Pilot Study on Teacher Effectiveness

**Determined by Teacher Education Institutional and Student
Demographics**

Submitted to
TACTE

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Background

There is limited research identifying "best practices" in the preparation of teachers. Cruickshank (1990) provides several reasons. (1) Historically, teacher preparation has largely been the responsibility of teachers' colleges, institutions dedicated to teaching not research. (2) The backgrounds of teacher educators are largely that of being successful teachers, and this tends to deflect an empirical model of investigation. (3) The dissertation is viewed as an end by the teacher educator (not necessarily a pleasant one) resulting in an often acrimonious relationship with traditional research design. (4) It is difficult in many colleges of education to reward research and this is often coupled with lack of funding for research. (5) The characteristics of teacher effectiveness are frequently viewed as too diverse or complex to study systematically.

This is especially paradoxical since state governments are insisting on increased accountability from K-12 school systems. The U.S. Congress has recently enacted legislation requiring the annual testing of America's school children. Nearly all states mandate some year-end academic achievement tests; even though most states have not been testing each student, each year. Tennessee historically used TCAP and more recently, Terra Nova, for baseline test measures. Across the country the testing movement has generated immense interest and the data have been used to describe the progress of various groups based on ethnicity, gender, and socio-economic status. Tennessee used the TCAP through the 90s and produced its initial report, TVAAS (Tennessee Value-Added Assessment System) Report in 1993 with individual teacher effects included for the first time in 1996. The focus is no longer on the score a student makes each year compared to some state or national norm, but upon the gain a student achieves from year-to-year. Tennessee is unique in this respect in that it maintains a longitudinal database on student gains. These data can be related to the experiences that a child has received in terms of teacher, school, and system. Often termed the "Sanders' Model," these procedures are being investigated by numerous states and have been adapted into several state teaching programs. To date, however, the only major longitudinal database is in Tennessee.

Problem

Short Term - A pilot study was conducted starting in the Fall of 2000 and continuing until the Summer of 2002 involving four schools of education within Tennessee to determine teacher candidate and institutional effects upon teacher effectiveness.

Long Term - A longitudinal study will be considered for the period 2002 to 2005 involving 37 schools or colleges of education within Tennessee to determine what can be learned about colleges of education and teacher candidate performance that will predict teacher effectiveness.

Importance of the Study

With many states, for example, Texas, Florida, Colorado, and Delaware, now undertaking yearly reporting on student improvement as measured by the gain-score approach, research is being performed regarding outcomes as related to inputs a child receives. In Tennessee's TVAAS model, individual student scores for grades 3 through 8 and selected high school end-of-course tests are retained on-line; mixed-model statistics allowed all individuals to be included in teacher, school, and district effects calculations. This longitudinal database allowed the investigation of teacher effects and others. That is, teacher characteristics such as specific courses required for teaching licensure, or teacher candidate data such as ACT/SAT and GPA scores, could be related to the outcomes students demonstrate on TVAAS. Questions as described in the proposal were addressed by combining existing databases: TVAAS longitudinal data and "teacher characteristic"

databases maintained by teacher training institutions.

Significance of the Study

The TVAAS database contains over six million student records and forty thousand teachers. This is the largest longitudinal student database in the nation and dates back to 1991 TCAP scoring. The database allows researchers to calculate the teaching effects by teacher, school and district. The pilot study utilized teacher candidates from four colleges or schools of education. The candidates studied have graduated during the 90s and have taught, or are teaching, in Tennessee. Student data were linked to what these teacher candidates taught. Both personal teacher candidate information and teacher education institutional demographics were linked to the teacher data. In the pilot study, about 1,000 teachers, some with data for up to seven years, were analyzed. With the pilot study completed and appropriate model limitations tested and refined, data from the 37 institutions in Tennessee with one or more teacher preparation programs will perhaps be analyzed for effects related to teacher effectiveness and whether the effects are teacher candidate or institutional specific.

Questions for the Pilot Study

1. What were the relationships between the achievement level of teacher candidates and their effectiveness in sustaining academic growth of their students?
    Example: To investigate the effects of coursework that teacher candidates complete during their academic tenure upon teacher effectiveness.
2. What were the measurable effects of the kinds and levels of educational experiences that teachers have on the academic gains of their students?
    Example: To investigate the predictability of teacher effectiveness using ACT/SAT and GPA data as predictors.
3. What were the measurable differences among the schools of education?
    Example: To investigate the type of student teaching experience and length of program as predictors of success.

