

# Service to Texas in the New Century

**A Long Range Plan for The University of Texas System**



The University of Texas System  
601 Colorado Street  
Austin, Texas 78701  
512/499-4200  
[www.utsystem.edu](http://www.utsystem.edu)

*handout  
@ BOR  
mtg 11/16/00*

## Table of Contents:

1.	The U. T. System: Working for a Stronger Texas Through Leadership in Higher Education .....	1
2.	Challenges to the Economic and Social Vitality of Texas: Participation, Success, and Excellence in Texas Higher Education .....	4
	A. Parity in Participation and Success .....	4
	B. Parity in Excellence .....	7
3.	The U. T. System Response: Delivering Parity in Participation, Success, and Excellence .....	9
	A. Increasing Participation and Success .....	9
	B. Building Capacity for Excellence .....	12
4.	Resources to Implement the Long Range Plan .....	16



**The University of Texas System**

601 Colorado Street  
Austin, Texas 78701  
512/499-4200  
www.utsystem.edu

**The Board of Regents:**

Donald L. Evans, *Chairman*  
Tom **Loeffler**, *Vice-Chairman*  
Rita **Crocker Clements**, *Vice-Chairman*  
Woody L. Hunt  
Charles Miller  
Patrick C. Oxford  
A. W. "Dub" **Riter**, Jr.  
**Raul R. Romero**  
A. R. (Tony) Sanchez, Jr.  
**Francie A. Frederick**, *Counsel and Secretary*  
*to the Board of Regents*

**Executive Officers:**

R. D. (Dan) **Burck**,  
*Interim Chancellor*

Charles B. **Mullins**, M.D.,  
*Executive Vice Chancellor for Health Affairs*

Kerry L. Kennedy,  
*Interim Executive Vice Chancellor for Business Affairs*

Edwin R. **Sharpe**,  
*Executive Vice Chancellor for Academic Affairs*

**Cullen** M. (Mike) Godfrey,  
*Vice Chancellor and General Counsel*

Thomas (Tom) A. Scott,  
*Interim Vice Chancellor for Governmental Relations*

Shirley Bird Perry,  
*Vice Chancellor for Development and External Relations*

James C. Guckian, M.D.,  
*Vice Chancellor for Health Affairs*

Dale E. Klein,  
*Vice Chancellor for Special Engineering Programs*

Mark Franz,  
*Vice Chancellor for Federal Relations*

Joyce Moos,  
*Executive Associate to the Chancellor*

Lewis W. Wright **III**,  
*Associate Vice Chancellor for Business Affairs & Assistant Vice Chancellor for Governmental Relations*

**Armando Diaz**,  
*Associate Vice Chancellor for Governmental and Community Relations*

Thomas G. Ricks,  
*President and CEO, UTIMCO*



# Service to Texas in the New Century

## A Long Range Plan for The University of Texas System

### 1. The U. T. System: Working for a Stronger Texas Through Leadership in Higher Education

The University of Texas System has a responsibility to play a key leadership role in Texas higher education. To fulfill this responsibility the U. T. System must articulate a plan to meet the higher education challenges of 21st century Texas. These challenges grow out of significant demographic shifts as well as fundamental economic change, and they have far-reaching social and political implications for the state as a whole, as well as for the economic well-being and personal fulfillment of all Texans as individuals.

The natural statewide leadership role of the U. T. System is clear from a review of basic facts about the 15 U. T. component institutions—nine general academic universities and six health science institutions. By all measures, the U. T. System is the state’s largest and most comprehensive higher education enterprise. In Fall 2000, the System enrolled 152,297 students, who comprise 35.1 percent of the students at Texas public universities, including 72.8 percent of the students at health education institutions. With more than 74,000 faculty and staff employees, the System would rank as the state’s fifth largest private-sector employer. The System has an annual operating budget of \$5.8 billion, as well as a capital construction budget of \$2.7 billion for the current six-year capital improvement program. (Figure 1)

With these resources, geographically diverse and strategically located in every major growth area of the state, the U. T. System is in a unique position to meet the challenge of providing greatly expanded service to all people of the state. The highest priority state goal, best defined and most recently adopted in the

**Figure 1: U. T. System Facts**

**9 U. T. Academic Universities:**

- U. T. Arlington
- U. T. Austin
- U. T. Brownsville
- U. T. Dallas
- U. T. El Paso
- U. T. Pan American
- U. T. Permian Basin
- U. T. San Antonio
- U. T. Tyler

**6 U. T. Health Institutions:**

- U. T. Southwestern Medical Center - Dallas
- U. T. Medical Branch at Galveston
- U. T. Health Science Center - Houston
- U. T. Health Science Center San Antonio
- U. T. M. D. Anderson Cancer Center
- U. T. Health Center at Tyler

