

## **TEXAS HIGHER EDUCATION COORDINATING BOARD**

### **RESEARCH AND EMERGING RESEARCH UNIVERSITIES PEER GROUP**

#### **STUDENT SUCCESS IMPROVEMENT**

##### **Purpose of Report**

The Texas Higher Education Coordinating Board's Accountability System has been in place for several years, and there is a desire to focus on one of the original purposes of this system – improvement. The first area of the Accountability System in which improvement was investigated was Success – success at individual institutions and success in groups of institutions. Key questions to be addressed were how much success is taking place, what kinds of support programs are in place to drive that success, and what can institutions learn from one another that would help all institutions improve in this area? Thus, the purpose of this report is to describe the success occurring in the Research and Emerging Research institutions and the nature of the support programs that are supporting that success.

Emerging research universities are educational, scientific, engineering, business, and cultural resource centers committed to teaching, research, and service. They have extensive educational programs, direct their academic efforts to applied and basic research in selected fields, and involve both undergraduate and graduate students in research and creative pursuits. Research universities have a similar mission but a significantly higher proportion of their students in graduate and professional programs to support their extensive research efforts. Both groups of universities serve their region, the state, and the nation.

Research and emerging research universities

- have a wide range of baccalaureate and master's programs and serve a student population from within and outside their region;
- award 20 or more doctoral degrees annually in targeted areas of excellence that span at least 10 disciplines (research universities may award over 100 doctoral degrees in a comprehensive range of programs); and
- place significant emphasis on research and creative activities and generate research expenditures in the tens of million of dollars (research universities generate over \$150 million annually).

##### **Peer Group Membership:**

Texas' research universities currently are Texas A&M University and The University of Texas at Austin. Emerging research universities include Texas Tech University, The University of Texas at Arlington, The University of Texas at Dallas, The University of Texas at El Paso and The University of Texas at San Antonio, the University of Houston, and the University of North Texas.

##### **Selection of Success Measure Focus:**

The peer group representatives used a cross-impact analysis to select their targeted success measures and topics for best practices. The group first identified a 28 by 28 matrix of success measures, including four outcome measures, 13 state variables that indicate the well-being of their institution, and 11 input variables most likely to be influential on improving the student success outcome. Through discussion and consensus the group distilled, by means of summing weights in the cross-impact matrix, a sub-matrix that demonstrates the two most significant outcome measures, one most indicative state variable, and five most influential input variables (see Figure 1).

**Figure 1. The Accountability Success Measure Cross-Impact Matrix**

Cross-Impact Matrix for Research and Emerging Research Institutions' Accountability Measures		Impact on Objective							
		6-year graduation rate	6-year graduation and persistence rate	1st-year persistence rate	early identification of at-risk students	quality instruction	academic support programs	learning communities	high quality advising
6-year graduation rate	accountability measures								outcome
6-year graduation and persistence rate									outcome
1st-year persistence rate		X	X						most important state variable
early identification of at-risk students	variables of rows have impact on variables in columns	X	X	X		X	X	X	high impact input
quality instruction		X	X	X					medium impact input
academic support programs		X	X	X					medium impact input
learning communities		X	X	X					medium impact input
high quality advising		X	X	X			X		medium impact input

**Success Measure Focus:**

For research and emerging research universities the significant accountability measures identified by the cross-impact analysis are:

- *First-year persistence rate*
- *Six-year graduation rate*
- *Six-year graduation and persistence rate*

The first-year persistence rate is a state variable that has an influence on the two outcome measures and is significant as a success predictor.

An evaluation of the input variables that improved success ranked the early identification of at-risk or underperforming students at the top of the list. A second group of activities would improve the quality of instruction, enhance academic support programs such as supplemental instruction (SI) and tutoring, further learning communities such as strong social/academic support networks among students, and support high quality advising opportunities.

**Graduation and Persistence Rate Performance**

Based on Board FY2006 accountability system data, sixth-year graduation rates at the same institution are virtually the same at the two Research institutions at 76.5% while the rates for the seven Emerging Research institutions average of 42.5% with a range from 28.1% to 55.7%. Between FY1999 and FY2006, increases in these rates have averaged 7.9% at the Research institutions (or 1.3% per year) and 7.2% at the Emerging Research institutions (or 1.2% per year). Similarly, 6-year persistence rates at the same institution averaged 79.2% for Research Institutions while at the Emerging Research Institutions they averaged 52.8% during FY2006. Increases in these persistence rates averaged 1.5% per year at both the Research and Emerging Research institutions. Finally, first-year persistence rates at the same

institution for FY2006 at the Research institutions averaged 91.4% while at the Emerging Research institutions they were 72.7% with per year increases of 0.3% and 0.2%, respectively.

Overall, the Research and Emerging Research institutions had an average 6-year graduation rate of 50.1%, a 6-year persistence rate of 58.6%, and a first-year persistence rate of 76.9%, all at the same institution and all in FY2006. Yearly increases in these rates averaged 1.2%, 1.5%, and 0.2%, respectively.

Additional information about the Research and Emerging Research Universities is provided in Table A1 in Appendix I. Enrollment data in Fall 2000 and Fall 2006, graduation data in FY2000 and FY2006, and changes in both between the two years are given along with graduation rates and graduation and persistence rates.

