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ABSTRACT

This paper explores relationships among grade point average (GPA), SAT scores, and Praxis I and II scores for traditional undergraduate preservice teachers, describing the development of an instrument to assess teaching skills. Participants were students from eight graduating classes at Elizabethtown College, Pennsylvania, from 1994-2001 (elementary and early childhood education majors). Data collected on these students included SAT scores, GPA after 1 year, final GPA, and scores for seven Praxis tests (e.g., general knowledge, communication skills, professional knowledge, and principles of learning and teaching). Three subgroups were formed using final GPA, total SAT, and the Praxis general knowledge score-students who scored between +1 and -1 standard deviation from the mean, students who scored one standard deviation or more above the mean, and students who scored one standard deviation or more below the mean. Overall, there were moderate to high correlations between total SAT scores and final GPAs, total SAT scores and Praxis test scores, and final GPAs and Praxis scores. In many relationships investigated, the correlation coefficients for the high and low groups were quite different. The low group maintained its identity on all variables tested even as the overall group went off in a different direction. (SM)

How Do We Find the Best Teachers?

A study of the relationships among SAT, GPA, Praxis Series test scores, and teaching ratings

Paper presented at the annual conference of the
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Finding the Best Teachers: A study of the relationships among SAT, GPA, Praxis Series test scores, and teaching ratings

Introduction

Across the country, individual states have been struggling to adjust their teacher education requirements to meet the needs of basic schools within their borders. Teacher shortages and the perceived need for accountability have driven most of that activity. This has led states, even those without general teacher shortages, to reconfigure teacher education requirements and give new direction to the preparation of professional educators for our P-12 schools. They make increased use of such variables as academic major, grade point average (GPA), SAT and ACT scores, Praxis I and II or other assessments, and life experience in describing and determining just who is qualified to become an appropriate teacher.

Examples of such strategies may be seen in Pennsylvania despite what some call an overproduction of teachers to meet the Commonwealth's needs. New legislation and regulation at the state level have required an increased emphasis on "academic content" in teacher education programs. While some state leaders are doing this to limit the number of students certified each year, other states are using these same criteria to allow persons with little or no background in pedagogy to enter the teaching force through alternative certification programs.

A similar pattern may be seen regarding grade point average. Pennsylvania recently raised the required GPA for acceptance into teacher education programs to 3.0 (on a 4 point scale). Again, the rationale was to reserve places for only "the best and the brightest" as defined by GPA. Other states with shortages have used grade point average or SAT/ACT scores as convenient and easy ways to set a threshold for granting alternative certification.

Praxis I and II and other state-based assessments also have been used to qualify persons for certification. Passing scores on required tests of general knowledge and skills, of pedagogy, and of areas of specialization regularly have been increased to limit the number completing certification programs and earning state licenses. Pennsylvania and some other states also have used such tests to justify the issuance of certificates to persons with limited training in pedagogy.

Finally, states increasingly have been willing to recognize life experiences as a way of demonstrating the skills thought essential to good teaching. Even in Pennsylvania, a generous alternative certification law operates in what seems to be contradiction to an ever more difficult traditional path to certification in the state.

Both the tightening and relaxing of requirements for certification seem to rest on some general assumptions that only have begun to be tested carefully in recent times. Does added preparation in the content taught really help make a person a better teacher? Do higher grade point averages, SAT or ACT scores, or Praxis I and II and other state assessment scores predict success in the P-12 classroom?

This paper reports exploratory work to date on some of these issues. Most specifically, it examines the relationship among grade point average, SAT scores, and Praxis I and II scores for students in one traditional undergraduate teacher education program. Additionally, it describes very preliminary efforts to develop an instrument to assess teaching skills and to use it to test the relationship between documented teaching skill and these various other variables.

