Texas Collaborative for Excellence in Teacher Preparation

TxCETP

Prairie View A&M University

CAMPUS REPORT May 2005

I. INTRODUCTION

This document presents a progress report of Prairie View A&M University (PVAMU), with a focus on the cumulative impact of TxCETP and plans for sustaining accomplishments. The report is organized by TxCETP goals, which cover these areas:

1. Course reform
2. Recruitment of students to STEM teaching
3. Preservice teacher and novice teacher support
4. Systemic reform connections

Because of the inherent overlap between Goal 2: Recruitment, and Goal 3: Preservice teacher and novice teacher support, the reader may find individual campus differences in which goal the strategies and activities are placed to accomplish these goals.

The following data sources have been used to show evidence of the extent to which these goals have been achieved:

- NSF reporting system
- State Board of Educator Certifications
- Student and faculty course surveys
- Campus Team Leader reports/interviews
- Campus Strategic Plan
- NSF Scholar application narratives

To provide a context for interpreting the TxCETP progress data, the next section includes some background information on PVAMU - a brief campus description, faculty and K-12 teacher involvement in TxCETP, and student participation in the teacher education program.

II. BACKGROUND INFORMATION

1. CAMPUS DESCRIPTION

Prairie View A&M University is a comprehensive public institution of higher education and a member of the Texas A&M University System. It is the second oldest university in Texas, second only to Texas A&M University. This historically black university is located 45 miles northwest of Houston and is known as one of the nation's top producers of African-American engineers and one of the state's largest sources for African-American registered nurses.

PVAMU is dedicated to excellence in teaching, research and service. It serves a diverse ethnic and socioeconomic population, producing graduates in careers geared towards working in the Texas Gulf Coast Region, the Northwest Houston Corridor, and Texas urban centers. Besides engineering and

nursing, degree programs include computer science, natural sciences, architecture, business technology, criminal justice, education, and mathematics.

Based on the most recent IPEDS data from school year 2003-04, the overall enrollment grew by 25% from 5,849 students in Fall of 1994 to 7,808 students in Fall of 2003. 77% of the Fall 2003 students were undergraduates, and 92% of them were Black/Non-Hispanic. The University awarded 711 Baccalaureate degrees between July 1, 2003 and June 30, 2004, 115 of these in Health Professions and Related Clinical Sciences, 100 in Biological and Biomedical Sciences, 85 in Business Management, Marketing and Related Sciences, 54 in Engineering Technologies/Technicians 51 in Multi/Interdisciplinary Studies.

Four community colleges (CC) are the primary feeder institutions for PVAMU: Cypress College, North Harris Montgomery County Community College District, Blinn College, and Houston Community College System.

2. PARTICIPATION IN TXCETP BY CALENDAR YEAR

The following tables show the number of faculty and K-12 educators involved in TxCETP implementation and benefiting from these reform efforts by PVAMU since the year 2000:

Table 1a: Campus Participation by Calendar Year

	Implementation					Beneficiaries				
	2000	**2001**	**2002**	**2003**	**2004**	**2000**	**2001**	**2002**	**2003**	**2004**
College of Education	1	1	2	1	0	0	0	2	1	1
Science	2	3	3	1	0	0	0	1	1	1
Mathematics	2	2	2	4	2	0	0	2	2	1
Other	0	0	0	0	0	0	0	0	0	0
Total	**5**	**6**	**7**	**6**	**3**	**0**	**0**	**5**	**4**	**3**

Source: NSF Data Reports

Table 1b: Community College Participation

	Implementation					Beneficiaries				
	2000	**2001**	**2002**	**2003**	**2004**	**2000**	**2001**	**2002**	**2003**	**2004**
College of Education	0	0	0	0		0	0	0	0	
Science	0	0	0	0		0	0	0	0	
Mathematics	0	0	0	0		0	0	0	0	
Other	0	0	0	0		0	0	0	0	
Total	**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	

