Exploration of the Relationships Between Principal Preparation Program Admission Requirements and Program Performance

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The role of the school principal is integral to successful educational outcomes. Principals serve as the instructional leader of the school and are responsible for setting a culture of achievement and high expectations. As such, they are expected to manage and promote effective teaching practices and curriculum implementation while providing oversight and guidance on issues related to student behavior. Additionally, they must ensure that budgets, policies, and procedures are aligned with state educational standards and other relevant regulations.

The role of the principal preparation program (PPP) is to provide a comprehensive structure for the educational leadership development of aspiring school principals. The program is designed to equip participants with the necessary knowledge, skills, and dispositions that are required to successfully obtain state certification assessments and assume the role of school principal (Duncan et al., 2011; Hernandez et al., 2012). To do this, it facilitates the acquisition of critical competencies such as leadership, communication, legal literacy, fiscal management, systems thinking, decision making and assessment practices that are essential for effective instructional leadership.

Certification of school principals is an essential procedure that involves rigorous evaluation and assessment of the professional qualifications and competencies necessary for effective leadership of a school. Each state in the U.S. has adopted its own set of requirements for school leader certification, and institutions of higher education across the country each have their own admission and program requirements for their educational leadership programs. Much debate, however, surrounds the effectiveness of these programs and the validity of many of these requirements as an indicator of successful program completion and school leadership licensure.

Review of Literature

Criticism of educational leadership programs has been robust in recent years, with some scholars suggesting a fundamental misalignment between the theoretical frameworks employed by such programs and the actual needs of practitioners. This criticism is premised on a critique of the epistemological underpinnings of many educational leadership programs, which rely upon an individualistic approach to instructional leadership that may not adequately account for larger systemic dynamics at play within educational organizations.

The current admissions standards for educational leadership programs have been the subject of significant criticism due to the lack of flexibility in the criteria. It has been argued that the rigid structure imposed by such standards not only fails to consider a variety of important factors, but also limits access to students from under-resourced backgrounds who may possess other important qualifications that could contribute to their success within such programs. This critique has highlighted the need for greater rigor and thoroughness with regards to the evaluation of applicants, so as to ensure that only those who possess an adequate level of knowledge and acumen are admitted into these programs (Pannell et al., 2015).

Adding to the criticism surrounding admission standards, graduates often criticize coursework as irrelevant, insignificant, and un-inspirational (Pannell et al., 2015). Further, Pannell et al. (2015) contended university faculties pay too little attention to instruction, and many do not have the principal experience to adequately prepare candidates for the principalship. This criticism is especially alarming considering, that in many states, graduates of these programs must pass a standardized test to obtain a license to practice.

However, despite many universities treating educational leadership programs as *cash cows*, using them to bring revenue into other parts of the campus, they often deny them the resources that might enable them to improve.

Principal Preparation Program Admission Standards

Principal preparation practices vary among colleges, universities, and departments of education, and critics of traditional principal preparation programs denounce their admission standards in addition to their curriculum and structure. Admission to most educational leadership programs has been largely dependent upon standardized test scores and grade point averages (GPAs). Lax admission standards often only require applicants to submit an application and payment to the college's graduate school and/or educational leadership program, undergraduate transcripts, and, in some instances, a competitive score on the Graduate Record Examinations (GRE), a standardized test designed to assess the academic aptitude of students who aspire to pursue post-graduate studies. The GRE was revised in 2011 and currently consists of two reasoning sections, a verbal and a quantitative, both scored on a 130-170 score scale, in one-point increments. The exam also has an analytical writing component scored on a 0-6 score scale, in half-point increments (Educational Testing Service, n. d.). The scoring system for the GRE utilizes both raw scores and percentile rankings to indicate success in each section relative to other test takers (Educational Testing Service, n.d.). These components allow admissions committees to make meaningful distinctions between applicants based on their respective levels of cognitive acumen.