Research Antecedents

The relationship between SAT scores and college performance has gained the attention of researchers for some time. Three related papers presented recently used data gathered from primary studies and unpublished data from the Educational Testing Service to perform the largest meta-analysis to date on these and related variables (Hezlett and associates, 2001; Ahart and associates, 2001; Vey and associates, 2001). Hezlett and associates (2001) found that the SAT predicts first year GPA very effectively. It also proved to be a valid predictor of academic performance later in college; for example, at the two-year and final point. SAT scores were found to be less consistent in predicting across subject/discipline areas, but they were successful in predicting certain non-academic criteria.

Using the same data, Vey and associates (2001) found that SAT verbal and SAT math scores were valid predictors of first year college success for male, female, Asian, Black, Hispanic, and White students. In an extension of the other two studies, Ahart and associates (2001) reported that high school measures such as grade point average and class rank were strong predictors of college performance.

Another important summary study looked at the link between SAT scores and tests from the Praxis Series (Teaching and Learning Division, 1999). SAT and ACT data from 1977-1995 were paired with data from more than 300,000 persons who completed some form of entrance or licensure test offered by the Educational Testing Service between 1994 and 1997. Researchers found that SAT scores for those who actually pursued certification (as opposed to those who just declared their intent to major in education) generally were higher than many report. They did find differences by certification area with elementary education students scoring less well than those with content specializations who scored as well or better than their college peers. Strong evidence was presented showing the relationship between high SAT and high Praxis test performance. In fact, it was clear that generally one could be used to predict the other. The research demonstrates that teacher education programs and NCATE accreditation tend to increase the likelihood of success for students on Praxis tests (Teaching and Learning Division, 2001).

The third type of study included here focuses on the role of licensure tests in the certification process. In a report done for the National Academy of Sciences at the request of the United States Department of Education, Mitchell and associates (2001) examined the quality and use of such tests. The authors offer that while higher passing scores would be expected to increase the proportion of candidates who are more competent on the knowledge and skills measured by the tests, they raised concerns about: relying too heavily on one form of evaluation; setting and changing passing scores without following careful policies and procedures; limiting the opportunities of minority candidates; using tests to compare passing rates across states; and judging the quality of teacher education programs on only one criterion such as the licensure test score(s) (Mitchell and associates, 2001).

Method

Students from eight graduating classes, those from 1994 through 2001 at Elizabethtown College, were used in this study. Only those students who were program completers, who successfully finished both departmental and state certification testing requirements, were included among the 328 students examined in order to get consistent data on all variables. The sample was limited to Elementary and Early Childhood Education students to guarantee substantial numbers on all certification tests as well.

Two changes during the eleven years these groups of students were enrolled in the college are noteworthy. First, the College Board "recentered" SAT scores during this time. No attempt was made to adjust or equate the pre- and post-1995 scores as that was not judged to be necessary for the primary purposes of the study. The second change was that the Commonwealth of Pennsylvania changed its certification testing requirements during that time. Students in various graduating classes completed some combinations of these required tests.

The sample included 37 males and 291 females, numbers consistent with the gender distribution common for these majors at this institution. Virtually all of the students were traditional college-aged students (18 to 22 years of age) who completed their degree and certification requirements in a four year time period.

Twelve kinds of data were collected from the 328 Elementary Education majors, comprising these eight graduating classes from Elizabethtown College. Included were SAT scores (verbal, math, and total), GPA after one year, final GPA, and scores for the following seven Praxis tests: General Knowledge, Communication Skills, Professional Knowledge, Principles of Learning and Teaching: K-6, Education in the Elementary School, Elementary Education: Curriculum, Instruction, and Assessment, and Early Childhood Education.

All of the scores were entered in a data worksheet of a statistical software package for data analysis. The Pearson product moment correlation coefficient was used to measure the degree of linear relationship between multiple pairs of variables. (See Correlation Summary Table in Appendix A.) In addition, the mean scores and standard deviations were collected for each variable.

Because questions began to emerge about groups within the sample, three subgroups were formed using final GPA, total SAT, and the Praxis General Knowledge score. Individual results were ranked for each of these variables. The first group was the largest of the three because their scores fell between +1 and –1 standard deviation from the mean. The second group included those students who scored one standard deviation or more above the mean while the third group was formed from those whose scores fell one standard deviation or more below the mean. This meant that the middle group was approximately 68% of the sample, and the high and low groups each were approximately 16% of the total. Although the two 16%

groups were quite small, the rationale for using the standard deviation to form the groups seemed a logical one to lead to further analysis of the data.

