

The El Paso Mathematics and Science Program Annual Report October 2002-September 2003

I. Introduction

El Paso's Math and Science Partnership program aims to improve student achievement in mathematics and science among all students, at all PreK-12 levels, and significantly reduce the achievement gap. In this, the first year of El Paso MSP, our work has focused on creating a solid foundation to carry out the transformation of teaching and learning of mathematics and science in our area schools and districts. The following are the foundation accomplishments that El Paso MSP has put into place this year.

Return on Investment

El Paso MSP, in its first year, has:

- developed a comprehensive and thoughtfully crafted five-year strategic plan, bringing together all the key partners, PreK-16, to deepen commitment and support of the program's vision and goals, and to facilitate the implementation of a results-oriented project;
- developed a dynamic and functioning Year One implementation plan that sets down commitments, details the work to be accomplished, and articulates the responsibilities of each partner, thus establishing an accountability structure;
- created an infrastructure critical to the success of MSP by investing in building relationships and understanding of MSP goals/activities among postsecondary faculty, elementary, middle, and high school principals, and key district office leaders;
- brought together a full cadre of math/science staff developers and district/region directors and began the process of deepening their content knowledge and their understanding of how to implement and sustain MSP work in schools and districts;
- brought together the city's K-16 math/science leadership, including school and district leaders, community college and university deans and provost to guide and support math/science improvement efforts and to promote the improvement of mathematics and science teacher education programs.

II. Overview of Year One Implementation

As planned, the first year of El Paso MSP implementation has focused primarily on setting the foundation for long term success of the MSP agenda. One of the lessons learned from El Paso's implementation of broad systemic reform initiatives, including the National Science Foundation's Urban Systemic Initiative (USI), is that overly ambitious implementation in the early months of any new and complex grant can lead to "building on shaky ground." Especially with a large and multifaceted endeavor, such as El Paso's Math and Science Partnership, failure to invest adequate time in ensuring that all key players have fully bought in and are at the table as the key elements of the implementation plan are defined, often leads to indifferent, even hostile reactions to new efforts toward educational improvement.

What this has meant for MSP is that rather than beginning implementation of the key elements immediately in Year One, we utilized the time to plan with school, district and post-secondary leaders and to deepen their commitment and support for MSP. As a result we have built ownership among superintendents, principals, and college/university faculty for carrying out project goals and activities. In addition, we have prioritized establishing processes for monitoring and accountability for program implementation and success.

Every activity carried out in year one meets the commitments delineated in the Year One Implementation Plan and supports the successful evolution of the five-year MSP program. The next section describes progress to date toward achieving each MSP goal and objective.

II.I. Key Element One: Increasing and Sustaining the Quantity and Quality of PreK-12 Mathematics and Science Teachers

The first key element addresses the Partnership's efforts to increase and improve the quantity and quality of certified math and science teachers across the twelve partner districts. Strategies include roles for the University of Texas at El Paso (UTEP), the El Paso Collaborative for Academic Excellence, Region 19 and participating districts, and focus on a continuum ranging from enhancing the skills of current well-trained and certified math and science teachers through Master's programs to encouraging high school students to consider careers in teaching.

Objective 1.1: Develop and enhance Master of Arts in teaching mathematics and science programs.

The College of Science has made considerable progress in fulfilling the objectives for the first MSP program year. One objective was to enhance an existing Master of Arts in Teaching Mathematics (MATM) into a program tailored to the needs of working middle and high school teachers. This past year, a planning committee, composed of senior faculty of the Department of Mathematics, was organized and has revised existing courses and developed new courses for the new MSP/MATM.

As projected, the initial courses for the MSP/MATM were listed in the UTEP Summer I & II 2003 class schedules, and a first cohort of students has enrolled and completed their first set of courses by the end of the summer. The committee is pursuing the formal approval of the MSP/MATM so that all courses receive appropriate graduate-level course numbers. Continued revision of existing courses will be implemented to accommodate the needs of the cohort. Additionally, Calculus I and Calculus II will be offered in the Fall 2003 semester, as pre-MSP/MATM to interested applicant teachers with insufficient mathematical background to ensure their enrollment and success in a future MSP/MATM cohort. All classes will be offered at times convenient to working teachers.

The search committee to recruit new faculty for the MSP/MATM courses was established. Positions were advertised, four candidates were invited to interview, and one candidate has been offered a position. A final candidate will be interviewed in late June, 2003.

For the new Master of Arts in Teaching Science (MSP/MATS), a search committee has been established and is currently seeking two new science faculty in Physics. The new MSP/MATS will be offered for the Fall 2003 semester. The curriculum planning committee has focused on prerequisite coursework for a physical science degree because of the critical need for qualified physics and chemistry teachers. The first cohort for the MSP/MATS degree will be a physics and chemistry composite. Other composite majors with other disciplines within the College of Science will be planned for subsequent cohorts.

Objective 1.2: Create the MSP Scholars to support twenty students each year to work toward middle school or high school mathematics or science certification.

In Spring 2003, the College of Science's MSP Advisory Board strongly endorsed the recruitment of scholars. Extensive work was undertaken to identify local teachers who are uncertified or teaching out of field. Recruitment was initiated through an intensive campaign directed at teachers, schools, districts and region. The campaign included newspaper, poster, and radio dissemination. After an informational meeting for interested teachers in May, twenty-seven applications were submitted and twenty-three were accepted into the MATM programs beginning during the summer semesters. To date, 19 have successfully completed the Summer I course. Additional information was sent to area schools for Fall 2003 enrollment.

Objective 1.3: Create the NSF Scholars Program for Alternative Certification (ACP) Professionals.

Work toward creation and implementation of the NSF Scholars Program for ACP Professionals is on schedule and the Year One Implementation Plan Action Steps have been completed. An ACP Scholars program has been designed by a faculty and staff team and the pool of candidates for participation has been identified. A faculty/staff committee will select the first group of 10 ACP Scholars from a pool of approximately 25 who completed the ACP program in May with specializations in mathematics or science. The 10 selected scholars will benefit from an orientation and advising program concurrent with their enrollment this Fall in a program leading to a masters degree in math or science education.

Objective 1.4: Recruit undergraduate engineering students into secondary math/science teaching.

Dr. Louis Everett, Chair of Mechanical and Industrial Engineering leads this project and has held weekly meeting with MSP staff and other engineering faculty to plan and organize MSP activities. In Year One of MSP, the Teacher Recruitment Program (TRP) in the College of Engineering was established, and four undergraduate students and one graduate student were hired to assist in program planning and recruitment. These students participated in the TRP May workshop held May 22-29. Teaching and learning theories were at the heart of the workshop that utilized a collaborative, team-based approach. The training was also offered to other interested engineering students, and a total of eight participated in the program. In addition, two engineering faculty have been identified to work with the TRP students enabling them to apply newly-learned pedagogical skills in classroom settings as a way of encouraging them to pursue teaching as a career choice and to promote it among the College of Engineering community. The

TRP students continue to work closely with faculty throughout the summer. Weekly meetings are held to prepare, reflect, and provide professional development in pedagogical approaches and teaching/learning theory. Students are maintaining documentation and reflection both in soft and hard copy including online journals for reflection and goal setting.