- ◆ 152,297 students (35% of public university students)
- ◆ 29,361 total degrees awarded annually: 19,655 bachelor’s degrees (34% of the state total); 9,339 advanced degrees (40% of the state total) including 1,118 doctoral degrees (47.5% of the state total); and 167 associate degrees and certificates
- ◆ \$925.3 million in annual research spending (64% of the state total and 69.6% of the federal FY98 expenditures in Texas)
- ◆ \$5.8 billion annual operating budget
- ◆ \$15.2 billion under investment management
- ◆ \$23.7 billion in total assets
- ◆ \$744-7 million annually in indigent health care
- ◆ An internationally distinguished faculty, including 7 Nobel laureates, 32 members of the National Academy of Sciences, 44 members of the National Academy of Engineering, 37 members of the American Academy of Arts and Sciences, 21 members of the American Law Institute, and 30 members of the American Academy of Nursing.

Texas Higher Education Coordinating Board's Higher Education Plan, *Closing the Gaps*, is to increase African-American and Hispanic rates of participation and success in a high quality system of higher education so that these groups achieve parity with current Anglo graduation rates. The fundamental importance of this challenge to the state's continued prosperity and social cohesion is discussed in Section 2 of this document. The U. T. System is committed to lead the state in achieving this goal through implementation of the Long Range Plan to follow.

The U. T. System is well placed to lead the state to parity. Since 1998, the System has had a "minority-majority" enrollment, with Anglo students making up approximately 48 percent of the total student population. With Hispanics comprising 83 percent of the growth in the 18- to 24-year-old population from the year 2000 to the year 2030, it is particularly important to note that four of the System's universities (U. T. Pan American, U. T. El Paso, U. T. Austin, and U. T. San Antonio) are among the top five in the nation in the awarding of bachelor's degrees to Hispanic students. U. T. Austin leads the nation in the production of Hispanic doctoral graduates, and the System's four medical schools rank first, second, sixth, and seventh in the nation in the production of Hispanic medical doctors. More than half of the Hispanic students at Texas public universities are enrolled at U. T. institutions.

The U. T. System must play the major role in providing access to a system of nationally ranked institutions of higher education if parity is to be reached. Success in this endeavor by 2030 would result in vast changes in the demographics of the U. T. System student population and the transformation of numerous U. T. institutions with regard to their size as well as the educational services they provide the people of Texas.

<b>Figure 2</b> U. T. System General Academic Universities <b>Projected Enrollment Changes from 2000 to 2030</b> Assumptions: Enrollment Parity for African-Americans and Hispanics, Stable Enrollment Rates Among Anglos, and an Enrollment Cap at U. T. Austin		
institution	2000 Actual	2030 Projected
U. T. Arlington	20,424	43,000
U. T. Austin	50,010	49,000
U. T. Brownsville	9,075	19,000
U. T. Dallas	10,954	21,000
U. T. El Paso	15,224	31,500
U. T. Pan American	12,751	25,000
U. T. Permian Basin	2,274	3,500
U. T. San Antonio	18,830	36,500
U. T. Tyler	3,594	8,500
<b>TOTAL</b>	<b>143,156</b>	<b>236,000</b>

Enrollment parity by African-Americans and Hispanics would result in an overall enrollment increase of 93,000 at the U. T. System's nine general academic universities. As shown in Figure 2, this increase would be absorbed by eight of the institutions, assuming a permanent enrollment cap at U. T. Austin at the 1999 enrollment level. Given these assumptions, approximately 70 percent of the System's enrollment would be made up of minority students by 2030.

A strong system of public education that produces large and increasing numbers of highly qualified high school graduates is the necessary foundation for a strong system of higher education. In the last 10 years Texas has adopted and implemented policies to accomplish this requirement. The key to any state's survival in a diversified, knowledge-based economy is the ability of institutions of higher education to produce large and increasing numbers of highly qualified graduates. Just as Texans are learning in the public education system, this can only be accomplished through the development of excellent, high quality education available across the state. For the reasons discussed above, the success of the entire higher education enterprise in Texas depends in large part on the success of the U. T. System. The U. T. System recognizes that success in reaching parity is tied directly to the development of strategically located, geographically diverse institutions of excellence dedicated to producing highly qualified graduates.

The System's leadership role in excellence is reflected in the quality of its personnel and programs. (Figure 1) System-wide, the faculty includes seven winners of the Nobel Prize and numerous recipients of other major awards. The System's faculty leads the state in membership in professional academies. U. T. Austin and U. T. Dallas have, along with Texas A&M University, the highest admission standards among Texas public universities. Graduates of all U. T. institutions are leaders in their professional fields as well as leaders in their communities. The U. T. System is committed to developing and supporting excellence across the state.