Charts showing correlations among all variables for data ranked by SAT, GPA, and scores on the General Knowledge test may be found in Appendices B, C, and D. In each cell where comparisons are meaningful, the top number is the correlation for the high subgroup. The second number is the correlation for the middle group, and the third is the correlation for the lowest group. The last coefficient is for the total group.

Because all of the students included in this investigation were "program completers" in the sense used for submitting Title II information, they all were successful in meeting both graduation and certification/testing requirements. This then is a study of a group who were successful because of, or in spite of, their SAT scores or GPA. This study deliberately does not include those students who were lost along the way to program completion.

A subgroup of this larger group was used for the most recent and continuing part of this research. One hundred forty-six students who met the characteristics above and who completed their programs in 1998 through 2001 were rated by the full-time faculty members of the department who supervised their professional internships. The instrument for doing this was developed by one of the authors and was used to assess the student teachers' employment potential (See Appendix E). This measure of teaching skill then was correlated with the other variables important to this study. A summary chart of these correlations is included as Appendix F.

Results

The cumulative data from this exploratory study indicated that the 328 Elementary Education majors at this institution followed a normal distribution with a range from 700 to 1390, a mean of 1028.9, and a standard deviation of 127.62.

Although the sample size of 328 subjects was not large, it did suggest patterns in the overall relationships among the variables. Generally, a significant correlation in social sciences is in the .20 to .60 range. This range was observed when comparing the data for the whole group. For example, the correlation between total SAT scores and the General Knowledge test of the Praxis Series was .69 while a .44 relationship was found

between SAT total score and GPA at graduation. The correlations of SAT scores (verbal, math, and total) with the Praxis Series tests consistently were at the .4 to .6 level as were the relationships between GPA and the Praxis Series exams.

While the correlations of the whole sample appeared consistent with what one would expect, questions emerged about groups within the sample. For instance, did the same pattern hold true for students with high SAT scores, middle SAT scores, and low SAT scores? A review of these data suggested that there were differences among the correlation coefficients for the high, middle, and low groups when defined by SAT total scores, GPA, and Praxis General Knowledge test scores.

It was interesting to find that there were no significant correlations between final GPA and the SAT Verbal (.12), SAT Math (.04), and total SAT scores (.13) for students who entered college with low SAT scores. Low to moderate correlations were found for this group when SAT Verbal and total SAT were compared to Praxis Series test scores. No significant relationships were found for the low group between SAT Math and Praxis test scores, a pattern reflected by the high SAT group.

Rankings based on GPA produced more interesting findings. While significant correlations were found between final GPA and Praxis test scores for the high, middle, and total groups, the opposite was found for the low group. Only the Principles of Learning and Teaching test showed a significant correlation for these students. Smaller relationships were found for students grouped by their scores on the General Knowledge test.

Strong and considerable correlations were found between total group scores on the measure of teaching skill/potential and several other variables (see Appendix F). In virtually every case where this was true, though, the level and direction of the relationship was due to the effect of the middle sub-group. That is, most often there was no significant relationship for the high or low groups, but the middle group seemed to follow what might be predicted. In fact, the only strong relationship found for either the high or low group was that between high teaching skill scores and General Knowledge test scores.

Discussion

To a great degree, the relationships found for the total data of this study tended to match those uncovered

by others. Moderate to high correlations were found between total SAT scores and final GPA, between total SAT scores and Praxis test scores, and between final GPA and Praxis scores. This raises questions regarding what states need to require in order to maintain control over the pool of prospective teachers seeking certification. It would seem that SAT scores alone could be used to identify a certain type of teacher, but the higher the SAT score set, the more heterogeneous would be the teacher pool because those qualifying at a high SAT standard probably could meet any GPA or licensing test requirement. This, however, will not do much for the number of available candidates or for the diversity of the group. It would save the prospective teachers from spending hundreds of dollars and much time on other qualifying tests.