Methodology

1. Researched literature on teacher effectiveness.
2. TACTE identified FHU and MTSU to participate with UTC and UTK, home institutions of the researchers. The MTSU and FHU institutions identified Dean Gloria Bonner of MTSU and Dr. Ron Butterfield/Dr. John Sweeney of FHU to be contact persons for their institutions.
3. Researchers requested permission from the institutions for data access on teacher candidates.
4. Each participating institution provided data on all its education majors graduating from 1990 through 1999 who are either Elementary School or Middle School majors or who are secondary level Mathematics majors. The current Tennessee sample represented respectively the major campus within the University of Tennessee System, a regional campus within the same system, a major teacher education site within the Tennessee Board of Regents System, and a four year private college. Each campus e-mailed a list of their majors as described above to EVAAS unit (Dr. Sanders) at the SAS office.
5. Sanders accessed the TVAAS data system to determine which of the teacher candidates from the four institutions had or were teaching within Tennessee and for whom there existed TVAAS teacher effect estimates. A list for each institution with students in the TVAAS database was e-mailed back to the contact person at each of the four campuses for verification and further data collection.

6. Each institution took the teacher candidates for whom TVAAS data was found within the database and completed a demographic sheet, utilizing the permanent record of each student.
7. Institutional demographics were also collected using institutional records.
8. The researchers analyzed the pilot data for predictors and effects contributing to teacher effectiveness.
9. Project Directors compiled the Final Report for Pilot Study.

Sample

The four colleges/universities in question comprised the sample for Tennessee. It was estimated that the students from these campuses for the decade of the 1990s, who are on the TVAAS data set would be in excess of 1,000. In fact it totaled 1588 as is seen in Table 1. All students graduating from these four higher education institutions who majored in elementary or middle school and/or those licensed in high school mathematics (end of course tests are available for high school mathematics) were included. There were 121 males and 908 females with 559 with no gender recorded. There were 79 African Americans, 944 Caucasians, 5 Hispanics, and 560 who did not have race listed. Degrees represented a total 1198 with BS in Education, 269 with an MS in Education, 24 Post Baccalaureate and 97 not listed.

Table 1
Student Numbers by Institution with Completed Demographics

Institution	Numbers	Percentage
University of Tennessee at Knoxville	246	15.49
University of Tennessee at Chattanooga	313	19.71
Middle Tennessee State University	841	52.96
Freed-Hardemon University	188	11.84
Total	1588	100.00

Variables

Variables collected and used in the teacher effectiveness pilot study of students included but were not limited to ACT or SAT scores, GPAs (both overall and in education), grades from courses in English composition, mathematics, history, speech and science, and personal demographic variables. Institutional variables include program hours by general studies, professional studies and student teaching, faculty and student body sizes, education majors per year, institutional accreditations/affiliations, and whether there was a professional development school involved in training.

In Table 2 are shown correlation coefficients for Reading by grade levels and for variables with significant correlations. There were no coefficients showing more than low correlation, even though statistically significant. Correlations worth perhaps mentioning for reading include both ACT Reading and Composite at 0.19 and 0.15 respectively, GPAs at 30 and 60 hours of 0.17 and 0.16 respectively, and grades in Teaching Reading and Composition of 0.08 and 0.11 respectively.

Table 2
Correlations for all Schools for Reading by Grade Levels
for Effective Means with Independent Variables