While many if not most of these graduation and persistence rates are less than out-of-state peer institutions, it is clear that these rates are increasing over time. It is also clear that there is more room for growth in and improvement of these rates if the peer institutions are performing at higher rates. However, it is important to note that graduation rates are strongly related to selectivity. Research shows that 75% of the variance in graduation rates among institutions is explained by standardized test scores and high school GPA. In this context, the easiest way to increase graduation rates is to become more selective. However, increasing admission standards has a disproportionate impact on low-income and other under-represented minority students. Institutions represented in this Peer Group are committed to increasing their graduation rates by improving the effectiveness of their support programs and interventions, and not by limiting access.

The area of greatest potential for improvement is first-year persistence, and all of the institutions recognize this as a crucial area. Not only is it the gateway for first-year students to the balance of their education at these institutions, but it is also a key driver for increased graduation rates and hence graduates in the workforce of the state. It is no coincidence then that the Research and Emerging Research institutions ranked it as the most important state variable in the matrix in Figure 1 and focused their attention primarily on ways to improve first-year retention and to a lesser extent ways to increase ultimately six-year graduation and persistence.

Best practices that have led to improved first-year retention and ultimately to improved six-year graduation and persistence rates at each institution have been identified and are summarized below and described in more detail in Appendix II.

### **Best Practices to Address Group Focus**

#### Early Identification of At-Risk Students

A number of programs focused on the early identification of at-risk students exist at the institutions in this Peer Group. All of these programs are designed to ease the transition from secondary school to higher education, particularly for students who are likely to be at risk once in the university, and/or to identify these students once they have begun their first semester classes. They are overall aggressive in helping those students who need help. These include the following general categories of programs:

- College Readiness – Identify at-risk students while still in high school using university placement exams and basing intervention programs based on test scores;
- Admission - Identify at-risk students at the time of admission based on first-generation in college, from families with incomes of less than some amount, low SAT, disabled, and offer financial aid and support services that involve socio-cultural events, peer advising, one-on-one meetings with staff, and more;

- Intervention - Identify at-risk students early in their first semester based on performance in class exercises, engage the students in corrective actions early on, if performance still not as expected by mid-term then involve them in more intense programs (experience so far indicates good success);
- Risk Analysis – Identify at-risk students through a comprehensive statistical analysis of student characteristics and institutional factors that promote or hinder success and use to evaluate and improve existing programs that are designed to promote student success (in experimental stage).

### Quality Instruction

All of the Peer Group institutions have university-wide programs that support quality instruction and each offers services that support teaching effectiveness, curricular improvement, offer colloquia, workshops, seminars, and provide mentoring. These programs are successful to the extent that faculty desire to participate, which varies from campus to campus, and to the extent that the programs are large enough to fully support quality instruction. The inclusion of outcomes-based assessment in the Board's core curriculum regulations and in the Southern Association of Colleges and Schools' Commission on Colleges Reaffirmation of Accreditation standards and those of many profession academic programs' accrediting bodies should drive improvements in instruction, and the focus of many institutions' Quality Enhancement Plans on teaching effectiveness will as well. It will be important for the campus leadership to embrace and support such efforts for them to be seen as more than just accreditation activities; they need to become part of the fabric of the institution.

Other activities that can lead to enhanced instructional quality are curriculum reform, which can energize the entire campus and heighten awareness of the faculty of the curriculum and their teaching and administrative roles in it, and course redesign. The latter has been the focus of research at the National Center for Academic Transformation, and at least one of the Peer Group institutions is heavily involved with this. These activities seek to unleash and capitalize on the university's more important asset: the knowledge, passion, and creativity of its faculty.

### Academic Support Programs

All of the Peer Group institutions have academic support programs to help sustain students as they pursue their academic endeavors. These programs are typically campus-wide, but at the larger institutions there tends to be programs at the school/college level as well. Typical academic support services include: Supplemental Instruction (SI); academic counseling; peer coaching; tutoring; students with disabilities; writing workshops; orientation programs; and more. These programs are well thought out, skillfully implemented, innovative, and effective.

Two examples of the innovative programs offered by this Group are an Enhanced New Student Orientation and a First-Year Seminar. Orientation programs are common, but this one includes a mandatory math review workshop in which students are tested for their math capabilities using a placement test, placed in an appropriate orientation session for several days to refresh their math skills, and then allowed to retake the placement test to determine the improvement in the math skills as well as to move them further into their curriculum than they would have been. The other program is a first-year seminar that addresses critical thinking, academic success skills, and transitional issues based on an academic theme determined by the instructor's area of expertise. These seminars at some institutions are called First-Year Interest Group programs or FIGS.

### Learning Communities

Learning communities can generally be divided into residential and non-residential programs. Residential learning communities are residence halls that serve as central hubs for students living on-campus. These can focus around schools/colleges or specific disciplines within those colleges, but academic advisors, tutors, peer mentors, space for individual and group study, wireless connectivity, and late night dining hours are characteristics of these communities.

Non-residential learning communities are groups of students in courses (like the First-Year Seminar and the FIGS mentioned above) and forums, programs that span disciplines and programs that span institutions

#### High Quality Advising

High quality advising is another activity common to all of the Research and Emerging Research institutions. There are some very innovative programs that take advising to an even higher level at some institutions. Examples are:

- Partnerships between the students and the institution to graduate on time involving reducing student behaviors proven to increase time to graduation (i.e., limiting the number of courses a student can drop, no retaking of courses if a grade of C or higher is achieved, and additional fees for courses taken more than twice in return for institution's advising about how to avoid these negative behaviors)
- First generation student focus with assistance in three areas: academic; social; and financial with advising being a key element in all three areas.
- Student development and retention program for undergraduate business majors with following components: mandatory on-line orientation; new student receptions; corporate site visits; financial management and retention workshops, and the opportunity to hear special speakers.