U. T. System component institutions currently account for approximately 70 percent of the federally funded research in Texas public universities. Seven of the top 10 research institutions in the state are U. T. institutions. Five of the top ten are U. T. health institutions. Most of the future growth in research activity is likely to occur in the major population centers in which U. T. System institutions have a strong presence. Even with these resources, Texas finds itself behind key peer states in advanced degrees conferred and, consequently, in total federal research funding. Thus, the Texas research challenge is a U. T. System challenge.

Creating a highly educated citizenry requires wise investment of public and private resources at all levels of education, from pre-kindergarten through post-doctoral study throughout the state. The purpose of this report is to meet the U. T. System's leadership responsibility by setting forth a clearly articulated long range plan that links the mission of the U. T. System with key societal challenges facing Texas. The success of the U. T. System in this endeavor will ensure that Texas reaps the vast social, political, and economic benefits of a significant expansion in highly educated populations across the state.

To establish a credible, effective, and efficient long range plan, the U. T. System Board of Regents has defined the challenges in Section 2, developed responses tailored to those challenges described in Section 3, and finally, has developed and proposes to implement resource allocation strategies that are based on objective, transparent, and thus accountable criteria, as described in Section 4.

## 2. Challenges to the Economic and Social Vitality of Texas: Participation, Success, and Excellence in Texas Higher Education

### A. Parity in Participation and Success

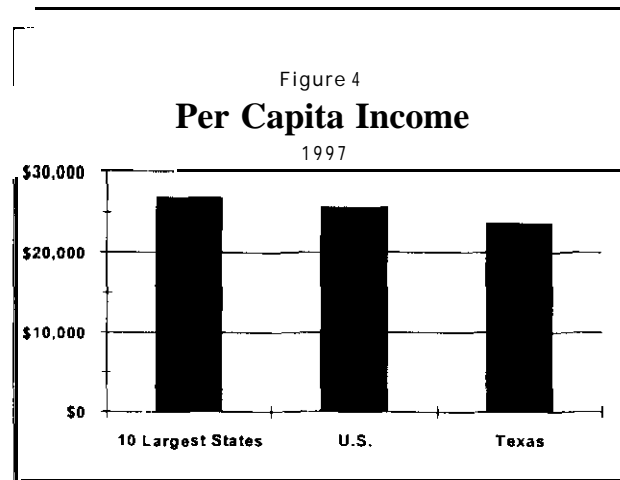
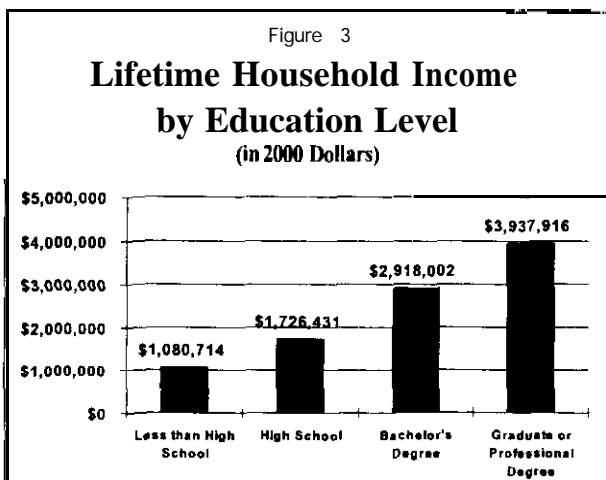
The first challenge is to meet the goal of parity in participation and success rates for the state's minority populations. The consequences of failure to meet this goal and the specific parameters of this challenge are defined in the following analysis.

The state demographer estimates that, in the next 30 years, the population of Texas will increase from 20 to 34 million. Minorities will comprise nine out of 10 of these 14 million new Texans. This strong population growth could become an economic engine for Texas. However, the economic strength and social cohesion of Texas over the next 30 years will be in jeopardy if current educational trends continue. These challenges result from the significant projected growth in the state's minority populations, together with the historically low educational participation and success rates of those groups in comparison with the Anglo population.

