the action. Currently, the state minimum GPA requirement for admission to educator preparation stands at 2.5. The findings of this study stand to provide valuable research in support of a higher minimum GPA requirement.

In 2014, a proposal was made to delete basic skills admission requirements from state minimum standards for admission to educator preparation. Rule revisions seek to align admission requirements with those already established for admission into institutions of higher education. This would essentially delete standards requiring basic skills assessments in reading, writing, and math for admission to educator preparation programs which occurs after students are already enrolled in college-level coursework. The Texas Education Agency "views the testing requirement for educator preparation programs applicants as redundant. Most students are exempted from the basic skills test based on performance on high school or national assessments. The basic skills test requirement only applies to candidates in undergraduate programs because candidates with bachelor's degrees are exempted" (State Board for Educator Certification, 2014, p. 4). The findings of this study may serve in support of a proposal to delete basic skills assessments from requirements for admission to educator preparation as results indicated that the assessments have no significant effect on a candidate's success in the program.

Admission standards must be reflective of what is required for success in an educator preparation program and for a rewarding and long-standing career in education. The grade point average is indicative of academic skills that are useful in completing the coursework portion of the teacher education programs (Casey & Childs, 2011). High grade point averages also provide strong foundation in the content area of the teaching certificate sought by the candidate therefore improving the potential for teacher quality upon completion of the program. Recruitment of high

caliber candidates amplifies the quality of candidates enrolled. This increases the likelihood that candidates will successfully complete certification requirements.

RECOMMENDATIONS

Teacher preparation and admission requirements are under intense scrutiny. The findings of this study serve to aid in the determination of appropriate and valid admission standards for educator preparation programs. Success in teacher preparation programs is however only one part of the process of producing qualified teachers. Teacher candidates must also successfully pass state certification examinations. Future research may seek to measure how GPA admission requirements and/or final program GPA ratings effect performance on state certification examinations. Future research may seek to analyze admission requirements' influence on other levels of teacher preparation such as alternative certification or professional level certification like principal or superintendent preparation program. Understanding what measures are valid as indicators of potential candidate success in teacher preparation can work effectively in conjunction with existing and future research to revamp teacher education thereby adding due value to schools of education and the teaching profession.

CONCLUSION

Universities currently using assessments such as the Nelson Denny Reading Assessment, basic skills assessments for reading, writing, and math using Accuplacer, THEA or other approved assessment tools, along with GPA for students to gain admission into an educator preparation program should take into account the information presented as a means to predict the success of the teacher candidates. Research has demonstrated that Grade Point Averages are the strongest indicator of student success for the undergraduate educator preparation program at an institute of higher education in southern Texas. Teachers and administrators are struggling today with the lack of preparation novice teachers currently hold and many are looking for solutions to avoid this from continuing and affecting our future. Utilizing studies that investigate standards of admission and entrance requirements for educator preparation programs may better prepare today's institutions of higher education as to the admission standards that will determine teacher candidate success.

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