**APPENDIX I**

Table A1. Statistical Profile for Research and Emerging Research Universities, Contextual Data and Selected Success Measures for Group Focus.

<b>Enrollment Data</b>	Fall 2000	Fall 2006	Change
Total	242,821	278,419	14.7%
Undergraduate & Post-Baccalaureate	196,169	223,204	13.8%
Graduate	46,652	55,215	18.4%
White	145,582	152,054	4.4%
African-American	14,596	19,312	32.3%
Hispanic	41,463	57,604	38.9%

<b>Graduation Data (Degrees Awarded)</b>	FY 2000	FY 2006	Change
Total	47,813	59,091	23.6%
Undergraduate	34,246	41,984	22.6%
Master's	10,392	13,402	29.0%
Doctorate	1,885	2,237	18.7%
Professional	1,290	1,468	13.8%

<b>Accountability Measures</b>			
<b>6-Year Graduation and Persistence Rate: Same Institution</b>			
	1993 Cohort	1999 Cohort	Change
Total	56.6%	64.6%	8.0%
<b>6-Year Graduation Rate: Same Institution</b>			
	1993 Cohort	1999 Cohort	Change
Total	50.5%	58.7%	8.3%
<b>1-Year Persistence Rate</b>			
	Enter Fall 2000	Enter Fall 2005	Change
Same Institution	80.6%	81.2%	0.6%

Source: Texas Higher Education Coordinating Board

## APPENDIX II

Summary of programs at Research and Emerging Research institutions that support the three key output variables: First-Year Persistence Rate; Six Year Graduation Rate; and Six-Year Graduation and Persistence Rate. Support programs fall into the following categories: Early Identification of At-Risk Students, Quality Instruction, Enhance Academic Support Programs, Learning Communities, and High Quality Advising.

### *Early Identification of At-Risk Students*

Because early identification of at-risk students was identified in the matrix as the most important input variable influencing first-year retention rates, graduation rates, and graduation and persistence rates, the programs in place at the various Research and Emerging Research Institutions are given here in some detail. All of these programs are designed to ease the transition from secondary school to higher education, particularly for students who are likely to be at risk once in the university, and/or to identify these students once they have begun their first semester classes. They are overall aggressive in helping those students who need help.

At **Texas A&M University**, one of the largest groups of at-risk students is the Regent's Scholars. These students, who are mostly minority, first-generation in college, and from families with incomes of less than \$40,000 a year, are identified through our financial aid system as soon as they are admitted and offered financial aid. A wide range of support structures are immediately made available to encourage these students to matriculate and to support them academically and otherwise at the university.

Academic Enrichment Services at **The University of Texas at Austin** offers four programs that are designed to break down the large environment of the university and enhance academic achievement of students:

- The Preview Program provides traditionally under-represented students with a smooth transition from high school to college. This is accomplished through a yearlong program that includes a summer "bridge" component and highly structured academic and social enrichment programming. During the academic year, students attend academic enrichment and socio-cultural events, peer advising meetings and individual meetings with the coordinator.
- The Gateway Program offers services and programs that maximize the academic and social engagement of new students for the first two years of their enrollment. The program seeks to introduce Gateway students to resources and encourage each student to take full advantage of the full-range of educational opportunities.
- First-generation, low-income and disabled students are served through the Longhorn Link Program, Student Support Services, a federally funded TRiO program. The program provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students towards the successful completion of their post secondary education. The goal of the Longhorn Link Program is to increase the college retention and graduation rates of its participants and facilitate the process of transition from one level of higher education to the next.
- The Achieving College Excellence Program is an academic support program for students requiring additional assistance to meet their educational goals. ACE provides academic support through tutorial services, academic workshops, peer advising and graduate school preparation.

Since 1994, the **University of Houston's** Academic Achievers program has worked to retain and graduate students of Hispanic descent through the provision of academic support and financial assistance. Most participating students come from low socio-economic backgrounds and are the first in their family

to attend college. Each participating student receives a \$2,500 scholarship per year and one-on-one tutoring in all academic areas. Participants also have the ability to participate in mentorship programs, self-development and skills workshops, career guidance, internships, and leadership training. Despite starting college with lower SAT scores than other Hispanic students enrolled at UH, Academic Achievers participants progress more rapidly toward a degree and graduate at higher rates than students who are not part of the program. In fact, program participants have a six-year graduation rate of 73% compared to a 33% graduation rate for other students of Hispanic descent. It is our belief that Academic Achievers yields well-rounded individuals who have received the academic, leadership and work experience needed to successfully enter the professional workforce.

At the **University of North Texas**, an early alert system has been developed for key large-enrollment freshman level courses that have a substantial online component. Student engagement in the course is measured in relation to the submission of assignments; time on-line; access to various web-base exercises, etc. Students whose activity in the class is low are contacted in the 3<sup>rd</sup> and 4<sup>th</sup> week of classes by phone and assistance is offered. By engaging the student in corrective action early in the semester – well before mid-term – the student is able to more quickly make up lost ground. The pilot project resulted in a higher percentage of students staying in the class and achieving a passing grade. If, by mid-term, a student is not performing to expected levels, a faculty member may refer them to the Student Learning Center for assistance in both course-specific and general study supports. Students who make use of these services are more likely to make the adjustments needed to succeed.