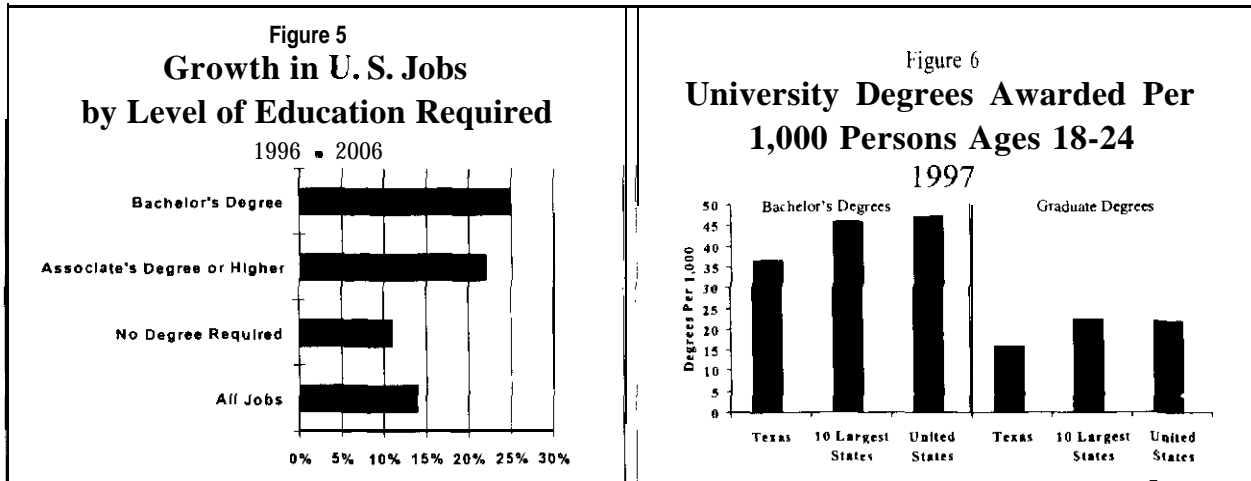
Unless the educational attainments of the state's Hispanic and African-American populations are increased, the Texas workforce of 2030 will be less well educated than it is today. If current trends continue those - with less than a high school education will represent the only educational category to increase as a percentage of the Texas labor force by 2030. Without intervention to change current projections, the result will be a Texas that is less able to compete in the global marketplace.

If current educational trends continue, average household income in Texas will decline by \$3,000 in real dollars by 2030, thus increasing demands on the state for support services while decreasing the state's ability to fund basic services and decreasing investment capacity simultaneously. Texas lags today in per capita income, because income is so closely related to education level. (Figure 3) In fact, Texas per capita income is 12 percent behind the average in our peer states (the 10 most populous states, Figure 4).

The implications for the Texas economy are critical because the educational level required for new jobs will increase, just at the time that the education level of the Texas workforce is projected to decline. (Figure 5). One obvious result is that the lion's share of new jobs will go to other states—states that have prepared for the 21st century economy by investing more wisely in education.



Source for Figures 3 and 4: U.S. Census Bureau



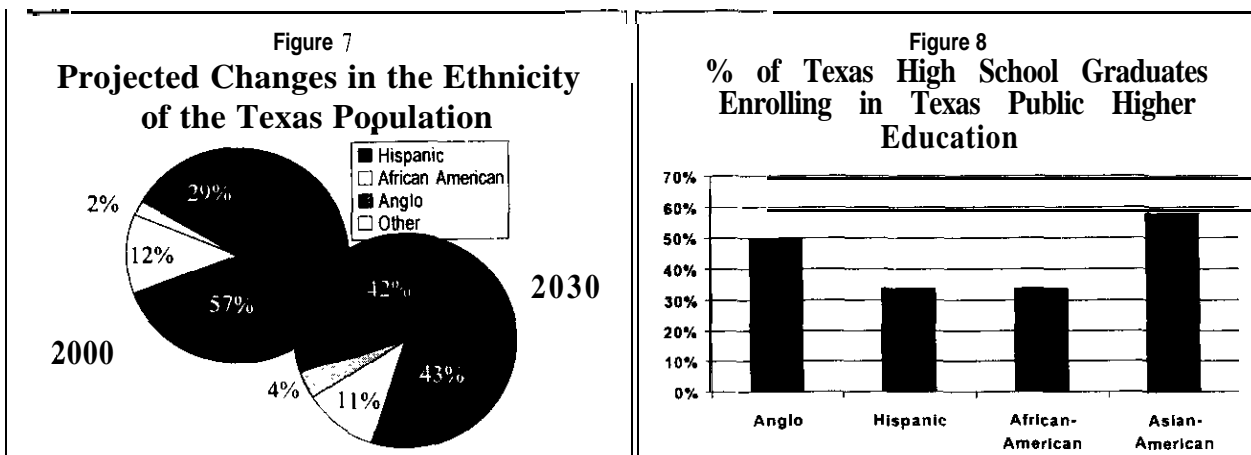
Source for Figures 5 and 6: Degrees from *Digest of Education Statistics*, 1999, U.S. Department of Education, National Center for Education Statistics. Population from U.S. Census Bureau, March 2000.