The real promise of this study seems to lie in understanding the differences among the three groups that were identified and isolated. In many of the relationships investigated, the correlation coefficients for the high and low groups were quite different. Some of the differences could be attributed to the sample size. Some of it probably was due to the sample selection process. That is, all students included here were "program completers" in the sense used for submitting Title II information. They all were successful in meeting graduation and certification/testing requirements, regardless of how low or high their GPA or SAT scores were. Just completing the General Knowledge test at a level required for state approval when one's SAT score was low would suggest a very different relationship than that for a person whose SAT score was very high. Some of the differences, though, likely were more complex, drawing upon variables that are much more difficult to identify and document.

The subgroups found to be one standard deviation or more below the mean when ranked on one of the variables clearly were the most interesting of the subjects of this study. This low group maintained its identity on all variables tested even as the overall group went off in a different direction.

The various low groups were and are the ones who suffer most at the hands of state law and institutional requirements regarding SAT scores, GPA, and/or state licensing test score requirements. These groups, by completing the same Praxis requirements as their classmates with higher SAT scores and higher GPAs, have shown that SAT, GPA, and Praxis scores are not necessarily good predictors of individual success. This seems to be validated by the rating scale used in this study where few significant relationships were found for

either the low and high groups when teaching skills and the other variables were compared. Many members of the lower groups have shown clearly that they can exceed expectations if given the opportunity. Yet, in these groups are the students who are often are denied the opportunity to enroll in and/or attempt to complete a certification program because of new and ever-increasing standards.

If the group at the top needs fewer qualifying hurdles, the lower group needs more varied and flexible ways to demonstrate their ability ultimately to do the work and meet the required standards. This seems especially so when our preliminary measure of teaching effectiveness seems to show that there is little relationship between this lower groups demonstrated ability in the classroom and the other variables considered in this study. We need to investigate the factors, characteristics, dispositions, and the like that make them successful. We need to convince policymakers to acknowledge different kinds of excellence if we are to give such students a fair chance to earn their place in the classroom. This seems an interesting and fruitful avenue for future work.

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Appendix A: Correlation Summary Table: SAT, GPA, and Praxis Tests

	SAT Verbal	SAT Math	SAT Total	GPA after one year	GPA at graduation	General Knowledge test	Commun-ication Skills test	Profess-ional Knowledge test	Principles of Learning & Teaching test	Education in the Elementary School test	Elementary Education: C, I, & A test	Early Childhood Education test
SAT Verbal	——	0.458	0.858	0.369	0.363	0.578	0.562	0.574	0.477	0.623	0.489	0.507
SAT Math	0.458	——	0.849	0.382	0.386	0.603	0.472	0.494	0.389	0.510	0.463	0.480
SAT Total	0.858	0.849	——	0.439	0.439	0.691	0.606	0.612	0.514	0.651	0.564	0.480
GPA after one year	0.369	0.382	0.439	——	0.845	0.441	0.436	0.516	0.512	0.448	0.555	0.417
GPA at graduation	0.363	0.386	0.439	0.845	——	0.403	0.406	0.509	0.498	0.512	0.553	0.428
General Knowledge test	0.578	0.603	0.691	0.441	0.403	——	0.391	0.667	0.462	0.642	0.588	0.578
Commun-ication Skills test	0.562	0.472	0.606	0.436	0.406	0.663	——	0.705	0.450	0.696	0.587	0.625
Professional Knowledge test	0.574	0.494	0.612	0.516	0.509	0.667	0.705	——	***	0.684	0.547	0.605
Principles of Learn. and Teach., K-6	0.477	0.389	0.514	0.512	0.498	0.462	0.450	***	——	0.596	0.627	0.487
Education in the Elem. Sch.	0.623	0.510	0.651	0.448	0.512	0.642	0.696	0.684	0.596	——	***	0.652
Elementary Ed: C, I, & A test	0.489	0.463	0.564	0.555	0.553	0.588	0.587	0.547	0.627	***	——	0.643
Early Childhood Ed test	0.507	0.303	0.480	0.417	0.428	0.578	0.625	0.605	0.487	0.652	0.643	——