Inst	Grades	Subject	Variable	r	Prob	N
All	3-5	Reading	Hrs Subject in Sec. Educ. Math	-0.21	0.02	120
All	3-5	Reading	Hrs Subject in Elem. Educ. K4	-0.28	0.02	64
All	3-5	Reading	Hrs Subject in Elem. Educ. K8	-0.28	0.02	64
All	3-5	Reading	Graduation Year	-0.06	0.04	1110
All	3-5	Reading	Years To Graduate	-0.14	0.00	485
All	3-5	Reading	GPA Institution (Educ Only)	0.09	0.04	538
All	3-5	Reading	ACT Science Reasoning	0.11	0.02	494
All	3-5	Reading	Grade in Teaching Reading	0.08	0.01	1048
All	3-5	Reading	Hrs Subject in Sec. Educ. Math	-0.11	0.04	337
All	6-8	Reading	Graduation Year	-0.09	0.03	535
All	6-8	Reading	ACT Reading	0.19	0.02	146
All	6-8	Reading	ACT Mathematics	0.14	0.02	272
All	6-8	Reading	ACT Composite	0.15	0.01	280
All	6-8	Reading	Grade in Composition I	0.11	0.05	335
All	6-8	Reading	GPA at 30 Hours	0.17	0.02	198
All	6-8	Reading	GPA at 60 Hours	0.17	0.02	211
All	6-8	Reading	GPA at 90 Hours	0.15	0.03	211
All	6-8	Reading	Faculty Percent Male	0.10	0.02	533
All	6-8	Reading	Faculty Percent Female	-0.10	0.02	533
All	6-8	Reading	Student Percent Black	-0.09	0.04	533
All	6-8	Reading	Student Percent Other	0.11	0.02	456
All	6-8	Reading	Student Percent Male	0.15	0.00	527
All	6-8	Reading	Student Percent Female	-0.15	0.00	527
All	6-8	Reading	PPST Mathematics (minimum)	0.12	0.01	443
All	6-8	Reading	PPST Reading (minimum)	0.12	0.01	443
All	6-8	Reading	PPST Writing (minimum)	0.12	0.01	443
All	6-8	Reading	Hrs Subject in Sec. Educ. Math	-0.25	0.00	147
All	6-8	Reading	Hrs Subject in Elem. Educ. K4	-0.31	0.01	77
All	6-8	Reading	Hrs Subject in Elem. Educ. K5-8	-0.31	0.01	77

Similarly in Table 3 Language, Math and Science correlations that were statistically significant are displayed. Although all were low, Language is correlated with GPA at 60 hours and the number of Education graduates; Math is correlated with GPA Overall, Graduation Year, and GPA at 60 hours; Science is only correlated with ACT Science Reasoning. Continuing to Table 4 Social Studies was not strongly correlated with predictive variables; several with low statistically significant relationships are PPST Mathematics, ACT Mathematics, Grade in Math I, and Grade in Comp II.

Table 3
Correlations for All Schools for Language, Math and Science by Grade Levels
For Effective Means with Independent Variables

Inst	Grades	Subject	Variable	r	Prob	N
All	3-5	Lang	Total Hours of Graduate	-0.07	0.02	1013
All	6-8	Lang	PLT: Grades K6	0.90	0.01	6
All	6-8	Lang	GPA at 60 Hours	0.16	0.05	152
All	6-8	Lang	Undergraduate Educ. Majors	0.21	0.02	112
All	3-5	Math	GPA (Institution Overall)	0.13	0.00	875
All	3-5	Math	GPA (Cumulative)	0.09	0.03	524
All	3-5	Math	Grade in Human Growth	0.10	0.00	797
All	3-5	Math	Percent Fulltime First Time Undergraduates with Fin. Aid	-0.10	0.01	771
All	6-8	Math	Graduation Year	-0.16	0.00	456
All	6-8	Math	Grade in Composition II	0.14	0.02	289
All	6-8	Math	GPA at 30 Hours	0.19	0.01	158
All	6-8	Math	GPA at 60 Hours	0.24	0.00	168
All	6-8	Math	GPA at 90 Hours	0.15	0.05	169
All	6-8	Math	Percent Part Time Undergraduates	0.10	0.03	452
All	6-8	Math	Percent Full Time First Time Undergraduates	-0.11	0.02	452
All	6-8	Math	Student Percent Male	0.10	0.04	448
All	6-8	Math	Hours General	-0.11	0.03	381
All	6-8	Science	ACT Science Reasoning	-0.18	0.03	143

Table 4
Correlations for all Schools for Social Studies by Grade Levels
For Effective Means with Independent Variables

Inst	Grades	Subject	Variables	R	Prob	N
All	3-5	Social Studies	Years to Graduate	-0.13	0.00	456
All	3-5	Social Studies	GPA Institution (Educ Only)	0.09	0.05	509
All	3-5	Social Studies	Student Percent Race -Other-	0.09	0.00	844
All	3-5	Social Studies	Student Percent Male	0.07	0.02	1034
All	3-5	Social Studies	Student Percent Female	-0.07	0.02	1034
All	6-8	Social Studies	ACT Mathematics	0.16	0.04	169
All	6-8	Social Studies	Average ACT	0.11	0.04	330
All	6-8	Social Studies	Faculty Percent White	0.11	0.05	330
All	6-8	Social Studies	Student Percent Indian	0.14	0.01	330
All	6-8	Social Studies	Hours General	0.14	0.02	276
All	6-8	Social Studies	Hours Clinical	0.16	0.01	276
All	6-8	Social Studies	PPST Mathematics (minimum)	0.48	0.00	276
All	6-8	Social Studies	Essay	0.14	0.02	276

Some of the course grades that produced significant or near significant correlations are found in Table 5. Grade in Reading appeared the most frequently but again at a very modest value of r between 0.07 and 0.20 for those with an N of 100 or more.