Texas currently produces university graduates at a lower rate than both the national average and the average of our peer states (Figure 6). Reaching the current national rate will require Texas to produce an additional 20,000 undergraduate degrees per year. Compounding this gap in success is the gap in participation rates. Texas lags the national average in college enrollment of 18-year-olds by 24.5 percent.

Based on the projected changes in the ethnicity of the Texas population through the year 2030 (Figure 7), it is clear that Texas is fast becoming a “minority-majority” state. Among the 18- to 24-year-old population, there will be a decline in the number of Anglos over the next 30 years, so that minorities will account for 106 percent of the growth in that age group when comparing the year 2000 to the year 2030. Of that growth, 83 percent will be Hispanic.

In themselves, these trends are by no means a concern, as the rich cultural and ethnic diversity of Texas is one of its principal strengths. A concern arises only because of the historic disparities between minority and Anglo educational attainments. (Figure 8)

The challenge to increase higher education participation rates is illustrated in Figures 9–12, which depict the college applicant pools of various ethnic groups, based on standards applicable to minimally qualified students. For each group except Asian-Americans, the percentage of the total pool meeting various standards of achievement declines sharply.



Source: Center for Demographic and Socioeconomic Research and Education, Texas A&M University; U. T. System Office of Governmental Relations

Source: Texas Higher Education Coordinating Board

Figure 9  
Anglo  
College Applicant Pool in Texas  
1998

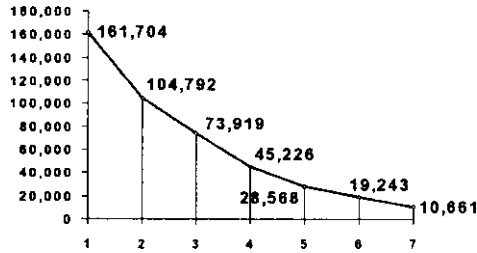


Figure 10  
Hispanic  
College Applicant Pool in Texas  
,998

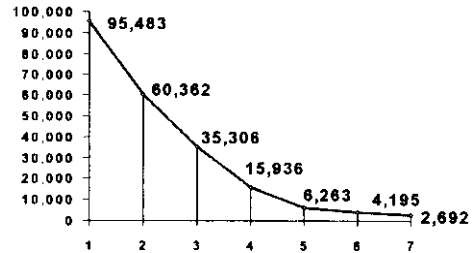


Figure 11  
African-American  
College Applicant Pool in Texas  
1998

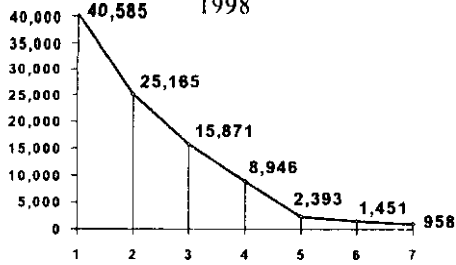
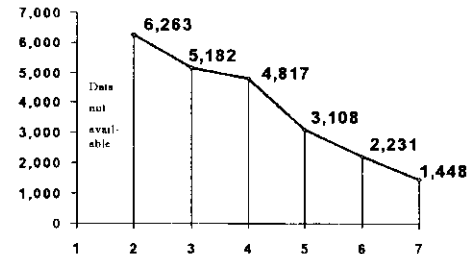


Figure 12  
Asian-American  
College Applicant Pool in Texas  
1998



1. 18-year-olds
2. High school graduates
3. College bound
4. Four-year SAT takers
5. SAT score above 900 and in the top 40% of high school class
6. SAT score above 900 and in top 20% of high school class
7. In top 10% of high school class

Source for Figs. 9-12: U. T. Austin

Figure 13  
Projected College and University Enrollment  
of Resident Students

Year	Trend Line Projection	PaHtyorK-12 Achievement Projection
2000	787,659	N/A
2010	889,227	1,112,224
2020	987,797	1,310,792
2030	1,097,876	1,474,387

Source: Center for Demographic and Socioeconomic Research and Education, Texas A&M University; U. T. System Office of Governmental Relations

Figure 14  
Projected Enrollment Changes  
in Texas Public Colleges and Universities  
by 2030  
Resident Students • By Region

Region	Current Trend	Parity Rate
High Plains	(2,080)	8,794
Northwest Texas	(3,293)	3,566
<b>Metroplex</b>	<b>124,887</b>	<b>229,014</b>
Upper East Texas	(4,504)	1,927
Southeast Texas	(5,319)	882
Gulf Coast	69,681	167,738
Central Texas	27,761	80,630
South Texas	68,760	140,404
West Texas	1,427	11,272
Upper Rio Grande	32,897	42,281
Total	310,217	686,728