Cell contents = Pearson Correlation
*** = not enough data in column

Appendix B : Correlations of sub-groups and total group: SAT total

	SATV	SATM	SATT	GPA1	GPA2	GK	CS	PK	PLT	ELED10	ELED11	ECE
SATV	xxxxx											
SATM	-.179 -.190 -.390 .458	xxxxx										
SATT	.714 .626 .418 .858	.561 .821 .674 .849	xxxxx									
GPA1	.109 .166 .083 .369	.178 .248 -.016 .382	.218 .304 .051 .439	xxxxx								
GPA2	.201 .147 .117 .363	.217 .244 .038 .386	.323 .295 .131 .439	.850 .795 .887 .845	xxxxx							
GK	.400 .223 .295 .578	-.046 .429 .055 .603	.304 .524 .291 .691	.352 .317 .233 .441	.362 .257 .236 .403	xxxxx						
CS	.293 .278 .401 .562	.082 .244 -.063 .472	.305 .391 .259 .606	.285 .305 .344 .436	.194 .291 .328 .406	.550 .520 .468 .663	xxxxx					
PK	.190 .336 .362 .574	.189 .218 .075 .494	.299 .425 .354 .612	.459 .405 .462 .516	.405 .400 .455 .509	.519 .550 .424 .667	.349 .633 .521 .705	xxxxx				
PLT	.370 .231 .351 .477	-.253 .252 -.136 .389	.149 .377 .184 .514	.456 .425 .260 .512	.464 .466 .067 .498	.488 .262 .299 .462	.246 .299 .585 .450	***** ***** ***** *****	xxxxx			
ELED10	.279 .380 .286 .623	-.047 .204 .020 .510	.192 .470 .223 .651	.262 .331 .288 .448	.392 .398 .341 .512	.441 .476 .243 .642	.628 .512 .579 .696	.319 .598 .531 .684	***** 1.000 ***** .596	xxxxx		
ELED11	.333 .256 .322 .489	.081 .288 .106 .463	.307 .431 .428 .564	.723 .426 .413 .555	.707 .456 .451 .553	.596 .493 .183 .588	.529 .468 .579 .587	***** .328 .336 .547	.499 .530 .972 .627	***** ***** ***** *****	xxxxx	
ECE	.675 .174 .223 .507	-.028 .050 -.331 .303	.638 .175 -.137 .480	.565 .269 .146 .417	.685 .241 .226 .428	.722 .346 .575 .578	.522 .514 .487 .625	.248 .604 .364 .605	.403 .305 -.751 .487	.685 .448 .152 .652	.619 .597 .216 .643	xxxxx

In each set, the top number represents the group whose total SAT score put them one standard deviation or more above the mean. The second number is for the group whose SAT total is between + and – one standard deviation. The third number is for the group whose SAT total was one standard deviation or more below the mean. The final correlation coefficient is for the total group. ***** indicates insufficient data.