A review of 450 principal-certification programs found their admission criteria gave the most weight to GRE scores and undergraduate GPA (Lashway, 2003). According to Educational Testing Service data, education majors had lower GRE scores than majors in most other fields with educational administration candidates ranking near the bottom of, not only all education majors but of all academe. Elementary and secondary level teaching applicants scored higher than them on all three sections of the GRE, and while they score at the national average on the analytic portion of the GRE, their scores trail the national average by 46 points on the verbal portion of the exam and by 81 points on the quantitative section (Educational Testing Service, n.d.).

Given the increasingly competitive nature of the academic landscape and the need for institutions to differentiate themselves from a wide range of similar offerings, many educational leadership programs have opted to no longer require prospective students to submit GRE scores. This is due in part to an increased reliance on qualitative data within admission committee decisions, in addition to the desire for educational leadership programs to become more accessible. Leniency in admission standards can also be connected to enrollment targets, which could determine adequate funding for the program (Reames, 2010). Entrance into most PPPs is determined by self-selection with half-hearted screening and little outreach to talented individuals. Lashway (2003) noted only 40 percent of programs listed teaching as an admission requirement and only six percent required a personal interview. Nearly two decades later, many states have begun to require teaching experience for entrance into principal certification programs which has led to program reform efforts among their educational leadership programs.

Lashway (2003) noted that best-practice recommendations emphasize the need to connect admission practices with leadership standards. Despite this recommendation, little research has been conducted to explore effective admission criteria to help develop aligned practices. In fact,

some would argue that admission practices have become more lenient as many PPPs have dropped the GRE requirement as a criterion for admission.

Principal Licensure

All 50 states, plus the District of Columbia, have adopted standards to guide school leadership preparation and certification policies. According to the Education Commission of the States (n.d.), at least 38 states require field experience as part of traditional school leader preparation programs while 37 states require candidates to hold a master's degree and have at least three years of teaching or related experience to qualify for an initial school leader certification. In addition to degree program requirements, 34 states require a passing score on an adopted examination for initial school administrator licensure. The most widely used principal certification examination is the School Leadership Licensure Assessment (SLLA). Currently, seventeen states, the District of Columbia, Guam, and the U.S. Virgin Islands require a passing score on the SLLA for initial school administrator licensure. The passing score for the SLLA is 151 except in South Dakota and Virginia. These two states require a score of 146 or above for principal licensure.

Despite the efforts in preparing leaders for 21st-century schools, the overwhelming consensus from graduates, school leaders, and policymakers is graduates are not ready for the complex roles, and those who run the preparation programs are all too aware of the need for change (Pannell et al., 2015). Levine (2005) asserts many of these programs are engaged in a counterproductive *race to the bottom*.

Purpose of the Study

Admission to most educational leadership programs has been largely dependent upon standardized test scores and undergraduate GPAs, and graduates of these programs must pass a standardized test to obtain a license to practice. Recent attempts to boost educational leadership program enrollments have led to some principal preparation programs waiving the GRE requirement as part of their admission criteria. Of the eight principal preparation programs in Mississippi, four have removed the GRE as a criterion for admission. All of the programs, however, still require a minimum undergraduate GPA for admission. Graduates of each program must pass the SLLA to obtain a school administrator license, but no program requires the assessment for program completion.

This study sought to determine if correlations exist between admission requirements, academic performance, and standardized test scores of candidates. More specifically, the researchers determined if a correlation exists between the following: undergraduate GPAs and GRE scores of candidates; candidates' undergraduate GPAs and their program GPAs; candidates' GRE scores and their program GPAs; candidates' SLLA scores and their program GPAs; candidates' GRE scores and their SLLA scores; and lastly, candidates' GRE Writing scores and their SLLA scores. This study adds to existing research on the effectiveness of principal preparation programs and has the potential to contribute to principal preparation program reform efforts, including admission practices.

Research Questions
The following research questions guided this study:
1. Is there a correlation between undergraduate GPAs and GRE scores of candidates?