Objective 1.5: Create an induction program to keep new math and science teachers in the profession.

All action steps of the Year One Implementation Plan are on schedule. Two faculty members have been designated as Coordinators of the Induction program for new math and science teachers. Associate Professor Sally Blake is coordinating the induction program in science and Associate Professor Mourat Tchoshanov is coordinating the program in mathematics. Both have excellent reputations in their respective fields and both have extensive experience in working with teachers and public schools. An attractive brochure was printed and distributed to recently graduated teachers. Program Coordinators are now in the process of selection of the first group of 15 math and science teachers to begin a 2-year induction program in the coming Fall (2003). The selection of candidates will be followed by an orientation and advising program to be held in September 2003, and principals from candidates' respective schools will be notified regarding their participation.

Objective 1.6: Build a solid mathematics and science focus in high school teaching magnet programs.

The two action steps toward building a math/science focus in high school teaching magnet programs in the Year 1 Implementation plan involve: the identification of target magnet schools, and the beginning of a year-long planning process with the target schools. In year 1, five target schools have been identified. These include Riverside High School, Socorro High School, Chapin High School, Silva Health Magnet School and Bel Air High School. In addition, initial meetings with magnet school administrators are scheduled toward the end of the Summer, 2003. Advertising and recruitment of a ½ time coordinator for the magnet school initiative will also take place this summer.

Objective 1.7: Build a cadre of mathematics and science staff developers.

One critical aspect of increasing and sustaining the quality of PreK-12 math/science teachers is the professional development, sustained and connected over time, provided in classrooms, and where teachers receive feedback about how they are implementing new learning. This professional development is to be provided by a cadre of highly qualified math and science master teachers. After thorough discussions with key partners, job descriptions for MSP and staff developers were developed and finalized. All districts partners have advertised these positions, interviews are ongoing, and a majority of staff developers have been hired. Professional development for the master teachers has been designed, and will take place throughout July and August, 2003. The training will include a comprehensive orientation and preparation for the role of staff developer as well as training on Algebra I and II curriculum frameworks, TEXTEAMS in math and science, and content-focused coaching. To prepare for

the new school year, staff developers will work closely and intensively with district MSP directors to ensure a smooth transition to their high school site that will serve as their home base.

Objective 1.8: Build a cadre of outstanding math and science teachers through National Board Certification.

All of the Action Steps in the Year 1 Implementation Plan toward developing a set of National Board certified math and science teachers have been met ahead of schedule. Deborah Svedman, a National Board Certified teacher of mathematics—one of only two in the El Paso region—was hired in February as Coordinator of the NBC effort. She held a series of informational and orientation meetings with administrators and interested teachers across local school districts. Out of those sessions, a first cohort of 12 interested teachers from two school districts was recruited to attend a series of candidate support workshops. This first cohort has already completed four of five workshops, and we anticipate a number of these candidates will apply for the year-long National Board certification process. Work is now underway to identify—prior to end of Summer, 2003—a new cohort of interested teachers for Year 2.

II.2. Key Element Two: Building School and District Capacity

The second key element focuses on issues central to supporting the improvement of math and science instruction in PreK-12 classrooms via leadership at the school and district level. Activities also include an increased parent engagement

Objective 2.1: Establish Principals' Academy to facilitate and sustain school improvement efforts.

One factor critical to implementing and sustaining standards-based instruction is the ability of school administrators to facilitate and actively support teacher efforts for improving teaching and learning. In Year One of MSP, Collaborative leadership has met biweekly with district and region MSP directors and monthly with superintendents and district curriculum and instruction leaders to plan initial MSP activities in the districts and schools as well as to design and organize Principal Seminars around MSP's vision and goals. The Collaborative has conducted formal meetings with principals to ensure a smooth launching of and commitment to the work of MSP. In addition, MSP district directors meet individually and with small groups of principals to share the goals of and plans for MSP and to get feedback and ideas for successful implementation of MSP activities. In May and June, Collaborative staff and district MSP directors met to develop a comprehensive plan for Year Two Principal Academies that will include attention to results-based reform efforts, data analysis, strategic planning, and content-focused coaching aimed at the successful implementation of the K-16 math and science curriculum frameworks. Formal district and school-wide launching of MSP will take place during a two-day School Leaders MSP Convocation in July.

Objective 2.2: Build District-Level Capacity and Support for School Sites.

As discussed in the previous section, regular, ongoing meetings with superintendents and other district leaders have taken place to ensure coherence, consistency, ownership and support for all MSP goals and activities, and to maintain a tight math/science instructional focus. An MSP Leaders' Retreat was held in April and conducted by the Collaborative leadership. MSP district directors, central office associate superintendents, facilitators and specialists from both rural and urban districts attended the retreat which provided an opportunity to "unpack" the implementation plan, to strategize and organize MSP launchings in each district, and to plan the summer's professional development activities. Regular monthly meetings with MSP district directors during Spring 2003 addressed important program and budget aspects of MSP, such as, updates on progress toward the implementation plan and related issues. The two-day MSP Convocation in July will formally launch MSP in the districts and will draw over three hundred principals and assistant principals, MSP staff developers, math and science department chairs and teachers, and higher education faculty. All MSP districts will include the new staff developers in district-wide orientation activities and school openings to introduce them to the educational community and to ensure that they become an integral part of the districts' overall instructional program.

Objective 2.3: Engage parents and community to support mathematics and science reform.

During Year One, the parent teams of the Parent Educators Network (PEN) were prepared for the upcoming implementation of the MSP program in their children's school. Many of the topics discussed in the monthly meetings included ideas embodied in the MSP math and science activities. For example, the seminars emphasized the importance of high-level mathematics and science for preparation to higher education, and the role parents play in supporting greater student achievement. In addition, presentations on the development of state standards and the current Texas Assessment of Knowledge and Skills (TAKS) test helped parents understand the rigor and demanding nature of the new assessment. Discussions centered on the increased expectations of students and the implications of the "No Child Left Behind" Act. Connections were made between the new standards and expectations and MSP program goals and objectives. For Year Two of MSP, an implementation plan for parent teams will include deeper learning about the goals and objectives of the MSP initiative, ways to support schools and students in this endeavor, and parents' crucial role in promoting student success. Further, parent teams will develop strategies to inform and extend the learning to the greater community of parents at their schools.