Table 5
Correlations for all Schools by Subject Areas and Grade Levels
for Effective Means with Course of Study Variables

Inst	Grades	Subject	Variable	R	Prob	N
All	3-5	Lang	Grade in Human Growth	0.09	0.01	792
All	3-5	Lang	Grade in Teaching Reading	0.10	0.00	1013
All	6-8	Lang	Grade in Science II	0.16	0.06	147
All	3-5	Math	Grade in Composition I	0.06	0.08	753
All	3-5	Math	Grade in Composition II	0.07	0.05	762
All	3-5	Math	Grade in Human Growth	0.10	0.00	797
All	3-5	Math	Grade in Teaching Reading	0.05	0.10	1023
All	3-5	Math	Grade in Science I	0.07	0.06	809
All	3-5	Math	Grade in Science II	0.13	0.00	459
All	6-8	Math	Grade in Teaching Reading	0.11	0.02	420
All	3-5	Reading	Grade in Teaching Reading	0.08	0.01	1048
All	6-8	Reading	Grade in Composition I	0.11	0.05	335
All	6-8	Reading	Grade in Composition II	0.10	0.07	335
All	3-5	Social Studies	Grade in Human Growth	0.06	0.08	775
All	3-5	Social Studies	Grade in Teaching Reading	0.09	0.00	988
All	3-5	Social Studies	Grade in Composition I	0.14	0.04	212
All	3-5	Social Studies	Grade in Science I	0.08	0.02	766
All	6-8	Social Studies	Grade in Teaching Reading	0.12	0.04	304
All	6-8	Social Studies	Grade in Mathematics I	0.20	0.00	231
All	6-8	Social Studies	Grade in Early Child. Educ.	-0.69	0.04	9

Table 6 contains the more important correlates for TVAAS Gain Scores with Course
Grades for the four institutions. These range from 0.10 to 0.25 for those with an N of 100
or more. The Grade in Teaching of Reading again surfaced several times as did Grades in
Science I and II.

Table 6
Correlations for Institutions by Subject Areas and Grade Levels of
Effective Means with Course of Study Variables

Inst	Grades	Subject	Variable	r	Prob	N
MTSU	3 - 5	Lang	Grade in Teaching Reading	0.13	0.00	547
UTK	6 - 8	Lang	Grade in Science I	0.30	0.02	59
UTK	6 - 8	Lang	Grade in Science II	0.30	0.02	57
MTSU	3 - 5	Math	Grade in Human Growth	0.11	0.04	384
UTC	3 - 5	Math	Grade in Science II	0.20	0.00	204
UTK	3 - 5	Math	Grade in Science II	0.19	0.01	178
FHU	6 - 8	Math	Grade in Teaching Reading	0.43	0.04	23
UTC	6 - 8	Math	Grade in Teaching Reading	0.26	0.04	64
UTK	3 - 5	Reading	Grade in Education in US	-0.24	0.02	97
UTC	3 - 5	Reading	Grade in Science II	0.14	0.04	209
UTK	3 - 5	Reading	Grade in Teaching Reading	0.22	0.00	207
MTSU	6 - 8	Reading	Grade in Speech	0.22	0.02	121
MTSU	3 - 5	Science	Grade in Science I	0.18	0.04	135
FHU	3 - 5	Science	Grade in World Civilization	0.62	0.02	14
UTK	6 - 8	Science	Grade in Education in US	-0.49	0.01	25
MTSU	6 - 8	Science	Grade in Human Growth	0.12	0.02	372
FHU	6 - 8	Science	Grade in Teaching Reading	-0.43	0.03	25
MTSU	6 - 8	Science	Grade in Teaching Reading	0.17	0.00	532
FHU	3 - 5	Soc. Studies	Grade in Science I	0.26	0.01	86
UTC	3 - 5	Soc. Studies	Grade in Science I	0.16	0.02	201
UTK	3 - 5	Soc. Studies	Grade in Speech Oral	-0.25	0.01	105
FHU	6 - 8	Soc. Studies	Grade in Mathematics I	0.41	0.02	31
UTC	6 - 8	Soc. Studies	Grade in Mathematics I	0.31	0.03	52

The pool of candidate predictor variables was determined by selecting those with a reasonable likelihood of sufficient numbers being available in the database as well as being those generally believed by professionals to have impact in these areas. These variables appearing in the "Variable" column of Table 7 include student grades in science courses taken as part of their base program, composite institution GPAs, and selected subsets of the ACT test taken from the student's transcript. The General Linear model (GLM) in SAS was used for this investigation.