2. Is there a correlation between undergraduate GPAs and the program GPAs of candidates?
3. Is there a correlation between GRE scores and the program GPAs of candidates?
4. Is there a correlation between SLLA scores and program GPAs of candidates?
5. Is there a correlation between GRE scores and SLLA scores of candidates?
6. Is there a correlation between GRE Writing scores and SLLA scores of candidates?

Methodology

This research examined the relationship between variables related to admission to and successful completion of one southern university's principal preparation programs to determine if a correlation exists.

Participants

Participants for this study consisted of 46 graduates of one southern university's principal preparation program. Due to access to graduates and required student records data, a convenience sample was chosen for the study. Participants included all graduates of the university's principal preparation program for a three-year span who attempted the state examination for educational administration licensure and granted permission for access to their student records data. Graduates during the selected three-year span who did not grant access to their academic records were excluded from the study.

Procedure

The researchers identified the graduates of one southern university's educational leadership for a three-year span. Due to the sensitive nature of the data needed for the correlational hypotheses, permission to use their student record data was sought from each eligible participant. An authorization survey was developed in Qualtrics to allow participants to grant or deny permission to use their student record data electronically. An informed consent and authorization form to access student record data was sent as an email to the 66 eligible participants in the study. A follow-up email was sent to the eligible participants who had not responded after one week. Phone calls were made to each participant who had responded to neither of the email requests. The email requests generated a 71.2% response rate, with 46 respondents granting permission for their student record data to be included in the study. One respondent denied permission to include their data in the study. The researcher retrieved GRE scores, SLLA scores, and both undergraduate and graduate GPA information on each consenting participant from the university's educational leadership department.

Confidentiality was maintained for participants. A coding system identifying programs and numerically identifying graduates was used to ensure the anonymity of all study participants. No personal names were used in the analysis and reporting.

Statistical Tests and Data Analysis

For research questions one through six, a Pearson product-moment correlation coefficient was performed using SPSS to determine if a correlation exists between the following variables: undergraduate GPAs and GRE scores of candidates; candidates' undergraduate GPAs and their program GPAs; candidates' GRE scores and their program GPAs; candidates' SLLA scores and their program GPAs; candidates' GRE scores and their SLLA scores; and lastly, candidates' GRE Writing scores and their SLLA scores. Pearson r is utilized to determine the magnitude of

the relationship between two or more measures and explore the linear relationship between the quantitative variables; however, correlations obtained cannot establish a cause-and-effect relationship between the correlated variables (Gall, Gall, & Borg, 2007). The use of this parametric test in a causal relationship study is only appropriate if the two variables have a linear relationship. To increase the reliability of the Pearson *r*, data should contain no extreme outliers. A scatterplot is used to determine whether the relationship between the two variables is linear and to determine if the data contains outliers. As previously mentioned, outliers can have varying degrees of influence on the dependent variable, so, if outliers are detected, the researcher must determine whether to leave them in the study or remove them from the data. Bivariate normality is recommended to assess the statistical significance of Pearson's correlation coefficient; however, Pearson *r* is considered robust enough to overcome violations of normality. For the purpose of this study, correlation coefficients were calculated to examine the relationship between candidates' principal program admission components, their undergraduate and graduate academic performance, and their performance on the SLLA.

The ETS concordance table to relate scores on the previous GRE assessments to scores on the revised edition was not needed to ensure equality in the data because all reported GRE scores were on the same scale. Each hypothesis one through six was examined for strong or moderately strong correlations for the purpose of program evaluation. If the *p*-value was greater than the level of significance for any hypothesis, the researcher failed to reject that null hypothesis.

Findings

According to previous research (Lashway, 2003), principal preparation programs often give the most weight to GRE scores and undergraduate GPAs when considering applicants for admission. The Mississippi Department of Education requires completion of an approved principal certification program and a score of 151 or above on the SLLA for school administrator licensure. The six correlational hypotheses contained in this study examined relationships between program admissions components, academic performance, and the state department of education school administrator licensure assessment scores.