In addition to work with parents, community-wide outreach in Year One focused on the importance of student preparation for higher education. Fulfilling one of MSP's commitments, region-wide recognition of Texas Scholars was achieved through the presentation of medallions at high school awards and graduation ceremonies. Also, a special ceremony and awards event was organized by the El Paso Collaborative to recognize schools graduating the highest percentage of Texas Scholars. Local print and broadcast media covered all of these events. Between now and the end of September 2003, a community-wide newsletter will be developed and used to report progress related to the goals of El Paso MSP.

II.3. Key Element Three: Aligning Curriculum, Instruction, and Assessment of Mathematics and Science Education

In order to help students achieve higher levels of mathematical and scientific understanding in preparation for higher education, it is necessary to ensure that teaching and learning in high school is aligned with the knowledge and competencies that will be required of entering college students. A key aim of this critical element is the development of high level mathematics and science curriculum course frameworks that will guide instruction and assessment in secondary schools.

Objectives 3.1 and 3.2: Fully align high school college-preparatory math and science courses, including Algebra I, Geometry, Algebra II, Biology, Chemistry and Physics to meet state and national standards, as well as college/university expectations and assessments, so as to ensure success in rigorous college math/science courses. Fully align PreK-8 math and science curricula with newly redesigned high school courses to develop a seamlessly aligned math/science teaching and learning program, PreK-16.

The K-16 Mathematics and Science Leaders Institute for El Paso educators was convened twice in Year One of the MSP program. Participants in the institute included the University Provost, the Vice President of Instruction from the Community College, Deans of Science, Education and Engineering from the University, and the Dean of Mathematics and Science of the Community College, Associate Superintendents from the three major school districts, District and Region 19 MSP Directors, key principals, teachers and faculty from K-16. In these meetings, leaders engaged in discussion that included: 1) a careful examination of the mathematics curriculum frameworks, and 2) the culture of evidence needed to measure student outcomes and achievement. One of the commitments emerging from the discussions was the decision to have all schools start implementation of K-8 Mathematics, and Algebra I and II Curriculum Frameworks in Fall 2003. The group also discussed and planned and scheduled the beginning of the work of aligning science curriculum, instruction and assessment.

Another level of leaders, composed of central office curriculum and instruction directors and math/science specialists, met with Collaborative staff to discuss the goals of MSP and explore the work to be done in preparing teachers to implement the math/science curriculum frameworks in classrooms. They made strong commitments to implement the frameworks and to provide professional development to teachers in their respective districts. This is an important commitment toward scaling up the work of reform and it reflects the districts' acknowledgement of MSP as being integral to their own improvement efforts.

The group most central to development of aligned curriculum frameworks—the K-16 Working Group—fulfilled their commitment by not only revising the Algebra II curriculum framework but also completing drafts of the Algebra I and K-8 Mathematics Curriculum Frameworks. The math content was mapped to cognitive demands as well as to state and national standards. To buttress these frameworks, a math assessment group will be convened in August to begin developing the Algebra II test. The test is aimed at measuring the readiness of students to enter college level mathematics without having to take remedial math courses.

The K-16 Science Working Group, including K-12 teachers and college/university faculty, will be in place by the end of July. In Year Two, the group will begin writing the high school chemistry curriculum framework.

Objective 3.3: Make recommendations to local school districts, community college, and university regarding policies affecting mathematics and science curriculum and instruction.

El Paso MSP partners recognize the importance of institutionalizing the instructional frameworks, developed through the mathematics and science alignment process, through policies at both the preK-12 and higher education levels. The mathematics placement processes at UTEP are in process of being reviewed with a focus on the criteria by which students entering in Fall 2002 were identified for remedial placement. The K-16 Mathematics and Science leaders group has also commenced its focus on development of better indicators of student readiness for enrolling in and successfully completing college-level mathematics courses. Collaborative staff along with representatives from UTEP and the El Paso Community College, will work to identify the alignment of new assessment policies (now under review by the State) with the K-16 frameworks. The development of draft policies at the preK-12 level will commence with meetings among Collaborative and district staff regarding the implementation of the curriculum frameworks, and the development of draft policy statements for review.

Objective 3.4: Integrate PreK-16 Alignment with postsecondary educators, including math/science teacher educators in EPCC.

The El Paso Collaborative MSP leadership met with the Dean's Leadership Council of the El Paso Community College to review the MSP program and to address the role and responsibilities of the Community College in the Partnership. As a result, instructional deans committed to recruit faculty to participate in the K-16 math/science alignment, and to assist and support the integration of the curriculum, instruction, and assessment frameworks into the college's pre-college math/science courses. This summer, thirteen faculty members at EPCC will begin the curriculum alignment process working intensively in July and August. Faculty represent four of the five College campuses and represent the biology, geology, mathematics and physics departments. Faculty from chemistry and engineering will come on board in Fall 2003. The work will be facilitated by the College's MSP director. The MSP position has been advertised, interviews have been conducted, and the position should be filled no later than August 2003. Until then, one of the tenured, full-time physics faculty will take the lead in initiating the math/science alignment process with assistance from the Collaborative's MSP Mathematics and Science Director. In addition, plans are underway to hold a faculty development day in August to formally launch EL Paso MSP at the Community College. All College math/science faculty who are scheduled to teach during the 2003-2004 academic year will have an opportunity to hear from an internationally known educator and advocate of mathematics reform about the urgent need for change in math/science teaching and learning at the postsecondary level.

Objective 3.5: Integrate PreK-16 alignment with postsecondary educators, including math/science teacher educators in UTEP's College of Science.

In Year One, the College of Science convened the Educational Compliance Committee, a comprehensive group of science faculty representing the various disciplines, to match the new state standards to the College curricula. They met weekly during the Fall semester to conduct this work and to make modifications where there was no complete alignment. They also examined degrees in Earth Science, Life/Earth Science, Natural Sciences, and Physical Sciences to determine the level of compliance with new requirements for secondary teacher certification. The committee achieved its goal of aligning UTEP courses for pre-service teachers.

Work integrating preK-16 alignment with postsecondary mathematics and science educators has taken place during the K-16 Mathematics Working Group and the Mathematics and Science Leaders Group. In the Working Group, two faculty, one from the mathematics department and another from the mathematics education department, have participated in writing mathematics curriculum frameworks. As members of the working group, these two professors have been key resources for both the working group as well as for faculty in the University's College of Science and College of Education. The dean of the College of Science, the mathematics department chair and a tenured mathematics faculty participated in both fall and spring sessions of the Leaders Institute. During these sessions, leaders provided constructive review of the mathematics alignment work as well as guided planning for recruiting faculty for the K-16 Science Working Group that will align curriculum, instruction and assessment of science, K-16.