Table 7
GLM of Effective Means by Subject Areas and Grade Levels for Demographic Variables

Subject	Grades	F Value	Prob	df	R^2	Variable
Math	3-5	2.95	0.03	303	0.03	Grade In Science II
Reading	6-8	2.79	0.04	116	0.07	Grade in Science II
Reading	3-5	4.16	0.04	537	0.01	GPA in Institution Educ
Reading	3-5	2.65	0.05	116	0.07	Grade in Science II
Social Studies	6-8	5.29	0.00	69	0.19	ACT Mathematics
Social Studies	6-8	4.28	0.01	69	0.16	ACT Composite
Social Studies	6-8	2.60	0.05	331	0.02	Institution
Social Studies	3-5	4.03	0.05	508	0.01	GPA Institution (Educ)
Social Studies	6-8	2.77	0.05	73	0.11	ACT Mathematics

Summary

Data were collected on 1588 elementary/middle school and high school math teachers. For these graduates of UTK, UTC, MTSU, and FHU from the decade of the 90s, institutional records and student records were compiled into a single database for analysis by SAS. Using the TVAAS gain scores in Language, Reading, Mathematics, Science, and Social Science as dependent variables and the other variables collected by the four institutions, correlations between the TVAAS means and other variables were computed. Several tables showing the results of these analyses were presented earlier. However in no case were the correlations large enough to be important in predicting teacher effectiveness. In fact many significant correlations may be considered spurious and due to chance factors. Similarly, although GLM found several significant relationships, the values of R^2 are smaller than 0.20 indicating little or no predictability for teacher effectiveness.

The three research questions are repeated below with our conclusion following analysis.

1. What is the relationship between the achievement level of teacher candidates and their effectiveness in sustaining academic growth of their students?

    GPAs at 30, 60, 90 hours were all correlated with the Available Effects Means of TVAAS. In Reading we found the most significant correlates to be GPA in Education; in Language we found the most significant correlates to be ACTs in Reading, Math, Science Reasoning and Composite but with an R^2 about 3% or less; for Mathematics and Science we noted GPAs and ACT Science Reasoning as significant correlates respectively; Social Studies had a plethora of significant, but low R^2 correlated variables, largely institutionally based.

2. What is the measurable effect of the kinds and levels of educational experiences that teachers have on the academic gains of their students?

    Course grades in selected course yielded a small number of significantly correlated values with R^2 typically 2.5% or less. Grades in Teaching of Reading, Composition I and II, Human Growth and Development, and Science Courses were the largest.

3. What is the measurable difference among the schools of education?

    In general the effects of the student teaching experience and length of program as predictors of success were described as having an R^2 of 7% or less. Institutional differences were small with MTSU yielding six significant relationships, UTK seven, and UTC and FHU yielding five each.

    Generally it seems that a more predictive and productive study might be conducted on high school teachers as the TVAAS procedure will soon be applied to the Gateway exams.

    Project Directors will consider with TACTE the feasibility of conducting a second and major proposal looking at thirty plus schools of education pre-service variables and student data for ten years for these schools in predicting teacher effectiveness as measured by TVAAS data.

Appendix
Student Teacher Data Items
1990-2000

Institution	Institutional Codes	1005 UTK, 1010 UTC
		2005 MTSU, 3005 FHU

Degree   1=BS in Education
                               2=MS in Education
                               3=Post Baccalaureate

Graduation Year   19XX, all 4 digits

BS Major in: 1=ECE (early childhood education)
                               2=EE (elementary education)
                               3=SEM (secondary education-math)

Years to Graduate   XX (whole numbers- like 4 years not 4.7 years)

Name   20 alphabetic/ last name first, comma next, first name

SSN   9 digit alpha Social Security Number

Program Type   1=traditional
                               2=leading to a MS
                               3=alternative Certification

Race   1=African American   4=Asian   7=Other
                               2=Caucasian   5=American Indian
                               3=Hispanic   6=Alien

Gender   1=male
                               2=female

Birth Year   19XX, all 4 digits

Instate/Out-of-State   1=instate
                               2=out of state

Total Hours   YYY semester/hours

GPA   Institutional overall   X.XX/4.00   Cumulative   X.XX/4.00
       Institution education only   X.XX/4.00