**The University of Texas at Arlington** has an aggressive plan for early identification of at-risk and underperforming students and we are looking for ways to do more. Currently, students are identified in one of two ways. First, freshmen identified as “at-risk” at the time of admission are placed in the Gateway program, which provides intensive advising and requires students to complete a specially designed college readiness course (EDUC 1301). Second, freshmen who under perform or who are identified as “at-risk” after admission are contacted by the University for intervention. Students who are placed on academic probation following their first semester are enrolled in a required course to improve study skills and preparation for college work. Additionally, any student on academic probation, as well as all freshmen and all undeclared students, receive mid-term progress reports that alert them to any problems with their academic progress. More information on the Gateway program can be found at <http://www.uta.edu/uac/gateway-home/> .

**The University of El Paso’s** Center for Institutional Evaluation, Research and Planning is completing the third year of a research grant from Lumina Foundation that supports a comprehensive statistical analysis of student characteristics and institutional factors that promote or hinder student success. Among the analyses completed or underway is a survival modeling technique for identifying students’ risk of departure using a number of variables that produces an overall “risk score” for each student. The findings from this research project provide a framework to evaluate and improve existing programs that are designed to promote student success.

The College Readiness Initiative (CRI) is designed to increase the academic preparation of students who plan to attend college by administering the university's placement exam in high schools and enabling the schools to provide interventions based on those test results. The College Readiness Initiative is a collaborative effort among UT El Paso, El Paso Community College, and Region 19 Independent School Districts with the goal of helping high school students become better prepared academically for college-level course work. The components of CRI include an orientation to the ACCUPLACER placement exam, early testing during a student’s junior and/or senior year(s), high school intervention for students who place into developmental math, reading, or writing, and retesting in their subject areas of intervention.

**The University of San Antonio's Academic Development Program** is a program designed to support the successful transition of students admitted provisionally. The program is structured to give students the opportunity to adjust to college life while improving the academic skills they will need to succeed in college. Features of the program include:

- Courses to enhance skills in reading, writing, and math
- Tutoring
- Individualized academic advising
- One year of follow-up guidance and academic support

In addition to this program, sixth-week grades are submitted by faculty, and advisors meet with those students who are whose grades at mid-term average a “D” or an “F”.

### ***Quality Instruction***

All of the Research and Emerging Research Universities have programs in place to support quality faculty instruction. **The University of Texas at Austin**, for example, has The Division of Instructional Innovation and Assessment (DIIA) which provides teaching and learning resources that enhance teaching excellence, promote the use of technology in teaching and support, and support the development of graduate teaching assistants. Additionally, the division provides instructional and course assessment for faculty members. The University also supports teaching excellence through the Academy of Distinguished Teachers, which comprises approximately 5% of the tenured faculty in the university and provides leadership in improving the quality and depth of the undergraduate experience. Members advise the president and provost on matters related to the University's instructional mission; participate in seminars, colloquia, and workshops on teaching effectiveness; and serve as mentors to new faculty.

**Texas Tech University** relies on the Teaching, Learning, and Technology Center (TLTC) to provide programming to the faculty that improve the quality of instruction. Specifically, the TLTC offers programming, individual consultations, and two conferences annually designed to improve instruction. The TLTC offers faculty members the opportunity to learn about and strategies to implement several techniques that improve the quality of instruction. Specifically the topics include: active learning; service learning; assessment; quality matters; learning styles; effective testing strategies; using rubrics; engaging students; make large classes personable; lecturing well; problem based learning; team based learning and scholarly approaches to teaching.

Finally, the **University of Houston's Faculty Development Initiative Program** (FDIP) offers UH faculty an opportunity to receive financial support and instructional assistance to implement innovative teaching strategies that use technology. Administered through the Office of Academic Affairs, FDIP has provided approximately \$350,000 to \$450,000 annually to assist faculty in the development and implementation of curricular innovations. Instructional design and technical resources, including consultation with course design and media specialists, are also available to award recipients throughout project development and implementation to ensure successful execution of the instructional innovation. A recent evaluation of hybrid courses found that when instructional designers were part of the course planning, best practices were more likely to be present in course content and delivery.

In addition to these faculty development programs found at each of the institutions, there are some very innovative activities, especially course redesign to enhance student learning, to lower per student costs, and to integrate information technology into the teaching/learning process, taking place at the University of North Texas, The University of Texas at Arlington, and The University of Texas at El Paso.

The **University of North Texas** has the Next Generation Project which is an effort to establish a community of practice of faculty, instructional consultants, librarians, and teaching assistants to redesign

large enrollment undergraduate classes to enhance student learning outcomes. Why large enrollment undergraduate courses? There is a growing recognition that the first year academic experience is critical to future success in college. In addition, redesigning a relatively small number of these classes will have an impact on the academic experience of a large number of students.

The Next Generation Project seeks to unleash and capitalize on the Universities most important asset: the knowledge, passion, and creativity of its faculty. The purpose of the project is not to put courses online but to enable the faculty to overcome the significant obstacles to higher level learning presented in the typical large enrollment course. Faculty are encouraged to “think outside the box” in determining what can be best accomplished in an online setting so that the students can be provided with an experience in a face-to-face environment that will promote high level learning. UNT is among the leaders in a national movement toward the redesign of undergraduate courses to utilize most effectively virtual and face-to-face experiences.

The redesigned courses must be sustainable in future semesters and must be replicable by other instructors teaching the same course. Multiple measurements of learning outcomes provide the basis for course revision. The tested and revised courses will provide models that will be disseminated through faculty forums at the University and through presentations and publications worldwide.

**The University of Texas at Arlington’s Quality Enhancement Plan** for SACS focuses on Active Learning to improve higher order thinking skills. This plan, recently approved by SACS, will eventually improve the quality of instruction across the curriculum. In support of this plan, a number of seminars and support sessions are being made available to faculty to improve their teaching. More information about teaching circles may be found at <http://activelearning.uta.edu/Assets/teachingcircles0708.htm> .