II.4. Key Element Four: Increasing College-Going Rates

The improvement of science, technology, engineering, and mathematics education (STEM), PreK-12, will support the development of a diverse and well-prepared set of students completing secondary school. If these students are to have an opportunity to join the ranks of scientists, technicians, engineers, mathematicians, and educators, students must recognize the importance of postsecondary education and be supported in preparing for colleges. This key element focuses the work of MSP directly on students through three major initiatives: THINK COLLEGE NOW, Counselors Creating College-Going Pathways, and the Infinity Project from the College of Engineering.

Objective 4.1: Implement the THINK COLLEGE NOW Initiative.

THINK COLLEGE NOW is comprised of two initiatives. The first, the Texas Scholars Program, recruits and trains business leaders and other community representatives in the El Paso region to deliver presentations to all eighth grade students. Texas Scholars presentations focus on the importance of preparation for college and promote the Recommended High School Program and enrollment in high-level math and science courses. Presenters also talk to students about eligibility for the Texas Grant which provides critically important financial aid for colleges to low-income students. To facilitate scheduling of Texas Scholars presentations, numerous meetings with district counselors were held in MSP Year One. Future meetings are already scheduled for the 2003-2004 academic year. In Year Two, a new ninth grade presentation will be introduced. This past year, 111 business and community volunteers were trained in Texas

Scholars presentations and they conducted 285 class presentations for 6,828 students throughout the El Paso MSP area. The second element of THINK COLLEGE NOW involves development of a ToolKit for middle and high school administrators, counselors and teachers aimed at preparing them to engage all students and their parents in preparing for college. The ToolKit is now being finalized and training on the ToolKit will take place in Year Two for school personnel.

Objective 4.2: Implement MSP Counselors' Initiative: Creating College-Going Pathways.

Work with counselors, through the Creating College-Going Pathways Initiative, will build on the partnerships forged with district counseling staffs through THINK COLLEGE NOW. Planning has begun for Year 2, and is aimed at training all counselors in (a) the effective use of data to track students' and schools' progress toward preparing for college; (b) high school courses associated with success in higher education; (c) supporting schools in effectively building on Texas Scholars presentations, which are led by representatives from business and the community; and (d) implementation of the THINK COLLEGE NOW toolkit.

Objective 4.3: Implement and Support the Infinity Project

The College of Engineering is implementing the Infinity Project as part of their commitment to MSP goals. The Project is an innovative national program that involves a specific curriculum for a high school junior or senior level course that is inquiry-based and meets state mathematics and science standards through its comprehensive classroom lessons. In Year 1 of MSP, the College of Engineering's Department of Electrical and Computer Engineering and the MSP College Coordinator made significant progress in engaging high schools in the Infinity Project and organizing training and implementation for Year Two. Through meetings and presentations with MSP directors and other district leaders, ten high schools were recruited—far more than the two schools noted in the Strategic Plan that would implement Infinity in Year One—and the faculty that will teach the course were identified. Twelve teachers received professional training on the Infinity Project during the week of June 9 and were provided the program materials. The 40-hour workshop introduced teachers to all elements and materials related to the Project. Training focused on the core chapters that meet the state standards in mathematics and science as well as on the hands-on laboratories that are a critical part of the curriculum.

The program involves the support of engineering students for teachers implementing Infinity in the classroom. Undergraduate and graduate students were hired, received training on the Infinity Project (IP), and were given opportunities to apply their training. A number participated in the summer professional development for teachers. In addition, these IP students were trained to implement Infinity with incoming university freshmen in order to hone their skills and knowledge, and increase their capacity to support teachers during the academic year. To implement a quality program and provide support for teachers, on-going and close contact is maintained with Southern Methodist University, originator and flagship site of the Infinity Project and the source of textbooks, training materials, and other support of the program.

II.5. KEY ELEMENT/GOAL V: Implementing a research agenda that advances knowledge and understanding about the systemic improvement of mathematics and science education.

The final key element in MSP recognizes that research into the impact of systemic education reform efforts is central to continued efforts and informs critically important decisions about what works, where, and under what conditions.

Objective 5.1. Develop math/science field based research pedagogical Laboratories (RPL)

Initial steps in establishing the field-based RPL's have been taken in Year I, on schedule with the June-August 2003 timeline. Teams of university educators have met and mapped out the design of a model and the selection of laboratory sites. Collaborative teams of math and science university faculty have compiled lists of necessary materials and supplies. Mentoring teams have visited school sites and met with teachers to get their input and refine the laboratory model. In addition, mentoring teams composed of College of Science/College of Education faculty, in-service teachers, and pre-service teachers have been organized and have designed action research projects. Some mentoring teams have initiated educational projects in area schools. Professional development and research training workshops for in-service and pre-service teachers are in the process of development and will be carried out before the end of program year one.

Objective 5.2. Provide research training to MSP math and science staff developers and district directors.

The initial action steps in the Year 1 Implementation Plan are on schedule. A key accomplishment is the hiring of the Associate Director for Research, Diana Moran, to coordinate this effort. Dr. Moran previously worked at the Wisconsin Center for Education Research and has extensive experience conducting research as well as working with teachers on action research. She will begin to work with MSP District Directors and Staff Developers this summer at Convocation, and at professional development sessions for staff developers. A research training plan for MSP Math and Science Staff Developers to be implemented in the 2003-04 academic year will be completed this summer.

Objective 5.3. Award small research grants to teachers for classroom research.

The Center's research coordinator, Diana Moran, has key responsibility for this effort. Goals and criteria, as well as an application process are being developed this Summer for the first grants to be awarded in the fall of 2003.

III. Student Achievement Data, and Teacher Quantity, Quality, and Diversity

Table 1	El Paso MSP Student Participation (Academic Year 2001-02)
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Student Participation Data

Table 1

EL PASO MSP			
<u>Student Participation for Academic Year 2001-2002</u>			
	Urban Districts	Rural Districts	All Districts
Total	140,008	22,259	162,267
African American	4,266	63	4,329
Hispanic	120,065	21,352	141,417
Native American	506	19	525
Asian	1,126	10	1,136
White	14,045	815	14,860
Economically Disadvantaged	21,439	1,138	22,577
Limited English Proficiency	Not Available	Not Available	Not Available
Special Education	Not Available	Not Available	Not Available

Source: A breakout of number of students in Region 19. Urban districts are El Paso, Ysleta and Socorro ISDs.