High School GPA   X.XX/4.00

SAT Scores
SAT V   XXX   SAT Overall   XXX
SAT M   XXX

ACT Scores
1. English   XX
2. Reading   XX
3. Mathematics   XX   ACT composite   XX
4. Science Reasoning   XX

Grades in Selected Courses

1.	English Comp I	X.X	GPA at end of: (aprox.)	30 hours	X.XX
2.	English Comp II	X.X		60 hours	X.XX
3.	World Civilization	X.X		90 hours	X.XX
4.	Human Growth and Dev.	X.X	Number Math courses taken		XX
5.	Education in US	X.X			
6.	Teaching Reading	X.X			
7.	Speech (Oral)	X.X			
8.	Science I	X.X			
9.	Science II	X.X			
10.	Math I	X.X			

Institutional Data (General or University)

Faculty Numbers in University	XX
Percent University Faculty with doctorate	XX
Undergraduate Students in University	XXXXX
Total University Students	XXXXX
Faculty Student ratio	XX.X
Average University ACT composite	XX.X
Average University SAT	XXXX.X
Numbers Full-time First-time Undergraduate students	XXXXX
Percent Part-time Undergraduate students	XX.X
Percent Full-time First-time Undergraduates (University)	XX.X
Percent Full-time First-time Undergraduate students with financial aid	XX.X

Carnegie Institutional Type   1994 Classifications
(Note –different classification system in effect for 2000)

Research University I	1	Masters (Comprehensive) I	5
Research University II	2	Masters (Comprehensive) II	6
Doctoral University I	3	Baccalaureate College I	7
Doctoral University II	4	Baccalaureate College II	8
		Specialized Institutions	9

SACS Accredited	1=yes
	2=no

University Faculty Demographics

Race (Percent)		
	Black	XX.X
	White	XX.X
	Hispanic	XX.X
	Asian	XX.X
	American Indian	XX.X
	Alien	XX.X
	Other	XX.X

Institutional Data (Education Specific)
Year 1990-2000

Institution	Institutional Code	1005 UTK, 1010 UTC
		2005 MTSU, 3005 FHU
Degree	1=BS in Education	
	2=MS in Education	
	3=Post Baccalaureate	

Graduation Year	19XX, all 4 digits	

BS Major in:	1=ECE (early childhood education)	
	2=EE (elementary education)	
	3=SEM (secondary education-math)	

Program Hours Allocation

General Studies/General education	XX
Pedagogy	XX
Subject Specific Pedagogy	XX
Clinical	XX
Subject Matter if Secondary Math	XX

Faculty

Numbers in Education (college/Dept)	XXX
Percent Faculty in Education with doctorate	XX

Undergraduate Education majors (BS level) graduating this year	XXX
Faculty Student Ratio (Education)	XX.X

AACTE Affiliated	1=yes
	2=no

NCATE Accredited	1=yes
	2=no

PDS (component in degree)	1=yes
	2=no

Percent of University Budget that the College of Education is	XX

Major Required in Subject Matter (such as Math) (yes/no)	1=yes
	2=no

Institutional Data (Education Specific)
Year 1990-2000

Requirements for Program Entry
Test score Minimums

PPST	Math Minimum	XXX
	Reading Minimum	XXX
	Writing Minimum	XXX
CBT	Math Minimum	XXX
	Reading Minimum	XXX
	Writing Minimum	XXX
ACT Composite Minimum		XX
SAT Minimum		XXXX

GPA Minimums	
GPA Cumulative	X.XX
GPA At Institution	X.XX
GPA on all Professional Courses	X.XX
GPA on Content Areas	X.XX

Additional Requirements
Interview Required   1=yes
                                            2=no
Essay Required   1=yes
                                            2=no
Req. Course "Education in US"   1=yes
                                            2=no
Req. Course "Human Growth/Dev"   1=yes
                                            2=no
Req. Course "Teaching Reading"   1=yes
                                            2=no

Institutional Specific Variables
1990-2000

Gender (Percent)	Male	XX.X
	Female	XX.X

University Student Demographics

Race (Percent)	Black	XX.X
	White	XX.X
	Hispanic	XX.X
	Asian	XX.X
	American Indian	XX.X
	Alien	XX.X
	Other	XX.X
Gender (Percent)	Male	XX.X
	Female	XX.X

Fifth year program   1=yes
                                            2=no

PDS I   1=yes
                                            2=no

PDS II   1=yes
                                            2=no