Assumptions Testing

Participants' undergraduate GPAs, program GPAs, GRE scores, GRE Writing scores, and SLLA scores were plotted on a graph for each relevant relationship. The scatterplots for each hypothesis being tested were examined to determine if there was a linear relationship between the two variables and if any outliers were present in the data being analyzed. An inspection of the scatterplots indicated a linear relationship in each correlation, confirming a Pearson *r* could be used to test the magnitude of the relationship between the variables. Further analysis of the scatterplots also suggested some variables contained outliers. In an effort to not manipulate test results, all outliers were included in the data analysis. Scatterplot results to determine the linearity of variables and outliers are presented in figures 1 through 6 in Appendix A.

Normality was assessed for each variable using Shapiro-Wilk tests of normality. Analysis of the results revealed not all variables were normally distributed; however, since the Pearson *r* is considered robust enough to account for violations of normality, the correlations were conducted. The results of normality testing are presented in Table 1.

Table 1
Shapiro-Wilk Test of Normality Results for Correlation Variables

Variable	Shapiro-Wilk		
	Statistic	Df	Sig.
Undergraduate GPA	.932	44	.012*
Program GPA	.653	46	.000*
GRE Score	.958	47	.088
GRE Writing Score	.933	47	.010*
SLLA Score	.875	39	.000*

Note: * indicates significance resulting in violation of normality

Descriptive Statistics

The correlations in this study sought to determine the magnitude of the relationship between three categories of variables: admission component variables, program academic performance variables, and state school administrator licensure variables. Three major components for principal preparation program admission considerations are undergraduate GPAs, GRE scores, and GRE Writing scores. Program GPAs indicate the level of students' academic performance in their respective principal preparation program, and SLLA scores represent the candidates' scores on the state-required examination for school administrator licensure. Permission to use protected student record data for the correlations was sought through emails. Participants were asked to complete an electronic survey and indicate whether they would grant or deny necessary permission. The survey returned a response rate of 71.2% ($N = 47$), with 46 authorizations and one denial. Despite multiple attempts to garner a response, nineteen subjects responded neither to emails nor phone calls.

Pearson *r*

The first null hypothesis stated there would be no relationship between candidates' undergraduate GPAs and their GRE scores. The first Pearson *r* analysis was used to determine if a relationship exists between undergraduate GPAs and GRE scores. The results indicated there is no statistically significant relationship between the two variables, but a weak positive correlation exists between undergraduate GPAs and GRE scores, ($r = .186$). Because the *p*-value of .226 is greater than the .05 significance level, the null hypothesis cannot be rejected.

Null hypothesis two expected there would be no correlation between candidates' undergraduate GPAs and program GPAs. The next Pearson *r* explored the relationship between undergraduate GPAs and university principal preparation program GPAs. Analysis of the results of this Pearson *r* revealed a weak positive with no statistical significance between the GPAs ($r = .241$), leading the researcher to fail to reject the null hypothesis. Because the *p*-value of .119 is greater than the .05 significance level, the null hypothesis cannot be rejected.

The third null hypothesis stated there would be no relationship between candidates' GRE scores and program GPAs. A Pearson *r* was used to determine if a correlation exists between the candidates' admission examination scores and their academic performance in the program. Results for this hypothesis indicated a slight positive correlation with no statistical significance between the candidates' GRE scores and their earned GPAs in their respective principal preparation program, ($r = .069$). Because the *p*-value of .647 is greater than the .05 significance level, the null hypothesis cannot be rejected.

Null hypothesis four expected there would be no correlation between candidates' program GPAs and their SLLA scores. Examination of the results for the Pearson *r* used to determine the relationship between candidates' program GPAs and how they performed on the SLLA suggested there was no statistically significant relationship and a weak positive correlation between the two variables, (*r* = .166). Because the *p*-value of .312 is greater than the .05 significance level, the null hypothesis cannot be rejected.

The fifth null hypothesis stated there would be no correlation between GRE scores and SLLA scores. Results for the Pearson *r* for hypothesis six revealed a statistically significant strong positive correlation between candidates' GRE scores and their SLLA scores, (*r* = .559). Because the *p* < .0005 value falls far below the .05 significance level, the null hypothesis is rejected.