Student Achievement Data

Mathematics

Table 2

Urban School Districts	TAKS Spring 2003 (Math) - Percent Meeting Minimum Expectations					
	Ethnicity			Program Areas		
	Hispanic	African American	White	Economically Disadvantaged	LEP	Special Education
Grade 03	88.6%	90.4%	94.4%	87.6%	88.4%	82.9%
Grade 04	84.8%	80.7%	92.3%	83.6%	79.3%	75.1%
Grade 05	83.7%	78.2%	92.1%	82.3%	75.6%	68.9%
Grade 06	70.5%	68.2%	82.7%	68.3%	51.6%	47.9%
Grade 07	66.0%	64.0%	81.6%	63.4%	34.9%	39.1%
Grade 08	64.5%	62.1%	81.6%	62.1%	29.6%	40.4%
Grade 09	50.4%	46.7%	71.9%	47.3%	22.0%	18.7%
Grade 10	62.8%	65.4%	77.4%	60.4%	36.7%	22.5%
Grade 11	55.9%	50.5%	72.4%	53.6%	32.5%	22.3%
Total	68.7%	67.7%	82.6%	67.1%	54.3%	45.8%

Student Achievement Data (Continued)

Mathematics

Table 3

Rural School Districts	TAKS Spring 2003 (Math) - Percent Meeting Minimum Expectations					
	Ethnicity			Program Areas		
	Hispanic	African American	White	Economically Disadvantaged	LEP	Special Education
Grade 03	88.5%	66.7%	89.8%	87.8%	89.7%	88.9%
Grade 04	79.7%	100.0%	73.1%	78.5%	72.5%	69.0%
Grade 05	81.2%	66.7%	84.9%	80.2%	77.8%	72.5%
Grade 06	72.0%	75.0%	84.4%	72.0%	55.6%	61.5%
Grade 07	63.7%	55.6%	77.8%	63.3%	42.4%	31.0%
Grade 08	56.4%	71.4%	84.4%	56.6%	35.4%	40.0%
Grade 09	42.9%	50.0%	59.4%	42.1%	20.3%	7.7%
Grade 10	46.4%	25.0%	60.9%	47.1%	21.2%	15.0%
Grade 11	39.7%	0.0%	53.2%	38.8%	18.9%	13.2%
Total	62.0%	59.5%	74.1%	61.6%	51.4%	38.7%

Mathematics

Table 4

All School Districts	TAKS Spring 2003 (Math) - Percent Meeting Minimum Expectations					
	Ethnicity			Program Areas		
	Hispanic	African American	White	Economically Disadvantaged	LEP	Special Education
Grade 03	88.5%	89.9%	94.1%	87.6%	88.7%	83.5%
Grade 04	84.2%	80.9%	91.2%	82.9%	78.2%	74.7%
Grade 05	83.4%	78.1%	91.7%	82.0%	76.0%	69.2%
Grade 06	70.7%	68.3%	82.8%	68.9%	52.5%	49.3%
Grade 07	65.6%	63.7%	81.4%	63.3%	36.7%	38.1%
Grade 08	63.4%	62.3%	81.7%	61.2%	31.0%	40.3%
Grade 09	49.4%	46.7%	71.2%	46.4%	21.7%	17.5%
Grade 10	60.5%	64.8%	76.4%	58.0%	33.3%	21.4%
Grade 11	53.5%	50.3%	71.4%	50.9%	30.1%	21.3%
Total	67.8%	67.6%	82.1%	66.2%	53.7%	45.0%

Student Achievement Data (Continued)

Science

Table 5

Urban School Districts	TAKS Spring 2003 (Science) - Percent Meeting Minimum Expectations					
	Ethnicity			Program Areas		
	Hispanic	African American	White	Economically Disadvantaged	LEP	Special Education
Grade 05	66.5%	73.2%	84.8%	63.8%	49.9%	36.9%
Grade 10	57.2%	63.3%	82.0%	53.1%	24.0%	19.7%
Grade 11	56.4%	57.9%	77.8%	54.9%	26.4%	25.7%
Total	60.7%	66.1%	82.0%	58.1%	38.9%	29.2%

Science

Table 6

Rural School Districts	TAKS Spring 2003 (Science) - Percent Meeting Minimum Expectations					
	Ethnicity			Program Areas		
	Hispanic	African American	White	Economically Disadvantaged	LEP	Special Education
Grade 05	64.8%	66.7%	81.5%	63.1%	54.1%	48.3%
Grade 10	46.7%	33.3%	72.9%	46.6%	19.0%	13.3%
Grade 11	37.0%	0.0%	60.5%	36.0%	11.9%	6.3%
Total	50.8%	42.9%	72.8%	49.9%	36.4%	24.2%

Science

Table 7

All School Districts	TAKS Spring 2003 (Science) - Percent Meeting Minimum Expectations					
	Ethnicity			Program Areas		
	Hispanic	African American	White	Economically Disadvantaged	LEP	Special Education
Grade 05	66.2%	73.2%	84.7%	63.7%	50.6%	37.8%
Grade 10	55.6%	63.0%	81.4%	51.9%	22.9%	18.8%
Grade 11	53.4%	57.6%	76.9%	51.2%	23.5%	23.7%
Total	59.2%	65.8%	81.4%	56.8%	38.4%	28.7%

Math/Science Course Enrollment and Pass Rates

Table 8

Math/Science Course Enrollment and Pass Rates El Paso MSP Urban Districts 2001-02 Academic Year					
		Hispanic	White	African American	Total
Algebra I*	Enrolled	98.1%	99.0%	98.9%	98.1%
	Passed	72.4%	83.3%	72.7%	73.7%
Geometry**	Enrolled	84.5%	87.2%	79.6%	84.5%
	Passed	85.7%	91.7%	77.6%	86.3%
Algebra II***	Enrolled	78.6%	85.1%	71.6%	79.0%
	Passed	72.3%	79.3%	71.9%	73.5%
Biology**	Enrolled	86.9%	89.9%	83.4%	87.0%
	Passed	80.0%	92.1%	80.5%	81.7%
Chemistry***	Enrolled	77.3%	81.7%	77.7%	77.5%
	Passed	77.6%	81.1%	76.9%	78.2%
Physics	Enrolled	23.4%	32.6%	29.0%	25.1%
	Passed	88.4%	90.0%	86.1%	88.5%

* By End of Grade 9

**By End of Grade 10

*** By End of Grade 11

Source: Calculations based on data provided by districts from the Public Education Information Management System.