Additionally, each year the University provides, through a competitive process, a limited number of faculty development leaves which provide faculty the release time to retool their courses or focus on their scholarship.

At **The University of Texas at El Paso**, math, reading, and writing courses were redesigned to ensure that first-year students enroll in college-level course work as quickly as possible. Specifically, UTEP implemented three strategies: (1) accelerated developmental courses, with or without technology assistance; (2) advanced placement of developmental students directly into college level courses with mandatory supplemental laboratory support; and (3) custom course redesign to provide mathematical training appropriate to the specific major. Allowing students to progress rapidly to college level work and credit decreases the number of prerequisites they must take, fosters early engagement with the University, increases their incentive to re-enroll, and shortens the time needed to earn their degrees.

### ***Academic Support Programs***

All of the Research and Emerging Research University’s have academic support programs to help sustain students as they pursue their academic endeavors.

**Texas A&M University**, for example, has the Aggie Access Learning Communities Program (<http://aggieaccess.tamu.edu/>) which is available to all students, but which focuses on at-risk students. For all Aggies, the persistence rate from freshman to sophomore years is 92%. For Aggie Access students, who are generally at higher risk, the persistence rate is 95%. The Regent’s Scholars Program Student Organization (<http://studentactivities.tamu.edu/online/organization/OTQyNTAw/profile/public/view>) supports the efforts of the Student Financial Aid Regents’ Scholars Program; aids in retention efforts for

those receiving the Regents' Scholarship; and encourages interaction within the Regents' Scholars community at Texas A&M University.

The Undergraduate Writing Center at **The University of Texas at Austin** conducts more than 11,000 consultations with undergraduate writers each year in addition to offering writing workshops for classes, student groups, and professors. Consultations are meant to foster independence in the students with whom the writing center work.

The UT Learning Center (UTLC) provides academic support to over 13,000 students per year. Services include non-credit classes and workshops focusing on study strategies to refreshers for calculus. Tutoring is offered to students by appointment or drop-in. UTLC offers non-credit developmental courses in math, reading, and writing to undergraduate students. The Learning Center also offers academic counseling and peer academic coaching. Students who believe they may have ADHD or another learning disability can request screening to help decide whether or not to pursue diagnostic testing. Through its teaching programs, the Learning Center also provides supplemental instruction in over 25 courses a semester and the teaching teams program provides peer-led study groups and collaboration faculty and graduate students supporting the study groups.

Services for Students with Disabilities serves all students on campus who register with the office. SSD determines eligibility and helps implement reasonable accommodations for students with disabilities. In addition to working with faculty members, administrators meet with students one-on-one to determine their needs. SSD provides an assistive technology lab and works with students with AD/HD, learning disabilities, psychological disabilities, traumatic brain injury, visual, mobility and hearing impairments, and other health and chronic medical disabilities.

At the school/college level, there are also a number of programs that complement what the University does but targets primarily their own students. The Cockrell School of Engineering has identified several specific populations of students to whom it targets academic support services. The Equal Opportunity in Engineering Program seeks to increase the diversity of its student body by supporting students who come from historically underrepresented population groups in Texas or students who have backgrounds or experiences that will contribute to the overall diversity of the Cockrell School of Engineering. Other programs include the Engineering Students with Disabilities (ESD) and the Women in Engineering Program (WEP). Women in Natural Sciences (WINS) is a program of the College of Natural Sciences designed to promote recruitment, retention, and success of women at all levels throughout the college and in the following academic disciplines within the college including astronomy, chemistry, computer sciences, human ecology, mathematics, physics, and all fields of biological sciences.

**Texas Tech University** has the Programs for Academic Support Services (PASS) which consists of five separate units designed to assist with Texas Tech students' academic success. PASS provides services for Texas Tech students as a supplement to classroom and lab instruction enabling them to achieve academic success and develop lifelong learning skills. One of the units of PASS, Supplemental Instruction (SI) exemplifies a program that has proven to assist with retention efforts in the past six years. Supplemental Instruction focuses on courses that are considered historically difficult. These courses possess a 30% or higher D, F, or W rate from initial enrollment to the end of the semester. Supplemental Instruction at Texas Tech has grown from 5,461 student contacts in 2000-2001 to 16,921 contacts in 2006-2007. In that same time frame contact hours have risen from 6,314 to 33,956; unduplicated headcount from 848 to 3,674, and sections covered from 22 to 56. Data collected on students using the program show that they achieve A, B, or C grades and fewer D, F, and W grades than those students not using the program. Research shows that students persisting with the SI program will have higher grades and higher retention in the course than those students not using the program.

At the **University of Houston**, CASA is a tutoring and testing center that provides students with hands-on tutoring assistance with completing math assignments and studying for exams. CASA also provides a secure testing facility for exams and access to practice tests and online quizzes at one of 120 computer stations located in a separate, sound-controlled room. Students schedule a time to take exams at their convenience during a specified window of time. All in all, CASA employs approximately 75 graders, proctors and tutors to assist students and the math department. Tutors are hired only after scoring well on a screener test of skills; and, at any given time, between twelve and sixteen tutors are available to assist students. While some CASA program components had been offered at UH for many years, the improved facilities and more technologically advanced and comprehensive tutoring and testing center at CASA became operational in the spring of 2004.

During any given year, between 12% and 17% of undergraduate students at UH enroll in College Algebra. Positive student outcomes in College Algebra can significantly impact the knowledge base of students in subsequent math courses and the aptitude of students graduating from UH. This year, withdrawal rates for this course decreased to 12% from a high of 22% in 2002. And, course failure rates decreased to 12% from an average of 15% in previous years. These successes correspond with the timeline in which the CASA programs were initiated.