Null hypothesis six held there would be no relationship between scores on the writing portion of the GRE and SLLA scores. Analysis of the results of the study's final Pearson *r* indicated there was a strong positive statistically significant correlation between candidates' GRE Writing scores and their SLLA scores, (*r* = .629). Because the *p* < .0005 value falls far below the .05 significance level, the null hypothesis is rejected. An overview of the Pearson *r* results is presented in Table 2.

Table 2
Overview of Pearson r Correlations Between Variables

	Program GPA	SLLA	Undergraduate GPA
Undergraduate GPA	.241	.319	1
Program GPA	1	.166	.241
GRE Writing Score	.179	.629**	.197
GRE Score	.069	.559**	.186

** Indicates significance at .01 alpha level

In summary, the results indicated there was no evidence of statistically significant correlations between undergraduate GPAs and any other variables. There was a moderate positive relationship between undergraduate GPAs and SLLA scores. Despite the positive relationships between undergraduate GPAs with all other variables, none were statistically significant at the .05 alpha level. Similarly, the results revealed weak positive correlations between program GPAs and GRE scores, GRE Writing scores, and SLLA scores; however, there was no evidence of a statistically significant correlation between program GPAs and any other variable. Pearson *r* results did, however, indicate statistically significant relationships between examination scores analyzed in the study. Both GRE scores and GRE Writing scores were found to have a statistically significant strong positive correlation with SLLA scores.

Implications & Recommendations for Further Research

Analysis of the results of each Pearson *r* revealed all of the examined correlations indicated varying degrees of positive relationships between the designated variables; however, the only statistically significant correlations in the study existed between standardized examination scores. Specifically, strong positive statistically significant correlations exist between the GRE writing score and the SLLA score (*r* = .629) and between the GRE scores and SLLA scores (*r* = .559).

The results of this study for the six correlational hypotheses suggest there are varying degrees of relationship between program admission requirements, academic performance, and standardized exams. Two critical elements for graduate school admission are the applicant's undergraduate GPA and GRE scores. Undergraduate GPAs are a measure of the student's academic performance across an extended time period and provide information about the applicant's knowledge across a variety of content areas. The GRE score is a vastly different assessment tool. It provides an assessment of verbal and quantitative knowledge from one point in time. Since no significant correlation was found between the two variables, it seems practical to continue using both components when evaluating candidates.

Candidates' academic performance in their respective graduate programs was not significantly correlated with either of the two program admission components. Graduate program GPAs showed a weak correlation ($r = .186$) with undergraduate GPAs and almost no correlation at all ($r = .069$) with GRE scores. Though no hypothesis was written for the relationship between GRE writing scores and program GPAs, the university educational leadership program does consider applicant's writing score for program admission. The Pearson r results also revealed no significant correlation ($r = 179$) between the two variables. University personnel could be using invalid criteria for admission standards, or admission selection committees could possibly be using the variables for general associations rather than actual statistical significance when evaluating candidates. No significant relationship was found between program GPAs and SLLA ($r = .166$) scores. The lack of relationship between program GPAs with the other variables could simply be indicative of grade inflation sometimes prevalent in graduate studies.

The only statistically significant correlations found in the study were between standardized examination scores. The SLLA scores were significantly correlated with both the GRE composite score and the GRE writing score. The GRE composite score measures verbal and quantitative reasoning, and the GRE writing score measures critical thinking and analytical writing skills. The SLLA measures the application of standards-relevant knowledge and reasoning skills. All of these variables are created and scored by an external entity. These findings combined with the findings for hypotheses one through five, suggest external assessments have a significant relationship with each other, yet the assessments do not have a significant relationship with academic performance.