Appendix C: Correlations of sub-groups and total group: Final GPA

	SATV	SATM	SATT	GPA1	GPA2	GK	CS	PK	PLT	ELED10	ELED11	ECE
SATV	xxxxx											
SATM	.535	xxxxx										
	.409											
	.269											
	.458											
SATT	.895	.856										
	.837	.841	xxxxx									
	.832	.758										
	.858	.849										
GPA1	.467	.262	.424									
	.242	.260	.299	xxxxx								
	.164	.193	.223									
	.369	.382	.439									
GPA2	.574	.276	.497	.547								
	.295	.295	.357	.788	xxxxx							
	-.063	.083	.005	.073								
	.355	.366	.422	.834								
GK	.662	.658	.753	.369	.268							
	.525	.557	.645	.315	.307	xxxxx						
	.474	.479	.597	.250	-.051							
	.578	.603	.691	.441	.395							
CS	.496	.486	.560	.373	.364	.730						
	.489	.415	.538	.312	.329	.590	xxxxx					
	.637	.350	.633	.229	-.168	.665						
	.562	.472	.606	.436	.390	.663						
PK	.707	.744	.782	.337	.293	.834	.795					
	.511	.424	.545	.305	.382	.580	.588	xxxxx				
	.562	.333	.548	.426	.021	.580	.768					
	.574	.494	.612	.516	.493	.667	.705					
PLT	.532	.392	.565	.548	.401	.673	.609	*****				
	.356	.262	.369	.237	.205	.403	.359	*****	xxxxx			
	.447	.032	.368	.369	.406	.228	.263	*****				
	.477	.389	.514	.512	.498	.462	.450	*****				
ELED10	.482	.679	.661	.244	.379	.671	.672	.515	*****			
	.574	.437	.586	.286	.428	.540	.651	.667	.596	xxxxx		
	.543	.314	.533	.123	.002	.583	.563	.502	.518			
	.623	.510	.651	.448	.486	.642	.696	.684	.596			
ELED11	.686	.429	.668	.474	.517	.706	.609	.533	.695	*****		
	.471	.357	.496	.409	.468	.535	.580	.670	.521	*****	xxxxx	
	.189	.398	.410	.326	.146	.629	.474	*****	.518	*****		
	.489	.463	.550	.555	.553	.588	.587	.547	.627	*****		
ECE	.660	.087	.493	.459	.383	.603	.755	.144	.802	.975	.964	
	.354	.173	.318	.392	.473	.417	.409	.523	.253	.536	.601	xxxxx
	.481	.562	.613	-.283	-.328	.761	.898	.785	-.803	.683	-.036	
	.507	.303	.480	.417	.391	.578	.625	.605	.487	.652	.643	

In each set, the top number represents the group whose final GPA put them one standard deviation or more above the mean. The second number is for the group whose final GPA is between + and – one standard deviation. The third number is for the group whose final GPA was one standard deviation or more below the mean. The final correlation coefficient is for the total group. ***** indicates insufficient data.

Appendix D: Correlations of sub-groups and total group: General Knowledge score

	SATV	SATM	SATT	GPA1	GPA2	GK	CS	PK	PLT	ELED10	ELED11	ECE
SATV	xxxxx											
SATM	.135											
	.263	xxxxx										
	.057											
	.458											
SATT	.819	.679										
	.795	.795	xxxxx									
	.791	.656										
	.858	.849										
GPA1	.347	.401	.489									
	.241	.199	.277	xxxxx								
	.066	.129	.074									
	.369	.382	.439									
GPA2	.375	.480	.556	.927								
	.229	.187	.262	.781	xxxxx							
	.008	.200	.128	.860								
	.355	.366	.422	.834								
GK	.156	-.042	.091	.135	.099							
	.303	.289	.372	.334	.289	xxxxx						
	.238	.064	.620	.056	.032							
	.578	.603	.691	.441	.395							
CS	.421	.258	.461	.244	.341	.286						
	.331	.199	.334	.328	.285	.409	xxxxx					
	.414	.041	.338	.179	.147	.016						
	.562	.472	.606	.436	.390	.663						
PK	.240	.268	.316	.312	.372	.293	.380					
	.365	.186	.343	.361	.332	.377	.542	xxxxx				
	.307	.027	.281	.370	.295	.158	.436					
	.574	.494	.612	.516	.493	.667	.705					
PLT	.603	.326	.646	.646	.715	.074	.615	*****				
	.316	.294	.374	.445	.477	.497	.314	*****	xxxxx			
	.299	.053	.280	.295	.069	-.029	.236	*****				
	.477	.389	.514	.512	.498	.462	.450	*****				
ELED10	.367	.164	.352	.286	.476	.064	.616	.321	*****			
	.383	.215	.374	.221	.257	.279	.471	.537	.596	xxxxx		
	.260	.007	.192	.165	.149	.012	.447	.416	.518			
	.623	.510	.651	.448	.486	.642	.696	.684	.596			
ELED11	.648	.387	.714	.818	.809	.369	.512	*****	.705	*****		
	.366	.271	.399	.535	.581	.457	.507	.514	.598	*****	xxxxx	
	-.028	.261	.123	.281	.381	.038	.172	.660	.518	.343		
	.489	.463	.550	.555	.553	.588	.587	.547	.627	*****		
ECE	.475	.400	.511	.484	.501	.268	.578	.416	.802	.324	..797	
	.270	-.072	.119	.099	.156	.139	.404	.466	.237	.226	.601	xxxxx
	.373	-.299	.225	-.049	. 036	-.012	.027	..239	-.803	-.188	-.036	
	.507	.303	.480	.417	.391	.578	.625	.605	.487	.652	.643	