Source: Campus Activities Reports

Table 2: K-12 Participation by Calendar Year										
	Implementation					Beneficiaries				
	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
Elementary Teachers	0	0	0	0	0	0	0	4	3	0
Mathematics Teachers	2	0	0	1	0	2	0	16	2	0
Science Teachers	2	0	0	0	0	2	0	4	0	0
Mathematics/ Science Teachers	2	0	0	0	0	2	0	0	0	0
Administrators	0	0	0	0	0	0	0	2	2	0
Other/Unknown	0	0	0	0	0	0	0	0	12	0
Total	**6**	**0**	**0**	**1**	**0**	**6**	**0**	**26**	**19**	**0**

Source: NSF Data Reports

3. Student Participation in Teacher Preparation Program – Enrollment, Graduation, and Certification

The next four tables provide the following information:

- Juniors and seniors enrolled in teacher preparation program by major and ethnicity
- Bachelor degrees from the teacher preparation program by major
- Post-Baccalaureate certification students from the teacher preparation program by major
- Initial ExCET/TExES Test Takers by Area and Academic Year

The key for the column headers is as follows: E = Elementary Education, M=Mathematics, S=Science.

Table 3: Juniors & Seniors Preparing to be Teachers by Ethnicity and Major																				
Ethnicity	Fall 2000				Fall 2001				Fall 2002				Fall 2003				Fall 2004			
	E	M	S	Total	E	M	S	Total	E	M	S	Total	E	M	S	Total	E	M	S	Total
African American/Black	216	1	5	90%	264	2	5	89%	196	1	4	89%	151	0	0	90%	125	2	1	93%
Anglo/White	17	0	0	7%	23	0	0	8%	16	0	0	7%	14	0	0	8%	9	0	0	6%
Hispanic	9	0	0	3%	10	0	0	3%	8	0	0	4%	2	0	0	1%	0	0	0	0%
Native American	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	0%
Asian	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	---	1	0	0	1%
Other/Not Reported	0	0	0	---	0	0	0	---	0	0	0	---	1	0	0	1%	0	0	0	0%
Total	**242**	**1**	**5**	**248**	**297**	**2**	**5**	**304**	**220**	**1**	**4**	**225**	**168**	**0**	**0**	**168**	**135**	**2**	**1**	**138**

Source: NSF Data Reports

Table 4: Baccalaureate Degrees Awarded to Students Preparing to be Teachers by Major and Calendar Year																				
Ethnicity	**2000**				**2001**				**2002**				**2003**				**2004**			
	E	**M**	**S**	**Total**	**E**	**M**	**S**	**Total**	**E**	**M**	**S**	**Total**	**E**	**M**	**S**	**Total**	**E**	**M**	**S**	**Total**
African American/Black	58	1	2	90%	57	0	2	89%	45	0	2	89%	39	1	3	86%	73	0	0	80%
Native American	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	0%
Asian	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	---	0	0	0	0%
Anglo/White	5	0	0	7%	5	0	0	8%	4	0	0	8%	6	0	0	12%	17	0	0	19%
Hispanic	2	0	0	3%	2	0	0	3%	2	0	0	3%	0	0	0	---	0	0	0	0%
Other/Not Reported	0	0	0	---	0	0	0	---	0	0	0	---	1	0	0	2%	1	0	0	1%
Total	**65**	**1**	**2**	**68**	**64**	**0**	**2**	**66**	**51**	**0**	**2**	**53**	**46**	**1**	**3**	**50**	**91**	**0**	**0**	**91**

Source: NSF Data Reports

Table 5: Post-Baccalaureate Students Certified by Major and Calendar Year					
Major	**2000**	**2001**	**2002**	**2003**	**2004**
Elementary Education	53	70	80	30	
Mathematics	5	11	3	2	
Science	0	4	0	1	
Mathematics/Science	0	0	0	0	
Total	**58**	**85**	**83**	**33**	