Research has established a strong connection between school leadership and student achievement in our nation's schools, and researchers in the field of educational leadership have declared the quality of leadership provided by school and district leaders is highly dependent upon the quality of their leadership preparation experiences (Lynch, 2012; Miller, 2013, Pannell et al. 2015). Further research with multiple regression applications to this study has the potential to reveal valuable predictive information about standardized test performance. Future research into educational leadership program admission requirements and candidate performance could be conducted with other university PPPs within the state and across states that use the SLLA to expand this study. Perhaps the study could be conducted in states that have transitioned to a performance-based assessment such as the Performance-Based Assessment for School Leaders (PASL). This research could be conducted within states that use assessments other than the SLLA for initial school administrator licensure to assist PPPs with evaluating admission criteria. Lastly, research and reform efforts could focus on connecting principal preparation program evaluations to their program outcomes, which is the impact of their graduates on student achievement.

References

Duncan, H., Range, B., & Scherz, S. (2011). From professional preparation to on-the-job development: What do beginning principals need?. *International Journal of EducationalLeadership Preparation, 6*(3). http://files.eric.ed.gov/fulltext/ EJ974249.pdf

Education Commission of the States (n.d.). 50-State comparison: School leader certification and preparation programs. https://www.ecs.org/50-state-comparison-school-leader-certification-and-preparation-programs/

Educational Testing Service. (n.d.). Graduate Record Examination. http://www.ets.org/gre

Educational Testing Service. (n.d.). School leadership series. http://www.ets.org/sls

Hernandez, R., Roberts, M., & Menchaca, V. (2012). Redesigning a principal preparation program: A continuous improvement model. *International Journal of Educational Leadership, 7*(3). http://files.eric.ed.gov/fulltext/EJ997446.pdf

Lashway, L. (2003). Transforming principal preparation. *ERIC Digest*. http://files.eric.ed.gov/fulltext/ED473360.pdf

Levine, A. (2005). A race to the bottom: The nation's school leadership programs are not producing the educational administrators we need. National CrossTalk, 13(3). http://www.highereducation.org/crosstalk/ct0305/voices0305-levine.html

Lynch, J. M. (2012). Responsibilities of today's principal: Implications for principal preparation programs and principal certification policies. *Rural Special Education Quarterly, 31*(2), 40-47. http://0-eds.a.ebscohost.com.umiss.lib.olemiss.edu/eds/pdfviewer/pdfviewer?vid=5&sid=f759ce88-0b35-4525-bc3c-41afa992ba17%40sessionmgr4005&hid=4202

Miller, W. (2013). Better principal training is key to school reform. *Phi Delta Kappan, 98*(4), 80. http://0-eds.a.ebscohost.com.umiss.lib.olemiss.edu/eds

Pannell, S., Peltier-Glaze, B., Haynes, I., Davis, D., & Skelton, C. (2015). Evaluating the effectiveness of traditional and alternative principal preparation programs. *Journal of Organizational & Educational Leadership, 1*(2). https://digitalcommons.gardner-webb.edu/joel/vol1/iss2/3/

Reames, E. (2010). Shifting paradigms: Redesigning a principal preparation program's curriculum. *Journal of Research on Educational Leadership, 5*(12.5), 436-459. http://files.eric.ed.gov/fulltext/EJ913598.pdf