Math/Science Course Enrollment and Pass Rates

Table 9

Math/Science Course Enrollment and Pass Rates El Paso MSP Rural Districts 2001-02 Academic Year					
		Hispanic	White	African American	Total
Algebra I*	Enrolled	90.3%	93.0%	Note 1	90.1%
	Passed	75.7%	93.8%	Note 1	76.4%
Geometry**	Enrolled	83.8%	93.8%	Note 1	84.1%
	Passed	79.1%	88.3%	Note 1	79.4%
Algebra II***	Enrolled	73.7%	76.7%	Note 1	73.7%
	Passed	84.7%	93.5%	Note 1	85.2%
Biology**	Enrolled	44.6%	37.5%	Note 1	44.2%
	Passed	74.8%	83.3%	Note 1	75.1%
Chemistry***	Enrolled	54.3%	43.3%	Note 1	53.6%
	Passed	83.4%	88.5%	Note 1	83.7%
Physics	Enrolled	16.8%	12.8%	Note 1	16.4%
	Passed	80.0%	100%	Note 1	80.9%

* By End of Grade 9

**By End of Grade 10

*** By End of Grade 11

Source: Calculations based on data provided by districts from the Public Education Information Management System.

Note 1: FERPA – ethnic category contains fewer than 5 students.

Math/Science Course Enrollment and Pass Rates

Table 10

Math/Science Course Enrollment and Pass Rates El Paso MSP Districts 2001-02 Academic Year					
		Hispanic	White	African American	Total
Algebra I*	Enrolled	96.8%	98.6%	98.4%	97.0%
	Passed	71.7%	83.1%	72.0%	73.0%
Geometry**	Enrolled	84.4%	87.5%	79.4%	84.6%
	Passed	73.2%	80.3%	61.9%	73.8%
Algebra II***	Enrolled	77.9%	84.6%	71.5%	78.5%
	Passed	59.9%	68.5%	51.8%	60.8%
Biology**	Enrolled	80.7%	87.5%	82.9%	81.6%
	Passed	69.9%	82.8%	67.2%	71.4%
Chemistry***	Enrolled	74.0%	79.8%	77.2%	74.7%
	Passed	62.0%	66.7%	59.9%	62.4%
Physics	Enrolled	22.6%	31.9%	28.7%	24.3%
	Passed	87.6%	90.2%	86.3%	87.9%

* By End of Grade 9

**By End of Grade 10

*** By End of Grade 11

Source: Calculations based on data provided by districts from the Public Education Information Management System.

SAT/ACT Participation and Achievement

Table 11

SAT/ACT Participation and Scores El Paso MSP Urban Districts 2002									
SAT/ACT Participation and Scores									
		Total	Hispanic	White	Afr.Am.	Asian	Nat.Am.	State Avg.	Natl. Avg.
SAT	Total Tested	4141	3238	573	214	95	21		
	Composite Score	866	842	994	811	1024	748	991	1020
	Mean Quantitative Score	436	426	495	412	535	379	500	516
	Mean Verbal Score	426	415	499	399	489	369	491	504
ACT	Total Tested	670	460	146	43	20	1		
	Composite Score	20.2	19.3	22.9	18.6	25.2	19	20.1	20.8

Source: College Board SAT District/Group Highlights Report for Class of 2002, ACT High School Profile Report for Class of 2002. Proxy data for the Socorro ISD represents SAT results for Class of 2001.

Table 12

SAT/ACT Participation and Scores El Paso MSP Rural Districts 2002									
SAT/ACT Participation and Scores									
		Total	Hispanic	White	Afr.Am.	Asian	Nat.Am.	State Avg.	Natl. Avg.
SAT	Total Tested	329	308	15	6	-	-		
	Composite Score	820	823	999	722	-	-	991	1020
	Mean Quantitative Score	421	425	506	370	-	-	500	516
	Mean Verbal Score	397	398	494	345	-	-	491	504
ACT	Total Tested	238	232	6	-	-	-		
	Composite Score	17.5	16.8	19.3	-	-	-	20.1	20.8

Source: College Board SAT Campus Reports for Class of 2002. SAT rural district composite includes Canutillo ISD, Clint ISD, and San Elizario ISD. ACT composite includes Clint ISD, Canutillo ISD, Fabens ISD and San Elizario ISD. Rural districts not reporting represent 1.6% of all SAT/ACT test takers in the El Paso MSP.

SAT/ACT Participation and Achievement

Table 13

SAT/ACT Participation and Scores El Paso MSP Districts 2002									
SAT/ACT Participation and Scores									
		Total	Hispanic	White	Afr.Am.	Asian	Nat.Am.	State Avg.	Natl. Avg.
SAT	Total Tested	4470	3546	588	220	95	21		
	Composite Score	863	840	994	809	1024	748	991	1020
	Mean Quantitative Score	435	426	495	411	535	379	500	516
	Mean Verbal Score	424	414	499	398	489	369	491	504
ACT	Total Tested	908	692	152	43	20	1		
	Composite Score	19.5	18.5	22.8	18.6	25.2	19.8	20.1	20.8

Source: College Board SAT District/Group Highlights Report for Class of 2002, ACT High School Profile Report for Class of 2002. Proxy data for the urban Socorro ISD represents SAT results for Class of 2001. SAT rural district composite includes Canutillo ISD, Clint ISD, and San Elizario ISD. ACT composite includes Clint ISD, Canutillo ISD, Fabens ISD and San Elizario ISD. Rural districts not reporting represent 1.6% of all SAT/ACT test takers in the El Paso MSP.

Advanced Placement

Table 14

Advanced Placement (Course Taking, Test Taking, and Passing) El Paso MSP Urban Districts Academic Year 2001-02					
Advanced Placement Course	Total Number of Students Enrolled in AP Courses	Total Number of Students Taking the AP Test	Total Number of Students Receiving an AP Score of 3 Or Higher	Percent of Students Taking the AP Test	Percent of Students Receiving an AP Score of 3 Or Higher
Calculus AB	656	360	117	54.9%	32.5%
Calculus BC	Note 1	18	7	Note 1	38.9%
Statistics	322	160	21	49.7%	13.1%
Biology	455	83	17	18.2%	20.5%
Chemistry	286	66	10	23.1%	15.2%
Physics B	123	63	15	51.2%	23.8%
Physics C - Mechanics	66	20	4	30.3%	20.0%
Physics C - Electricity & Magnetism	Note 1	17	2	Note 1	11.8%
Computer Science A	187	61	26	32.6%	42.6%
Computer Science AB	23	9	7	39.1%	77.8%
Environmental Science	18	18	2	100%	11.1%

Source: College Board School AP Distributions for the El Paso, Ysleta and Socorro Independent School Districts, AY 2001-2002. Note 1: There were 0 students enrolled in this AP course, however, AP data received from districts shows that some students tested.