Source: Campus Activities Reports

Table 6: Number of Initial ExCET/TExES Test Takers by Area and Academic Year					
Area	**(9/99-8/00)**	**(9/00-8/01)**	**(9/01-8/02)**	**(9/02-8/03)**	**(9/03-8/04)**
Early Childhood Education	3	-	9	6	-
Elementary Comprehensive	8	14	63	64	-
Professional Development (Elementary)	24	44	65	83	-
Generalist EC-4	-	-	-	4	53
Generalist 4-8	-	-	-	1	14
Pedagogy and Professional Responsibilities EC-4	-	-	-	2	59
Pedagogy and Professional Responsibilities 4-8	-	-	-	-	42
Pedagogy and Professional Responsibilities 8-12	-	-	-	2	103
Pedagogy and Professional Responsibilities EC-12	-	-	-	1	136
Mathematics (Secondary)	6	9	13	12	-
Mathematics 4-8	-	-	-	4	2
Mathematics 8-12	-	-	-	1	32
Science 4-8	-	-	-	-	7
Science 8-12	-	-	-	-	19
Biology (Secondary)	7	8	10	7	-
Chemistry (Secondary)	1	2	1	-	-
Composite Science (Secondary)	-	2	9	8	-
Earth Science (Secondary)	-	1	-	-	-
Life/Earth Science (Secondary)	1	2	3	-	-
Life Science 8-12	-	-	-	-	15
Physical Science (Secondary)	-	-	-	-	-
Physics (Secondary)	-	1	-	-	-
Psychology (Secondary)	1	-	-	-	-
Sociology (Secondary)	-	1	-	-	-

Source: SBEC Reports

III. CUMULATIVE IMPACT OF TXCETP ON THIS CAMPUS

GOAL 1: COURSE REFORM

This section of the report describes the cumulative impact made to date in the area of Course Reform to systemically improve STEM teacher preparation. Specifically how TxCETP has impacted this campus in the TxCETP wide objectives:

- Expand course reform from Biology to Chemistry, Physics, Earth Sciences, and courses taken by elementary, math/science preservice teachers and potentially to all students enrolled in these courses.
- Integrate Texas Essential Knowledge and Skills (TEKS) and the state standards for teacher certification into mathematics and science courses.
- Introduce course reform to faculty through the use of various TxCETP-sponsored projects (e.g., Multi-Initiative Dissemination Chemistry Workshops, Inquiry for Professors, TxCETP Forum)

In addition, other impacts on this campus as a result of involvement in the TxCETP initiative are reported.

CUMULATIVE IMPACT OF TXCETP ON COURSE REFORM

Information not provided.

Table 7: Reformed Courses and Student Enrollment by Calendar Year

Course #	Course Title	Enrollment				
		2000	2001	2002	2003	2004
MATH 4053	Foundations of Mathematics	10	20	11	9	
MATH 4003	Mathematics Models and Applications	15	-	8	11	
MATH 2003	Elementary Statistics	30	-	-	37	
MATH 1113	College Algebra	-	140	155	39	
MATH 1123	Trigonometry	-	-	-	31	
MATH 3933	Geometry	-	50	-	-	
MATH 5003	Real Numbers	-	-	14	-	
Total		**55**	**210**	**188**	**127**	

Source: NSF Data Reports

Table 8: Student and Faculty Course Survey Results by TxCETP Vision Indicators

Vision Indicators	Percent of All Item Responses that were Always/Usually					
	Fall 2003		Spring 2004		Fall 2004	
	Student (n=78)	Instructor (n=6)	Student (n=73)	Instructor (n=5)	Student (n=77)	Instructor (n=4)
Course Design	62%	90%	55%	100%	78%	100%
Prior Knowledge	74%	100%	65%	96%	77%	100%
Instructional Strategies	76%	95%	65%	95%	77%	100%
Assessments	79%	100%	72%	93%	79%	100%
Problem Solving	77%	90%	64%	70%	75%	100%
Multiple Representations	64%	87%	53%	67%	71%	100%
Learning Environment	73%	100%	58%	87%	79%	100%
Books, Materials & Technology	50%	80%	56%	80%	79%	100%

Source: Fall, 2003 Course Surveys; Spring, 2004 Course Surveys; Fall, 2004 Course Surveys

GOAL 2: RECRUITMENT OF PRESERVICE TEACHERS

This section of the report describes the cumulative impact made to date in the area of Recruitment of more undergraduate students to STEM teaching. Specifically how this campus has been impacted by the TxCETP wide objectives:

- Use introductory courses and summer experiences to target freshmen and sophomore mathematics and science undergraduates for preservice teacher recruitment and retention.
- Use alternative certification and post-baccalaureate pathways for junior and senior mathematics and science majors who become interested in teaching careers.
- Recruit high school students from local districts, from the Texas and South Texas Rural Systemic Initiatives (TRSI and STRSI) districts, and from Regents' Initiative (TX A&M System Schools only) partner school districts to teaching careers.
- Recruit community college students with declared interest in STEM teaching careers, and facilitate their transfer to TxCETP campuses.