Appendix A

Figure 1

Scatterplots to Determine Linearity of Variables and Outliers for Undergraduate GPA and GRE
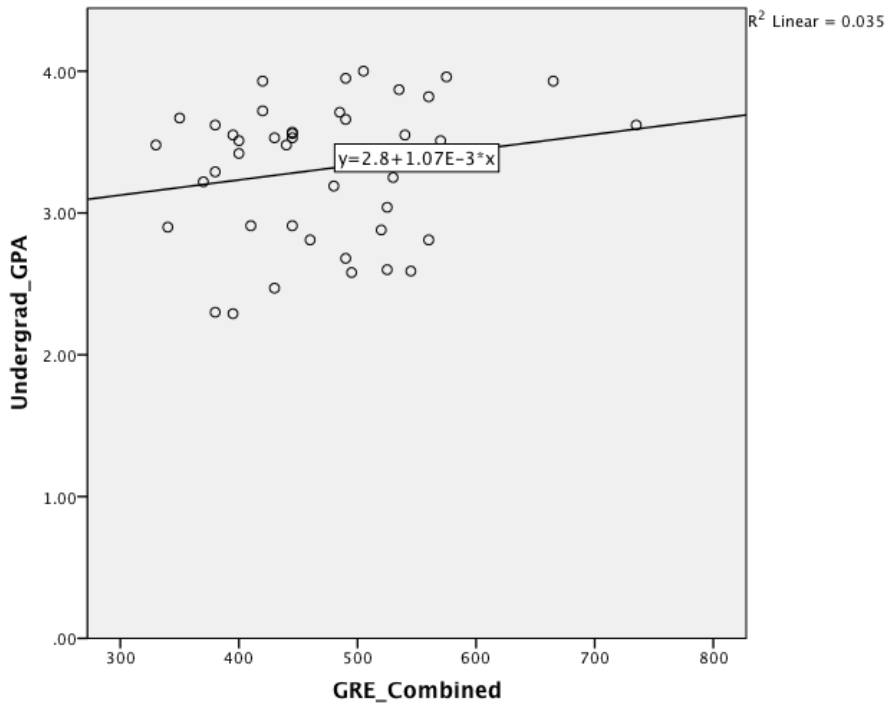
Figure 2

Scatterplots to Determine Linearity of Variables and Outliers for Program GPA and
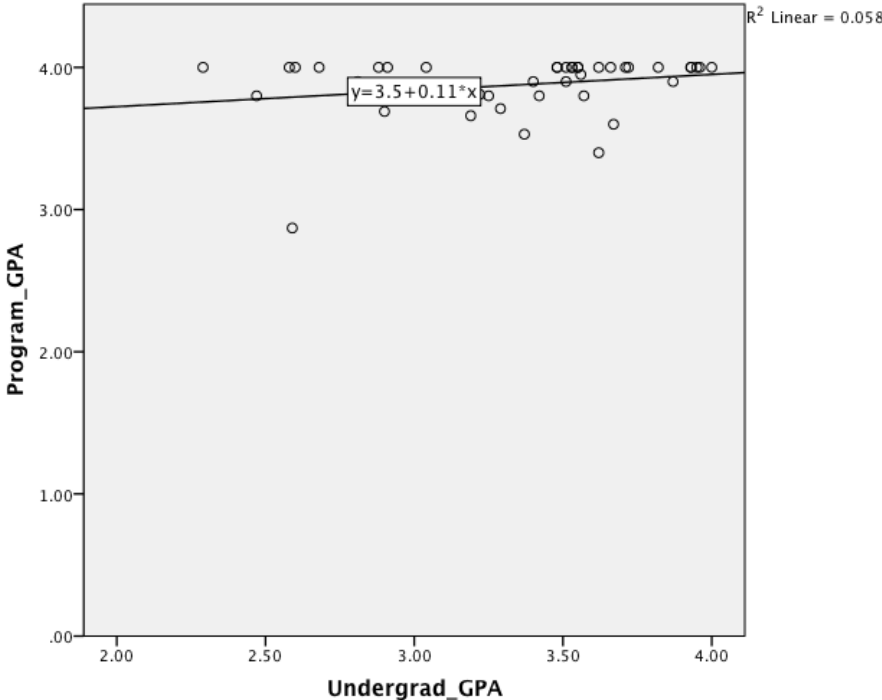
Undergraduate GPA