In each set, the top number represents the group whose General Knowledge score put them one standard deviation(s) or more above the mean. The second number is for the group whose General Knowledge score is between + and – one standard deviation. The third number is for the group whose General Knowledge score was one standard deviation or more below the mean. The final correlation coefficient is for the total group. ***** indicates insufficient data.

Appendix E
Student Teacher Rating Form for Employment **Name of Student Teacher** _____
Semester _____ **Name of Rater** _____

	Readiness for Practice		Leadership		Working with Others
10	Completely ready to work independently without any mentoring and will make an immediate significant contribution to the school	10	Will almost immediately assume leadership roles in work with others in and beyond the classroom	10	Works extremely effectively and confidently with others in all kinds of roles and functions
9	Needs only a very minimal amount of guidance and mentoring and will make a significant contribution tp the school almost immediately	9	Will very quickly prove to be a person who can take on important tasks and provide leadership in the school setting and then later at the district level	9	Quickly will become comfortable and effective in work with others, both personally and professionally
8	With limited mentoring and experience will grow to be an excellent addition to the school's teaching team	8	Will eventually develop the confidence and experience to assert himself/herself and take leadership responsibilities at the school and district level	8	Will work very well with others on a personal level and with experience will extend influence to a professional level
7	With normal mentoring and the opportunity for growth will become a teacher who can work confidently and effectively with children	7	Will grow in a year of two to be able to take leadership roles in the local school setting	7	Will be able to work effectively with others especially once full comfortable in the immediate and extended school setting
6	With normal and continuing mentoring and some experience will be a teacher who is productive in meeting the needs of children	6	Will grow over time to be a good team member who can carry out assigned tasks and occasionally take on modest leadership responsibilities	6	Generally works well with others but occasionally exhibits self-centered and selfish behavior that interferes with relations with others
5	With careful mentoring and years of experience will become an acceptable teacher who can meet average expectations of classroom practice	5	Will grow with time, mentoring, and experience to become a good team member but cannot be expected to demonstrate any significant leadership skill	5	Generally works well with others but is unpredictable in relations, confusing those around him/her
4	With careful mentoring and years of experience will become an acceptable teacher who will not harm anyone in his/her charge	4	Likely will become an acquiescent team member who will do as told and follow directions and orders	4	Fairly regularly allows selfishness and pettiness to interfere with interactions and relations with others
3	Will need significant mentoring and supervision could grow over time to become an acceptable teacher who will keep students under control and working on some kind of instructional program	3	Will have difficulty contributing in any significant way to the work of the group but will not interfere with it	3	Requires others to initiate contacts and gives appearance of not being interested in interaction with others
2	Will need extensive, direct, and continuing mentoring and supervision to be minimally successful in early years of career	\2	Will struggle just to keep up with everyone else	2	Seems unable to make and maintain productive and effective continuing contact with others
1	Should not be allowed to be put in charge of a classroom no matter what the circumstances	1	Shows no promise at all of leading anyone, including self	1	Doesn't seen to be able to work effectively with others

Appendix E
Student Teacher Rating Form for Employment **Name of Student Teacher** _____
Semester _____ **Name of Rater** _____