Advanced Placement

Table 15

Advanced Placement (Course Taking, Test Taking, and Passing) El Paso MSP Rural Districts Academic Year 2001-02					
Advanced Placement Course	Total Number of Students Enrolled in AP Courses	Total Number of Students Taking the AP Test	Total Number of Students Receiving an AP Score of 3 Or Higher	Percent of Students Taking the AP Test	Percent of Students Receiving an AP Score of 3 Or Higher
Calculus AB	92	79	5	85.9%	6.3%
Calculus BC	0	0	0	0	0
Statistics	0	0	0	0	0
Biology	60	31	0	51.7%	0
Chemistry	0	0	0	0	0
Physics B	17	0	0	0	0
Physics C - Mechanics	0	0	0	0	0
Physics C - Electricity & Magnetism	0	0	0	0	0
Computer Science A	0	0	0	0	0
Computer Science AB	0	0	0	0	0
Environmental Science	0	0	0	0	0

Source: College Board School AP Distributions for Anthony ISD, Canutillo ISD, Clint ISD, Fabens ISD, San Elizario ISD, and Tornillo ISD AY 2001-2002. Not included are students from rural districts, including Dell City ISD, Ft. Hancock and Sierra Blanca ISD, which represent ½ of 1% of all El Paso MSP participants.

Advanced Placement

Table 16

Advanced Placement (Course Taking, Test Taking, and Passing) El Paso MSP Districts Academic Year 2001-02					
Advanced Placement Course	Total Number of Students Enrolled in AP Courses	Total Number of Students Taking the AP Test	Total Number of Students Receiving an AP Score of 3 Or Higher	Percent of Students Taking the AP Test	Percent of Students Receiving an AP Score of 3 Or Higher
Calculus AB	748	439	122	54.9%	32.5%
Calculus BC	0	18	7	-	38.9%
Statistics	322	160	21	49.7%	13.1%
Biology	515	114	17	18.2%	20.5%
Chemistry	286	66	10	23.1%	15.2%
Physics B	140	63	15	51.2%	23.8%
Physics C - Mechanics	66	20	4	30.3%	20.0%
Physics C – Electricity & Magnetism	0	17	2	-	11.8%
Computer Science A	187	61	26	32.6%	42.6%
Computer Science AB	23	9	7	39.1%	77.8%
Environmental Science	18	18	2	100%	11.1%

Source: College Board School AP Distributions for the El Paso, Ysleta and Socorro Independent School Districts, AY 2001-2002 and College Board School AP Distributions for Anthony ISD, Canutillo ISD, Clint ISD, Fabens ISD, San Elizario ISD, and Tornillo ISD AY 2001-2002. Not included are students from rural districts, including Dell City ISD, Ft. Hancock and Sierra Blanca ISD, which represent ½ of 1% of all El Paso MSP participants.

Student Participation Data

High School Completion

Table 17

High School Completion Rates			
Class of 2002			
Ethnicity	Urban Districts	Rural Districts	All MSP Districts
	% Graduating	% Graduating	% Graduating
Hispanic	78.00%	71.20%	76.90%
White	76.40%	53.30%	75.00%
African American	73.90%	100%	74.40%
Native American	87.00%	50.00%	84.00%
Asian	94.20%	-	91.00%
Total	77.80%	70.10%	76.70%

Source: Graduation rates derived from 1997-1998 Region 19 district enrollment data provided by TEA, and Class of 2002 graduation data taken from TEA adhoc report generator. High school completion rates based on number of graduates divided by number of eighth graders 5 years prior.

College Matriculation

**Matriculation of El Paso Urban and Rural District Graduates Into
The University of Texas at El Paso and the El Paso Community College**

Table 18
University of Texas at El Paso (UTEP)
Fall 2002

	Urban Districts	Rural Districts	Total
Number Enrolled	1537	266	1803
Class of 2002	7728	1118	8846
% Enrolled	19.9%	23.8%	20.4%

Source: UTEP Center for Institutional Evaluation, Research and Planning Factbook. High School of Origin, First Time Freshman, Fall 2002.

Table 19
El Paso Community College
Fall 2002

	Urban Districts	Rural Districts	Total
Number Enrolled	1585	218	1803
Class of 2002	7728	1118	8846
% Enrolled	20.5%	19.5%	20.4%

Source: El Paso Community College Office of Institutional Research. El Paso Community College Students from last high school attended: Fall 2002.

Teacher Availability Data

Table 20

Total Number of Teachers from El Paso MSP Districts Urban Districts 2002-2003			
Number of Math Teachers in the System			
	Female	Male	Total
Elementary	4128	720	4848
Middle School	229	120	349
High School	172	204	376
Total	4529	1044	5573
Number of Science Teachers in the System			
	Female	Male	Total
Elementary	4128	720	4848
Middle School	157	103	260
High School	146	185	331
Total	4431	1008	5439
Number of Teachers in the System			
	Female	Male	Total
Elementary	4128	720	4848
Middle School	1122	650	1772
High School	1266	1344	2610
Total	6516	2714	9230

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Teacher Availability Data

Table 21

Total Number of Teachers from El Paso MSP Districts Rural Districts 2002-2003			
Number of Math Teachers in the System			
	Female	Male	Total
Elementary	570	126	696
Middle School	29	27	56
High School	22	33	55
Total	621	186	807
Number of Science Teachers in the System			
	Female	Male	Total
Elementary	570	126	696
Middle School	34	28	62
High School	26	32	58
Total	630	186	816
Number of Teachers in the System			
	Female	Male	Total
Elementary	570	126	696
Middle School	192	149	341
High School	188	217	405
Total	950	492	1442

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Teacher Availability Data

Table 22

Total Number of Teachers from El Paso MSP Districts All Districts 2002-2003			
Number of Math Teachers in the System			
	Female	Male	Total
Elementary	4698	846	5544
Middle School	258	147	405
High School	194	237	431
Total	5150	1230	6380
Number of Science Teachers in the System			
	Female	Male	Total
Elementary	4698	846	5544
Middle School	191	131	322
High School	172	217	389
Total	5061	1194	6255
Number of Teachers in the System			
	Female	Male	Total
Elementary	4698	846	5544
Middle School	1314	799	2113
High School	1454	1561	3015
Total	7466	3206	10672

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Table 23

Quantity, Diversity and Quality Baseline Data Regarding El Paso MSP District Teachers Number of Teachers by Level of Degree Held for Urban Districts 2002-2003						
Number of Math Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	3370	565	722	138	2	1
Middle School	188	97	36	21	1	1
High School	122	151	46	51	4	1
Number of Science Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	3370	565	722	138	2	1
Middle School	131	84	25	15	0	1
High School	108	121	36	57	0	5
Number of Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	3370	565	722	138	2	1
Middle School	879	517	231	114	1	3
High School	893	911	349	347	7	11

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Table 24

Quantity, Diversity and Quality Baseline Data Regarding El Paso MSP District Teachers Number of Teachers by Level of Degree Held for Rural Districts 2002-2003						
Number of Math Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	466	102	94	21	1	0
Middle School	26	24	3	1	0	1
High School	14	23	7	10	0	0
Number of Science Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	466	102	94	21	1	0
Middle School	30	23	3	5	0	0
High School	17	22	9	9	0	0
Number of Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	466	102	94	21	1	0
Middle School	158	122	29	21	0	3
High School	141	157	40	45	0	3