CUMULATIVE IMPACT OF TXCETP ON RECRUITMENT

Information not provided.

GOAL 3: SUPPORT FOR PRESERVICE AND NOVICE TEACHERS

This section of the report describes the cumulative impact made to date in the area of Support for Preservice and Novice Teachers to increase retention and quality. Specifically how TxCETP has impacted this campus in the TxCETP wide objectives:

- Disseminate reformed courses for preservice mathematics and science students. Include emphasis to tie to Informal Science partners (e.g., Fort Worth Museum, Texas Parks and Wildlife, Texas State Aquarium)
- Use student chapters of NCTM, NSTA, scholarships (TxCETP and Noyce Scolars), and travel awards to conferences to support preservice mathematics and science teachers.
- Assist with placement, induction and sustained professional development to novice mathematics and science teachers.

CUMULATIVE IMPACT OF TXCETP ON SUPPORT FOR PRESERVICE AND NOVICE TEACHERS

Information not provided.

Table 9: TxCETP Scholars (L1), Student Awards (L2) and Noyce Scholars by Major												
Majors	**2002**				**2003**				**2004**			
	L1	**L2**	**Noyce**	**Total**	**L1**	**L2**	**Noyce**	**Total**	**L1**	**L2**	**Noyce**	**Total**
Elementary	0	0	0	0	0	0	0	0	0	0	0	0
Mathematics	3	0	1	4	6	0	1	7	6	0	2	8
Science	1	0	0	1	1	0	0	1	0	0	1	1
Mathematics/Science	1	0	1	2	0	0	1	1	0	0	0	0
Total	**5**	**0**	**2**	**7**	**7**	**0**	**2**	**9**	**6**	**0**	**3**	**9**

Source: TxCETP Scholarship Database

GOAL 4: MAKING SYSTEMIC REFORM CONNECTIONS

This section of the report describes the cumulative impact made to date in the area of Strengthening Systemic Reform Connections to maximize alignment and impact. Specifically how this campus has been impacted by the TxCETP wide objectives:

- Collaborate with STRIS/TRSI by involving mathematics and science specialists, and Teacher Partners in mentoring, lesson modeling, observations, workshops, etc. with TxCETP preservice and novice teachers.
- Collaborate with Texas Education Agency (TEA), State Board for Educator Certification (SBEC), and others to construct the new Texas Examinations of Educator Standards (TExES) to reflect standards-based instruction.
- Collaborate with Regents' Initiative (A&M Systems Schools) to coordinate activities with mathematics and science Academy members, campus recruiters, and data collection resources.

CUMULATIVE IMPACT OF TXCETP ON MAKING SYSTEMIC REFORM CONNECTIONS

Information not provided.

IV. STRATEGIES TO INSTITUTIONALIZE ACCOMPLISHMENTS

This section of the report describes plans for sustaining TxCETP accomplishments on this campus for each of the four goals: Course Reform, Recruitment of Students to STEM Teaching, Preservice Teacher and Novice Teacher Support and Systemic Reform Connections. In addition, plans to sustain other accomplishments on this campus as a result of involvement in the TxCETP initiative are reported.

PLANS FOR SUSTAINING COURSE REFORM

Information not provided.

PLANS FOR SUSTAINING RECRUITMENT OF STUDENTS INTO STEM TEACHING

Information not provided.

PLANS FOR SUSTAINING PRESERVICE AND NOVICE TEACHER SUPPORT

Information not provided.

PLANS FOR SUSTAINING SYSTEMIC REFORM CONNECTIONS

Information not provided.

PLANS FOR SUSTAINING OTHER TXCETP-RELATED ACCOMPLISHMENTS

Information not provided.