Class Research Project for EDU 7374

Cohort 1, Don Martin, and Dustin Johnson
Their meta-analysis of 123 studies concluded that pre-service teachers’ performance in college, especially during student teaching, predicted performance better than teacher licensing tests. D’Agostino and Powers commented on the irony “that the standardized licensing tests are less related to teaching performance than students’ success in pre-service programs that the standardized tests were designed to hold accountable!” (D’Agostino and Powers, p. 164-165)
Independent Variables

(1) GPA at time of admission to the teacher education program (range, 2.5849 - 4.0 on a 4 point scale, mean, 3.3465, Standard Deviation, .3445) - Each of the 63 student teachers had GPAs at the time of admission and inclusion of college GPA scores was supported by the literature review.
Independent variables

(2) GPA at the end of the fall of the student teacher’s senior year (range, 2.8624 – 4.0 on a four point scale, mean, 3.5292, Standard Deviation, .2651) – Each of the 63 student teachers had fall senior year GPAs and the inclusion of college GPA scores was supported by the literature review.
Independent variables

(3) Junior Year Disposition (range, 42 – 60 on a 60 point scale, mean, 56.44, Standard Deviation, 3.5277) – Inclusion of a measure of teacher disposition was supported by the literature review. Scores were available for 58 of the 63 students; the mean score was substituted for the missing data.
Independent variable

(4) Internship evaluation (range, 31 – 65 on a 69 point scale, mean, 54.0, Standard Deviation, 5.9379) – Inclusion of a measure for an internship experience was supported by the literature review. Scores were available for 35 or the 63 students; the mean score was substituted for the missing data.
Independent variables

(5) Electronic Evidence #3 – Literacy Infused Curriculum Project (range, 29 – 45 on a 45 point scale, mean, 39.10, Standard Deviation, 4.0069) - Electronic Evidence #3 consists a rubric for the five North Carolina Teaching Standards: Teacher leadership; Teachers establish a respectful environment for a diverse population of students; Teachers know the content they teach; Teachers facilitate learning for their students; and Teachers reflect on their practice. The literature review supports the inclusion of measures of pedagogy and content knowledge. Scores were available for 61 out of 63 students; the mean score was substituted for the missing data.
Independent variables

(6) Electronic Evidence #6 – Leadership and Collaboration Project (range, 14 – 21 on a 21 point scale, mean, 19.57, Standard Deviation, 1.9) - Electronic Evidence #6 consists of a rubric for three of the five North Carolina Teaching Standards: Teacher Leadership, Teacher outreach to students, parents, and community members of diverse backgrounds; and Teachers professional growth and reflection. The literature review supports the inclusion of measures of pedagogy and the ability to work together (dispositions).
HPU student teacher variables not included

(1) GPA in content area: There were only 8 out of 63 secondary content GPAs available; hence not used.

(2) SAT/ACT/Praxis Scores: All but one student out of 63 had either an SAT, ACT, or Praxis combined score (the combined Praxis score includes a math, reading, and writing subtest score) available. Students with SAT or ACT scores above a certain cutoff score did not have to take the any of the three Praxis tests. Students with high math or verbal/English scores on the SAT or ACT only had to take one Praxis subtest. And finally, individual subtest scores on the Praxis were not immediately available.
HPU student teachers variables not included

With some additional data assimilation the class believed that equating scores for math, verbal/English SAT or ACT scores could be found and these could be equated with Praxis scores. If so, a Praxis math and reading score could be included in the regression analysis.

(3) Professional Development Plan (PDP): No literature was found to support the relationship of the development and scoring of a PDP rubric during student teaching and future teacher success. Therefore, this variable was omitted.
HPU student teacher variables not included

(4) Electronic Evidence #2 – Depth and Application Project: While every student had an Electronic Evidence #2 score, there are two different scales – one for elementary and special education students, and one for all other majors. As a result this variable was omitted.
SPSS was used to run a linear regression analysis to determine how well the six independent variables used in the study were able to predict the dependent variable, the mid-term student teaching rubric score for HPU student teachers.
Regression results

The regression model was significant at the .02 level and all six variables were able to account for 22.8 percent of the variation in the mid-term student teaching rubric score. The adjusted R squared using all six independent variables was 14.5 percent. This difference suggests a lot of variability in the model (i.e., the likelihood that the model would predict next year’s variance).
Correlation between independent variables and the dependent variable

<table>
<thead>
<tr>
<th>GPA admission Internship eval.</th>
<th>GPA fall sr. yr Elec. Evid. #3</th>
<th>Jr. yr. disposition Elec. Evid. #6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-term student teacher disposition</td>
<td>.271 sig. .016</td>
<td>.357 sig. .002</td>
</tr>
<tr>
<td>Mid-term student teacher disposition sig. .157</td>
<td>.309 sig. .007</td>
<td>.303 sig. .056</td>
</tr>
</tbody>
</table>
Repeat of regression analysis with two independent variables

The two independent variable SPSS linear regression analysis was significant at the .004 level and indicated that 18.3 percent of the variation in the student teacher mid-term student teaching rubric score was accounted for, but the adjusted R squared was 1.1 percent higher than the first analysis at 15.6 percent.
Observations

As the literature suggests, it is hard to quantify the behaviors and skills that are required to train an effective teacher. In addition, many rubric scores used by universities are completed by the same people that supervise the student teaching experience; potentially a limitation of any research analysis.
Observations

It is noteworthy that the GPA in the fall of the senior year is the most highly correlated of the six independent variables with the mid-term student-teacher rubric. The assessments of the course work from many HPU professors contribute to the cumulative fall senior year GPA. Clearly the performance of student teachers in their courses is a predictor of student teaching success, and cohort 1 found that affirming for the HPU teacher education program.
The second study will examine the predictability of the HPU input variables on K-12 student ratings on the beginning teacher effectiveness survey developed by Tripod Educational Partners. The dependent variable in this study will be created by K-12 student survey responses instead of the score on the mid-term student-teacher rubric.
Next study

Changes in the independent variables:

(1) It is also possible that the math and reading Praxis subtest scores along with equated math and/or verbal/English SAT and ACT scores will be available for every student teacher;

(2) The end of year student teacher rubric can be used;
Next Study

(3) With more support from the literature, the Professional Development Rubric can be used (may need to eliminate another independent variable due to small sample size); and

(4) Depending on sample size the predictability of different license areas can be explored or another statistical comparison could be made.
Two Content Layout with SmartArt

Group A
- Task 1
- Task 2

Group B
- Task 1
- Task 2

Group C
- Task 1
- First bullet point here
- Second bullet point here
- Third bullet point here