Source: Center for Demographic and Socioeconomic Research and Education, Texas A&M University; U. T. System Office of Governmental Relations

To reach parity of college graduation rates for minority 18- to 24-year-olds by the early 2020s will require that aggressive intervention begin immediately. For example, the *Texas Professional Development Online: Algebra J* project currently being developed as a part of the U. T. System's K-16 Initiative will be fully developed by fall 2001 and should receive widespread application by fall 2006. Since it is targeted for Algebra J teachers, its impact on high school graduation will not be complete until spring 2011 and it will not have full impact on the college graduation rate until 2017 or later. Some statewide actions such as the development of alternative pathways for the preparation of mathematics teachers and making the recommended high school curriculum the default curriculum are still being debated. Thus, it does not seem realistic to reach parity of college graduation rates for minority 18- to 24-year-olds until sometime between 2020 and 2030. By 2030 the statewide parity graduation rate would be 107,000 bachelor's degrees, 87 percent more than in 2000.

Parity must also be achieved in the award of graduate and professional degrees. At current levels, African-Americans and Hispanics are even more under-represented than at the bachelors degree level. To achieve greater diversity in the awarding of graduate and professional degrees will require continued progress in achieving diversity at the undergraduate level. Texas needs to produce an additional 8,500 advanced degrees per year to reach only the current national average.

Figure 13 shows projected statewide enrollments over various ranges. At the high end of the range, the 30-year growth would require adding the equivalent of 34 new institutions the size of U. T. Arlington (20,000 students). Even with no improvement in performance, by 2030 the state will need additional capacity equivalent to 15 institutions the size of U. T. Arlington. Most of the enrollment increases shown in Figure 13 will occur in regions where either the U. T. System or the University of Houston System has a major presence. (Figure 14) Thus, over the next 30 years, the U. T. System must be prepared to add a large amount of capacity in faculty, staff, and buildings in those institutions where the growth will occur and parity will be achieved.

Texas faces special challenges in meeting its medical and health-related manpower needs. For the foreseeable future, Texas will have adequate numbers of physicians and health-related professionals. Texas currently graduates approximately 6.3 physicians per 100,000 population compared to 5.9 as the U.S. average. Furthermore, Texas licenses more physicians from out-of-state each year than it graduates. The challenge for Texas is to continue to increase the diversity of its health manpower to match the diversity of its population. The Texas Medical Association currently reports a population which is 56 percent Anglo being served by a physician workforce which is 76 percent Anglo. Another challenge relates to the distribution of physicians to geographic areas of great need. The U. T. System has already begun to meet this challenge with its creation of the Regional Academic Health Center in the Lower Rio Grande Valley.

## **B. Parity in Excellence**

The second challenge Texas faces is to reach or exceed parity in excellence. If Texas is to capture the opportunities provided by achieving parity in participation and success, then the state must provide not only expanded physical capacity but ensure expanded capacity for excellence. With U. T. Austin and Texas A&M University, Texas has two nationally ranked public institutions to offer to the most capable undergraduates in the state; however, undergraduate enrollments at these institutions are effectively capped. Texas must develop nationally ranked alternatives or begin exporting many of the most capable students to other states.

Texas is not competitive with peer states in nationally ranked Ph.D. programs. Texas has only 11 Ph.D. programs in public universities ranked in the top 10 nationally by the National Research Council. The state of California has 124. Without significant expansion of excellence through nationally ranked programs of every kind, advanced degrees will not be produced nor will the research activity that these programs generate.

The University of Texas System already meets national excellence standards in the area of academic medicine. However, the completion of the mapping of the human genome offers Texas and competing states tremendous opportunities in the rapidly developing biotechnology field. The research explosion in this field has been compared to the economic explosion in the telecommunications industries following the discovery and development of the silicon chip. Unless Texas moves immediately to take advantage of this revolutionary new knowledge, a once-in-a-lifetime opportunity for Texas will be lost.

In federally funded research, Texas receives about \$300 million per year less than its proportional share based on the size of its population relative to the U.S population and \$500 million less than its share at the California rate. Texas is losing well over \$1 billion in economic activity as a result of lack of competitive research capacity. With over 20 million people, Texas ranks No. 2 behind California in population but only sixth in federal support for research. Among the federal agencies that support research, Texas is first only in agriculture, where the state has a strong formal research partnership with the U.S. Department of Agriculture. With regard to other agencies, Texas ranks no higher than fourth in the amount of research and development funding. (Figure 15 )

The opportunity cost to Texas of not closing these degree and research gaps is large. The impact on the Texas economy of 20,000 more individuals earning bachelor degrees has been estimated to exceed \$3.6 billion in present value terms. Permanently closing this gap would create those benefits each year. The value to the Texas gross state product of permanently closing the research gap is estimated to be over \$1 billion per year.