	Commitment		Content Knowledge		Tolerance for Ambiguity, Problem Solving, and Coping
10	Is completely committed to doing whatever is necessary to be the best s/he can be	10	Seems extremely well prepared for the teaching role by his/her extensive command of subject content which is well beyond that which most teachers possess	10	Handles new, unusual, and/or troublesome problems without fear and with clear, strong, and effective coping and problem solving skills
9	Displays deep commitment to teaching and working effectively well beyond the norm	9	Seems to know or be able to locate all of the information a very good experienced teacher would possess	9	Is comfortable and effective in addressing new, unusual, and/or troublesome problems and possess good coping and problem solving skills
8	Is committed to teaching as a career and generally is able to act upon that commitment regularly and systematically	8	Seems to know or be able to locate all of the information one could expect an average experienced teacher to possess	8	Handles new, unusual, and/or troublesome problems effectively, being able to develop good strategies for dealing with them after thoughtful consideration
7	Is dedicated to doing what is necessary to match the norms of most teachers	7	Seems to know or be able to locate all of the information a beginning teacher should possess	7	Handles new, unusual, and/or troublesome problems effectively if given a limited measure of assistance by others
6	Generally interested in doing the best s/he can but allow some personal issues and concerns to limit that commitment	6	Seems to know or be able to locate most of the information a beginning teacher should possess	6	Handles new, unusual, and/or troublesome problems effectively when given significant help by others
5	Seems committed to the profession as long as it doesn't interfere too much with personal life	5	Seems to know or be able to locate some of the information a beginning teacher should possess	5	Handles some new, unusual, and/or troublesome problems effectively when given significant help by others
4	Is inclined, at times, to take the easy way out and do only what is necessary to maintain the status quo	4	Makes content mistakes and seems unwilling or unable to locate accurate information	4	Needs extensive help and guidance to work through new, unusual, and/or troublesome problems
3	Is inclined fairly regularly to do only what is necessary to avoid negative repercussions	3	Makes many content mistakes and seems unwilling or unable to locate accurate information	3	Only occasionally, even with assistance, can s/he solve new, unusual, and/or troublesome problems
2	There is little reason to suspect that teaching is anything more than a source of income	2	Makes so many content mistake that s/he confuses students regularly	2	Even with assistance, is not able to solve new, unusual, and/or troublesome problems
1	Doesn't seem to know what teaching requires and entails so far as commitment is concerned	1	Makes numerous content mistakes and has no idea that s/he is doing so	1	Is paralyzed by new, unusual, and/or troublesome problems

Appendix F
Correlations and P-values for Total and Sub-groups on Student Teacher Ratings

	Total Group	+1 S.D. and higher	+1 S.D. to −1 S.D.	_1 S.D. and lower
Gender	.034	-.089	.004	-.171
N=146	.687	.651	.970	.424
SAT Verbal	.126	.332	.073	-.270
N=146	.130	.084	.487	.202
SAT Math	*.188*	.312	.051	-.095
N=146	*.023*	.107	.624	.659
SAT Total	*.185*	.368	.077	-.216
N=146	*.025*	.054	.461	.310
GPA 1	*.434*	.200	*.341*	.071
N=146	*.000*	.308	*.001*	.742
GPA 2	*.519*	.129	*.421*	.051
N=146	*.000*	.512	*.000*	.811
General Knowledge	*.183*	*.518*	.199	.031
N=146	*.027*	*.005*	.054	.884
Communication Skills	*.210*	.142	*.208*	-.038
N=146	*.011*	.473	*.044*	.860
Professional Knowledge	.368	.233	.495	xxx
N=22	.092	.546	.101	xxx
Principles of Learning & Teaching	*.349*	.233	*.323*	-.223
N=124	*.000*	.323	*.003*	.307
Education in the Elementary School	.010	-.192	.032	1.000
N=25	.961	.680	.907	xxx
Elementary Education: Curriculum, Instruction, and Assessment	.020	-.070	.042	.256
N=122	.834	.756	.723	.262
Early Childhood Education	.034	.945	.237	-.035
N=39	.835	.212	.216	.929

Top number = Pearson correlation
Lower number = P-value *(italicized if below .05)*

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