Figure 3

Scatterplots to Determine Linearity of Variables and Outliers for Program GPA and GRE
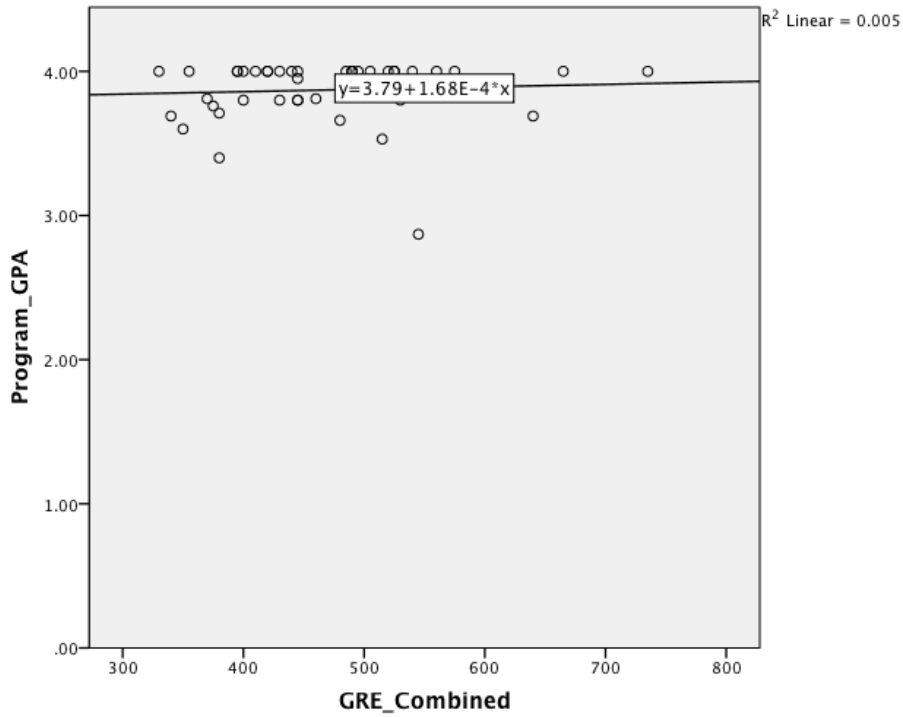
Figure 4

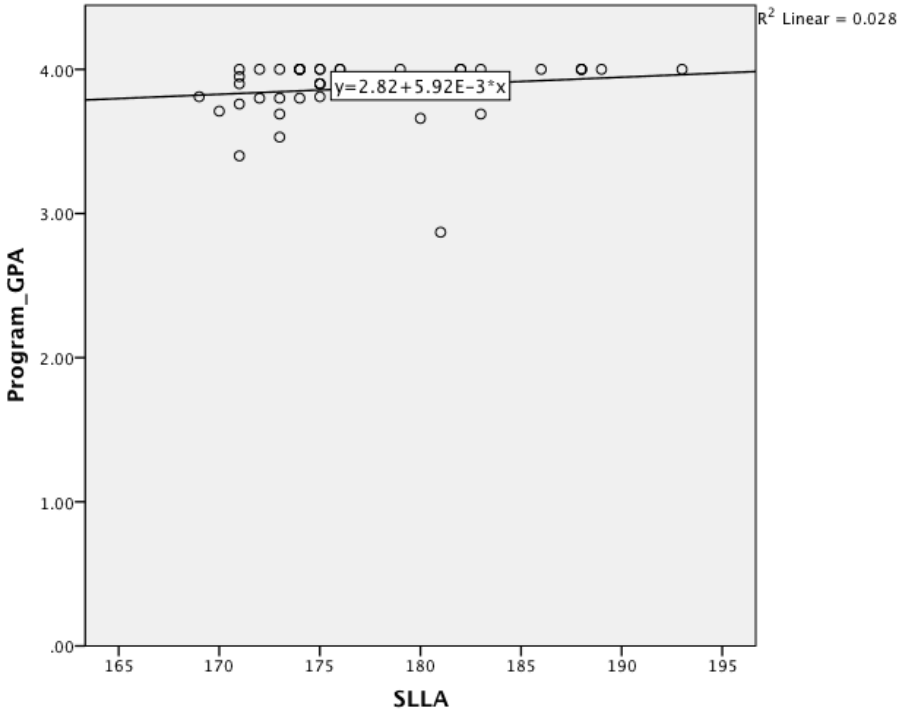*Scatterplots to Determine Linearity of Variables and Outliers for Program GPA and SLLA*

Figure 5

Scatterplots to Determine Linearity of Variables and Outliers for GRE and SLLA

Figure 6

Scatterplots to Determine Linearity of Variables and Outliers for GRE-Writing and SLLA