Meeting the state's challenges of creating parity in participation and success and of expanding capacity for excellence are directly tied to one another. Successfully meeting these challenges is inextricably tied to the ability of Texas to be economically competitive in the global economy. The U. T. System Long Range Plan must therefore provide a response that is consistent with the particular nature and scope of these challenges as defined above.

**Figure 15  
Federal Research & Development Obligations  
1998**

Agency	R & D Obligations (\$ Millions)	Texas Rank	California Rank
Health and Human Services	7,972	4	1
National Science Foundation	1,973	7	1
Defense	1,547	5	2
NASA	791	5	1
Agriculture	434	1	1
Energy	611	5	1
Education	98	6	1
Commerce	101	4	2
EPA	166	4	1
Interior	66	6	1
Other	85	n/a	n/a
<b>TOTAL</b>	<b>13,847</b>	<b>6</b>	<b>1</b>

R&D obligations to Texas, \$730 million;  
R & D obligations to California, \$2,060 million.  
Source: *National Science Foundation*

### 3. The U. T. System Response: Delivering Parity in Participation, Success, and Excellence

Parity in participation and success and parity in excellence are inextricably linked. However, for purposes of discussing the U. T. System response, the material that follows is separated into two parts. While different programmatic activities are required to achieve parity in participation and success for individual students and parity for institutional excellence, the goal of the U. T. System is to achieve parity participation in excellent programs.

#### **A. Increasing Participation and Success**

To meet the goal of reaching parity in participation and success, the U. T. System will implement or expand the following policies and programs System-wide while ensuring that each component institution reflects the demographics of its service population.

#### **Meeting Parity in Participation and Success: Programmatic Requirements**

##### K-16 Initiative

The U. T. System has launched an initiative to work collaboratively and systemically with public schools and community colleges to improve the entire public education system from kindergarten through college. The initiative is based on the recognition that these levels of education are highly interdependent. The public schools and community colleges depend on the universities both to prepare teachers and other education professionals and to assist the districts in their continuing education and professional development. The universities, in turn, depend on public schools to prepare high school graduates who are ready for college-level work and on the community colleges to prepare transfer students for upper-level college work.

The current System initiative includes:

- Expanding outreach services to motivate and prepare students for college;
- ◆ Aligning college admission expectations with high school graduation expectations;
- ◆ Building capacity for Advanced Placement (AP) instruction;
- ◆ Better preparing new teachers to meet the challenges of the public school classroom;
- Supporting and helping retain teachers through professional development and online teaching tools such as the online instructional package for high school algebra teachers currently under development; and
- ◆ Creating an infrastructure for joint and collaborative projects

The academic components are reviewing their teacher preparation curricula in conjunction with local school districts and state-level administrators to improve the readiness of new graduates to enter the public school classrooms. The UTeach program at U. T. Austin has become a new model for preparing math and

science teachers and an entirely new method of preparing teacher aides to become certified teachers is currently being studied.

Alignment of high school curricula and college entrance expectations will take place through a continuous dialogue with public schools, community colleges and U. T. components at the regional level. Expanded support for outreach programs that work with public school faculty and counselors to motivate, prepare, and recruit students for college is a key part of the K-16 initiative.

### Community College Transfers

To achieve large increases in the number of bachelor's degrees awarded, it will be necessary to increase greatly the number of students entering universities. The component institutions of the U. T. System are enhancing their relationships with community colleges in their regions and are encouraging more community college students to transfer to a university and pursue a bachelor's degree.

U. T. institutions are creating dual admissions processes and facilitating simultaneous enrollment with a community college. Four-year scholarship programs for students who start in a community college have been created. Selected junior level courses are being offered on community college campuses, and academic advising by universities is available on some community college campuses.

### Remedial Education

While the long-term goal is to increase significantly the number of high school graduates who are prepared to do college work, both the community colleges and the U. T. components will continue to offer remedial or developmental education courses for students who enter the system with weak high school preparation.

There are currently large numbers of college graduates who required remedial education when they began their college careers. However, there are also large numbers of students whose preparation is so weak that currently available remedial programs are not adequate to prepare them for success in college. The U. T. System components will continue to work with community colleges to find more effective ways of serving these students.

### Support Services

Especially for first-generation college students, support services are very important in making the transition to higher education. These students gain significant benefit from supplemental instruction associated with entry-level courses, the availability of tutors, the formation of peer groups, and superior academic advising.

Universities in the U. T. System have committed significant resources to offering supplemental instruction, supporting the application of learning technology, providing peer tutors, creating freshman interest groups (FIG's) and forming study groups associated with block scheduling. These programs are increasing the retention rates of entering students.