**The University of North Texas** has two programs of interest. First is Supplemental Instruction (SI), a unique version of tutoring, targeting traditionally difficult classes suffering from a large percentage (33% or more) of students who drop, withdraw or fail. This program targets high-risk classes rather than high-risk students. Students who have already successfully completed such a course are selected to re-take the class; i.e. attend class, take notes, complete exams, etc., plus hold three one-hour study sessions per week outside of class time. SI Leaders are trained to facilitate productive group work, exemplify constructive study habits, answer questions, and clear up misconceptions pertaining to the class itself. Therefore, students not only improve their grade in a specific class but also their ability to use critical thinking skills to succeed in future courses. Many students also bond with their SI leaders and continue a mentoring relationship with the SIs throughout their college career. Students who participate in SI are significantly more likely to succeed in the course.

UNT is initiating a Math Emporium to provide significant hands-on academic supports in math. Students attend sessions and complete assignments in a computer lab specifically designated for the purpose, staffed by individuals prepared to give one-on-one instruction upon request. Students work through programmed learning in math and consult with on-site tutors as needed.

**The University of Texas at Arlington** maintains a robust SI program that focuses on entry level courses. It is looking for additional courses to support and hopes to increase the number of SI sections for AY 08/09. More information on Supplemental Instruction can be found at <http://www.uta.edu/soar/UTProgram/SI/si.htm> .

**The University of Texas at Dallas's Office of Learning Services** provides supplemental instruction (SI) for selected freshmen gateway courses. The SI is aimed at creating a supportive environment for student success. The program emphasizes reducing the number of failures, the number of withdrawals and enhancement of student learning. A comparison of students who participate in SI to those who did not revealed that SI significantly and positively affected higher grades in those courses. The SI program is modest in cost (about \$1,300 to \$1,500 per section) and is financed by student fee funds. Annually more than 830 students are served. The program reduces the number of withdrawals and failures and course repeats.

**The University of Texas at El Paso** has several academic support programs of note. Enhanced New Student Orientation, the orientation program, was expanded in Fall 2006 to include a mandatory math

review workshop for students whose ACCUPLACER placement scores placed them into developmental math courses. This Enhanced New Student Orientation (ENSO) consists of a three-day, six-hour math review conducted by math tutors from UT El Paso's Tutoring and Learning Center and is designed to refresh mathematical skills for students who may not have taken a mathematics course during their last semester of high school. After completing the math review workshop, students are able to retake the ACCUPLACER placement exam to place into a college level mathematics course, or to attain a higher placement in mathematics. Positioning students to take college-level courses required as part of their degree plans helps students make progress in their academic careers, increases their incentive to re-enroll, and shortens time to degree.

The required First-year Seminar (UNIV 1301 – Seminar in Critical Inquiry) is a 3-hour core curriculum course that addresses critical thinking, academic success skills, and transitional issues through an academic theme determined by the instructor's area of expertise. Each section is taught by an instructional team that consists of an instructor, a student peer leader, a librarian, and an academic advisor. In addition to delivering the academic content of the course, this team addresses academic advising questions, helps students understand degree plans and time-to-degree based on hours completed in long semesters and summer school, and provides literacy instruction and introduction to library resources. An electronic financial impact module, created especially for UTEP students, helps students examine ways of paying for college, the long-term cost of not completing a degree or delaying degree completion, and the impact of part-time vs. full-time employment on time-to-degree. Students also explore career options as part of the course.

The Welcome Back Miner Program encourages students who have stopped out for one or more semesters to return to UTEP and finish their degrees. Stop-out students are contacted by their academic Dean's office each semester to offer information, incentives, and referrals that may encourage non-enrolled students to reenroll and complete their studies at UTEP.

Finally, at **The University of Texas at San Antonio**, Supplemental Instruction is a series of weekly study sessions offered to students enrolled in historically difficult courses at UTSA. Students who successfully completed the course and who are trained to facilitate collaborative study groups guide SI sessions. Students who attend SI sessions regularly tend to average one half to one full letter grade higher than their classmates who do not attend SI. Note: The UTSA SI program will be recognized as an exemplary program at the upcoming International Supplemental Instruction Conference. Cooperative agreement with Alamo Community College District colleges to partner with UTSA on preparing applicants to UTSA who lack prerequisite skills for University-level work. Students take agreed-upon curriculum at the community college, and are automatically accepted to UTSA upon successful completion of that curriculum.

### ***Learning Communities***

There is a wide range of learning communities available at **Texas A&M University**. These range from mandatory communities for at-risk scholarship students to discipline-based or interest-based communities. Some, but not all, involve shared living (<http://reslife.tamu.edu/housing/1lc/>). These communities also contribute to high retention and graduation rates.

Academic Community Centers are offered in two residence halls that serve as central hubs for students living on-campus at **The University of Texas at Austin**. The Cockrell School of Engineering and College of Natural Sciences provide academic advisors and graduate student assistants to provide tutoring. Wireless connectivity, peer mentors, space for individual and group study, and late night dining hours enhance the centers' offerings for students.

Approximately 3,400 students are enrolled the First-Year Interest Group Program (FIG) and 100 students are enrolled in the Transfer Interest Group Program (TrIG). A FIG or TrIG is a cohort of up to twenty-five freshmen or transfer students who take two to four courses together as a cohort. In addition to their courses, each cohort attends a one-hour seminar once a week. The seminar is facilitated by an academic advisor and a peer mentor. In the seminar, students take part in discussions about issues encountered as a first-semester student, including study and time management strategies, social opportunities and issues, campus life and involvement opportunities.