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Table 25

Quantity, Diversity and Quality Baseline Data Regarding El Paso MSP District Teachers Number of Teachers by Level of Degree Held for All Districts 2002-2003						
Number of Math Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	3836	667	816	159	3	1
Middle School	214	121	39	22	1	2
High School	136	174	53	61	4	1
Number of Science Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	3836	667	816	159	3	1
Middle School	161	107	28	20	0	1
High School	125	143	45	66	0	5
Number of Teachers in the System (by level of degree held)						
	Baccalaureate		Masters		Doctorate	
	Female	Male	Female	Male	Female	Male
Elementary	3836	667	816	159	3	1
Middle School	1037	639	260	135	1	6
High School	1034	1068	389	392	7	14

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Table 26

Quantity, Diversity and Quality Baseline Data Regarding El Paso MSP District Teachers Number of Teachers by Years of Experience for Urban Districts 2002-2003										
Number of Math Teachers in the System (by years of experience)										
	Beginning		1 – 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	341	83	1131	183	738	168	1086	145	832	141
Middle School	16	2	77	52	46	28	55	21	35	17
High School	8	13	32	57	20	41	57	52	55	41
Number of Science Teachers in the System (by years of experience)										
	Beginning		1 – 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	341	83	1131	183	738	168	1086	145	832	141
Middle School	7	10	57	24	26	22	38	34	29	13
High School	12	10	40	46	31	29	40	55	23	45
Number of Teachers in the System (by years of experience)										
	Beginning		1 – 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	341	83	1131	183	738	168	1086	145	832	141
Middle School	113	92	318	176	208	126	287	153	196	103
High School	97	89	304	302	208	245	344	387	313	321

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Table 27

Quantity, Diversity and Quality Baseline Data Regarding El Paso MSP District Teachers Number of Teachers by Years of Experience for Rural Districts 2002-2003										
Number of Math Teachers in the System (by years of experience)										
	Beginning		1 – 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	55	11	154	37	128	31	147	32	86	15
Middle School	5	5	7	7	8	7	8	6	1	2
High School	3	1	6	8	5	12	5	4	3	8
Number of Science Teachers in the System (by years of experience)										
	Beginning		1 – 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	55	11	154	37	128	31	147	32	86	15
Middle School	10	2	9	9	7	6	7	5	1	6
High School	3	4	12	8	3	8	5	6	3	6
Number of Teachers in the System (by years of experience)										
	Beginning		1 – 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	55	11	154	37	128	31	147	32	86	15
Middle School	25	26	58	42	42	31	43	32	24	18
High School	24	22	60	57	31	51	42	39	31	48

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Table 28

Quantity, Diversity and Quality Baseline Data Regarding El Paso MSP District Teachers Number of Teachers by Years of Experience for All Districts 2002-2003										
Number of Math Teachers in the System (by years of experience)										
	Beginning		1 - 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	396	94	1285	220	866	199	1233	177	918	156
Middle School	21	7	84	59	54	35	63	27	36	19
High School	11	14	38	65	25	53	62	56	58	49
Number of Science Teachers in the System (by years of experience)										
	Beginning		1 - 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	396	94	1285	220	866	199	1233	177	918	156
Middle School	17	12	66	33	33	28	45	39	30	19
High School	15	14	52	54	34	37	45	61	26	51
Number of Teachers in the System (by years of experience)										
	Beginning		1 - 5		6 - 10		11 - 20		Over 20	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Elementary	396	94	1285	220	866	199	1233	177	918	156
Middle School	138	118	376	218	250	157	330	185	220	121
High School	121	111	364	359	239	296	386	426	344	369

Source: PEIMS data Record Types 040, 090, Submission I-2002.

Teachers Certified at the University of Texas at El Paso

Table 29

The University of Texas at El Paso Teacher Certification in Math, Science and All Subjects by Completion Year										
	UNDERGRADUATE STUDENTS									
	Elementary			Secondary						
	All	Math	Science	All	Math	Biology	Chemistry	Physics	Physical Sci	Geology
1996	288	17	7	57	8	2	0	1	1	0
1997	275	14	13	58	1	1	0	1	1	0
1998	256	13	12	60	2	4	0	0	2	0
1999	325	22	19	64	6	0	0	0	2	0
2000	232	22	9	35	3	0	0	0	0	0
2001	249	19	7	35	2	3	0	0	0	0
2002	289	28	18	33	6	0	0	0	0	0

Sources: The University of Texas at El Paso, College of Education, Office of Student Services.

Table 30

The University of Texas at El Paso Teacher Certification in Math, Science and All Subjects by Completion Year										
	GRADUATE STUDENTS									
	Elementary			Secondary						
	All	Math	Science	All	Math	Biology	Chemistry	Physics	Physical Sci	Geology
1996	56	2	4	55	6	4	0	1	6	0
1997	45	7	5	39	8	3	1	0	1	0
1998	29	3	1	28	4	2	0	0	1	0
1999	18	0	1	23	2	2	0	0	0	0
2000	10	0	0	19	2	4	1	0	0	0
2001	12	3	0	6	1	0	0	0	0	0
2002	5	1	0	6	1	0	0	0	0	0

Source: The University of Texas at El Paso College of Education, Teacher Certification, Office of Student Services

Alternative Certification

Table 31

Number of Secondary Mathematics and Science Teachers Receiving Alternative Certification through The University of Texas at El Paso and the Region 19 Education Service Center				
	Academic Year 1999-2000	Academic Year 2000-01	Academic Year 2001-02	Academic Year 2002-03
Mathematics	10	10	12	18
Science	21	17	22	21
Total	31	27	34	39

Sources: The University of Texas at El Paso, College of Education, Alternative Certification Program and Region 19 Education Service Center, Alternative Certification Program.

University of Texas at El Paso Science and Mathematics Majors with Education Minors

Table 32

Mathematics and Science Majors with Education Minors Enrolled at The University of Texas at El Paso (Fall 2002)					
	N	Freshmen	Sophomores	Juniors	Seniors
Science Majors with Minors in Education	42	4	12	11	15
Mathematics Majors with Minors in Education	52	4	6	20	22
Total	94	8	18	31	37

Source: Center for Institutional Evaluation, Research and Planning, The University of Texas at El Paso.

IV. MSP Management Plan

El Paso's MSP management structure remains intact. Key personnel including Susana Navarro, PI; Co-PIs Arturo Pacheco, Steve Riter, and Jimmy Vasquez; and Project Director Alicia Parra continue to be fully focused on El Paso's MSP. The relationships implied by the MSP Organizational Chart continue to deepen.