The First-year Seminars Program offers small, fifteen-student courses taught by university faculty. The seminars are only offered in the fall semester and are only open to entering students. Freshman seminars often include third-hour activities that introduce students to the academic richness and resources of the university. The small size of the seminar allows the instructor to act as a mentor and helps new students make connections with each other. Students consistently report that the seminars aid significantly in making the transition from high school to college-level writing and thinking. The seminars also assist students in identifying interesting subjects for further research and future careers. An average of 1,000 entering students enroll in freshman seminars each fall semester.

Forum Seminars introduce freshmen and sophomores to contemporary issues with an emphasis on interdisciplinary perspectives and critical discourse. The seminars feature weekly discussions with faculty from a variety of departments, and thus assist students in exploring potential majors, learning about interesting classes, and connecting with faculty. Students have the opportunity to learn about some of the research being conducted on campus and get to know a wide range of potential professors. Forum seminars also introduce students to UT's wide array of interdisciplinary programs. Approximately 1000 freshman and sophomores enroll in forum seminars each year.

The Bridging Disciplines Programs (BDPs) support students in becoming versatile thinkers with the skills to collaborate across disciplines and cultures. BDP advisors and faculty from across UT's schools and colleges work closely to plan and integrate classroom, research, and internship experiences. The coursework for most of the BDPs is organized into strands that reflect significant topics and subfields within the broader BDP theme. Students choose courses from an existing strand, or create their own strand with the approval of the faculty. The Bridging Disciplines Programs emphasize undergraduate participation in faculty research because research allows students to explore potential careers, hone communication and critical thinking skills, and connect with faculty mentors. There are currently eight BDP areas, each with multiple strands. An average of 250 students enter a BDP each year.

The Longhorn Scholars Program is a four-year honors program for top 10% students from selected Texas high schools whose graduates have historically been underrepresented at the university. Longhorn Scholars receive advising support, peer support from experienced students, program events to get to know professors, advisors and staff, a diverse curriculum of small and large classes taught by outstanding professors, opportunities to engage in interdisciplinary study and participation in faculty research and international study.

The Texas Interdisciplinary Plan (TIP) is a highly selective academic program for first-year students in the College of Liberal Arts and the College of Natural Sciences. TIP provides students with a rigorous course of study, an introduction to critical thinking, and a unique blend of academic opportunities and benefits. Students enroll in a balance of small and large classes that are linked. They take a critical thinking seminar and have an academic peer mentor. The program assists students in making connection to faculty and academic advisors.

Learning communities have been in existence at **Texas Tech University** for the last eight years. There are currently 10 such communities operating on campus with capacity for more than 3,500 students. An

additional community will be added in fall 2008. Students involved in the programs have the opportunity to:

- Cultivate lasting relationships with faculty and peers
- Receive guidance from upper class students
- Attend specialized social and academic activities; create study groups
- Motivate each other to attend class, complete assignments, and exchange ideas
- Affirm personal and professional goals focused on strengths and interests
- Gain a broad perspective of the career opportunities available in specific fields

In fall 2008 Texas Tech plans to add Freshmen Interest Groups (FIGS). These will be small groups (approximately 20) of first year students who are co-enrolled in 1 course (same section) during the fall semester around a central interest or academic theme. The FIG participant will also be enrolled in a 1 credit FIG seminar. The FIG seminar will be team taught by a faculty member and a residence life student staff member. FIGs will typically be nested within a Learning Community which houses students of similar majors or interests within the same living environment.

The Houston-Louis Stokes Alliance for Minority Participation (AMP) at the **University of Houston** is an alliance of seven higher education institutions engaged in the task of attracting and retaining minority participation in science, technology, engineering and mathematics (STEM) majors. The University is funded by the National Science Foundation to support this program on campus. Participating students receive stipends and are offered the opportunity to obtain additional instruction and assistance through supplemental workshops covering the content necessary to master more difficult courses at the university. The AMP program is housed in one building on campus, and students tend to use the staff and other participating students as their base community for social and academic support.

Students who participate in the AMP program persist at higher rates and earn higher cumulative GPAs than non-participating STEM majors despite having similar admission characteristics (e.g. high school GPA and SAT scores). In fact, the one year persistence rate is 15% higher for AMP scholars compared to other STEM majors (94.7% vs. 78.5%). This provides compelling evidence that the AMP program is effective in supporting the academic achievement of minority students in STEM majors.

REAL Communities, Residents Engaged in Academic Living, are communities within the residence halls that bring students together who share the same major or interest at the **University of North Texas**. The goal of the REAL Communities program is to enhance students' education at the University by creating learning opportunities outside of the classroom. Besides living on a wing with other students who share the same academic interest, a REAL Communities resident would be able to attend programs and activities that focus on their major or thematic interest, meet and get to know UNT faculty outside of the typical professor-student environment, enroll in classes with their peers on the wing, and much more. This academic year, REAL Communities are being offered in Bruce Hall for jazz studies majors, in Kerr Hall for students in the College of Visual Arts and Design and in Clark Hall for biological sciences majors. Beginning in the fall of 2008, communities will be added to three other residence halls. One will be set aside for students majoring in radio/television/film and journalism. The others will be thematic wings for students interested in leadership, the environment and recycling, and health and wellness. Students of all majors may apply for these wings, which will house 30 to 40 students.

Faculty in Residence: Dr. Marc Cutright, director of UNT's Center for Higher Education, is the first faculty member at UNT to live in one of the residence halls under the university's new faculty-in-residence program. The program is designed to connect students' academic development with their personal development by making faculty members more accessible to students outside of the classroom. A faculty apartment has also been built into the new Honors Dorm with first occupancy planned for fall 2008.

**The University of Texas at Arlington** has a number of residential and non-residential learning communities. It has been our experience that these learning communities assist with student retention and students participating in the learning communities also have slightly higher academic performance. For example, freshmen participating in Freshman Interest Groups consistently show one-year retention rates 6% to 11% higher than non-participants. For more information, go to <http://www.uta.edu/uac/maverickscholars-home> .

A group of 25 freshmen with the same major or interests who take two or three of their core curriculum classes together during their first semester at **The University of Texas at San Antonio**. For example, a student majoring in Psychology may enroll in a Psychology Learning Community. The community may have a Freshman Seminar that connects to Freshman Composition and a large Introduction to Psychology lecture course.

### *High Quality Advising*

High quality advising is another activity common to all of the Research and Emerging Research Universities. However, some innovative programs have been put into place at Texas Tech University and the University of Houston, and they are described below.

In 2004, **Texas Tech University** implemented five measures to guide students back to university expected graduation timelines: limit number of courses a student can drop, no retaking of courses if a grade of A, B or C is achieved, additional fees for courses taken more than twice, university drop for excessive absences, and the Graduate-On-Time Partnership Agreement (GOT Contract). The first three measures are intended to decrease student behaviors proven to increase time to graduation.

The GOT Partnership Agreement assists students to be aware of expected course sequencing, encourages students to take and complete the expected full-load of courses each semester, and informs students of the academic consequences to graduation for poor academic performance and/or altering of program expectations. The program also seeks to inform students of the increasing demand by employers for qualified applicants with education beyond the baccalaureate degree.

The GOT Partnership Agreement program is strictly voluntary and holds no direct punitive actions for the student who signs an agreement and later reneges. Rather, the program focuses on the partnering of the student and the university to achieve the student's educational goals in the shortest timeline possible. Texas Tech has seen a fluctuation in the numbers of students signing a GOT Agreement since 2004. Entering freshmen have through advance registration of their second long semester during their first academic year to sign the agreement. The 2007-2008 academic year (the fourth year of the program) has by far been the most successful to date in numbers of students signing the agreement.

The fall 2004 entering freshmen have not yet reached their four-year graduation timeline, thus TTU has only preliminary research that suggests the success of the program. Students who chose to sign the GOT Partnership Agreement are performing more successfully academically (achieving higher grade point averages per semester, taking more semester credit hours (SCH) per semester, earning more SCH per semester (i.e., dropping few courses), and are repeating fewer courses than students who chose not to sign. This data suggests the program is achieving its goal of guiding students toward a more timely graduation.

The PEGASUS Program (Pioneers in Education: Generations Achieving Scholarship and Unprecedented Success) is an academic advising and mentoring program that supports First Generation College (FGC)

Students through their first year to make a successful transition to college. The purpose of this program is to ensure that FGC students have access to the resources necessary for them to effectively navigate their undergraduate educations. Assistance is provided in three main areas of concern for FGC students: academic, social, and financial. PEGASUS ensures that FGC students do not make their scholarly journeys alone by providing an academic home and demystifying the college experience. PEGASUS also impacts the success of upperclass FGC students with the opportunity of being Mentors and/or Program Assistants. This offers an on-going leadership development program for FGC students. The goals of the PEGASUS program are as follows:

- Provide First Generation College students with advising, information, guidance, and community as they take on the challenges of being a college student
- Retain FGC students through their first year to graduation
- Encourage on and off campus involvement in activities and events that will broaden the student both socially and intellectually
- Promote and encourage unity within the program and across the Texas Tech University campus in order to foster the success of every FGC student
- Provide the means for all FGC Students to actively participate in and benefit from the program no matter what stage of life they are in

The Bauer Experience is a student development and retention program for undergraduate business majors in the Bauer College of Business at the **University of Houston**. Program components include: a mandatory on-line orientation called “BBA Basics and the Bauer Code of Ethics and Professional Conduct”; new student receptions; corporate site visits; financial management and retention workshops; and the opportunity to hear special speakers. Students must also complete a business writing evaluation, which was developed in collaboration with the UH Writing Center. Students identified through the evaluation as needing to improve writing skills are assigned a Writing Center consultant for one-on-one tutoring to complete a career-related writing portfolio. Approximately 20% of the students are identified for additional writing support each semester. Once students demonstrate competency with the portfolio task, they are approved to continue their studies in the business majors. The Bauer Experience also includes careful monitoring of GPA and advising outreach to students, and academic advisors utilize an academic and career timeline in advising sessions to help students keep on track with major milestones such as filing a degree plan, participating in an internship if so desired by the student and graduating on time.

Since implementation of the Bauer Experience, the writing deficiencies of 20% of the business majors at UH are now being addressed. Over the past three years the graduation GPAs of business students has increased from a mean GPA of 3.02 to a mean GPA of 3.09. Student perceptions of their advising experience have improved, with recent graduates rating advising 20% higher on the annual survey. More students are seeking employment prior to graduation, and more have employment offers at the time of graduation. The six-year graduation rate in the College of Business for the 1999 and the 2000 cohorts has increased 7% from 49.5% to 56.7%. And, according to an article in *Diverse Issues in Higher Education* (May 31, 2007), based on Department of Education statistics, the Bauer College ranked first in Texas for the past two years in a row in the number of business related degrees awarded to minorities.