### Student Financial Aid

The cost of attending college is frequently perceived as a barrier to participation. The U. T. System is committed to ending affordability as a barrier to higher education. There are many forms of financial aid available for low and moderate income students, although too much of that aid is in the form of loans. For students who take a college preparatory curriculum in high school, there is a new state funded grant pro-

gram, the Toward **EXcellence**, Access, and Success (TEXAS) Grant Program. The U. T. System will continue to seek additional sources of grants and scholarships for students in need. Through the component institutions, a System-wide initiative will be implemented to inform counselors, students, and their families of the availability of financial aid, especially grants and scholarships.

### Distance Education

The U. T. System will take excellent instruction to students in places and at times that are convenient for them. From selected parts of individual courses to complete online degree programs, the U. T. System will aggressively develop its capacity to meet the needs of individual students who must combine study with work, family care, and other life activities. For many students of the next 30 years, university learning of the highest quality will take place in the workplace, the public schools, and the home. The U. T. System will stay at the leading edge in the adoption of emerging distance education technologies.

### Program Results

By about the fall of 2015, the continuation of public school reform and implementation of these strategies should result in parity participation rates for the entering class. By 2020, total enrollment should be approaching parity rates, and, by 2030, parity graduation rates should be achieved. The result would be nearly 29,000 bachelor's degrees awarded by U. T. component institutions in 2020 and 31,500 in 2030. This compares to 19,855 in 2000.

### Medical and Health-Related Manpower

Because Texas already graduates physicians at above the national rate and because it successfully attracts many out-of-state physicians to practice in Texas, no new medical schools will be needed in the near term. By the time some expansion of capacity is needed, possibly by the middle of the 30-year planning horizon, the state could decide to convert one or two of its Regional Academic Health Centers (RAHC) into independent medical schools. In the meantime, the primary focus will be upon reaching parity participation rates in medicine and the health professions and upon encouraging graduates to practice in underserved areas.

## Meeting **Parity** in Participation and Success: Physical and Human Resource Requirements

### Uncertainty Regarding Enrollment Growth

If all of the actions outlined above can be fully implemented on the recommended schedules, and if students respond as expected, enrollment will increase sharply and could reach parity levels between 2020 and 2030. However, delays in implementing any of the strategies outlined above or loss of momentum in the K-12 reforms currently underway could result in failure to reach these goals as expected. Consequently, it will be necessary to monitor enrollment growth carefully and to expand capacity as needed without overbuilding.

### New Buildings

To finance, design and construct new buildings requires a minimum of three to five years. Thus, the building planning process must be closely linked to the enrollment forecasting process. The U. T. System will build substantial new capacity to serve anticipated enrollment growth. With parity participation among all

ethnic groups, the enrollment in U. T. general academic component institutions will increase from 143,000 students to 236,000 students by 2030 with a corresponding requirement to construct approximately 14 million square feet of new building space, the equivalent of building more than four new universities the size of U. T. Arlington.

In addition to planning for the construction of new buildings, the U. T. System will maintain an aggressive program of experimenting with alternative methods of delivering educational services using emerging technologies. It is likely that such delivery systems will be most effective for more mature students seeking advanced degrees for professional development. It may also be possible to serve some younger students in their places of employment in partnerships with employers. To the extent that technology-based distance education delivery systems are effective substitutes for on-campus classrooms, some additional capacity may be created.

### New Faculty

In addition to adding buildings or technological capacity as a substitute for buildings, it is critical for institutions in the U. T. System to add faculty to accommodate growth. At the same time, the components will be required to replace approximately 40 percent of the tenured and tenure-track faculty within the next 15 years because of retirement or resignations. This requirement to hire a very large number of new faculty members represents a strategic opportunity. The faculty hired in the next 10 or 15 years will shape the character of the universities for the next 40 or 50 years. The ethnically diverse student populations of the 21st century can be served with a similarly diverse faculty if the universities can successfully recruit and develop such faculty. The scholarly strength of those recruited during the next decade will also have a strong influence on the teaching quality and research strength of the component institutions.

To compete effectively for the type of faculty most needed will not be easy. Other universities across the nation will be vigorously competing for the same faculty. Consequently, it will often be necessary to offer above average compensation and superior working environments. The most significant part of the working environment will be an academic culture that encourages important scholarly inquiry combined with teaching. Innovation and risk-taking should be encouraged. An environment of openness, trust and respect is essential.

One of the nation's largest producers of minority Ph.D.s will be the U. T. component institutions. Thus, the intra-system development of faculty is an integral part of the U. T. System Long Range Plan. The ability to develop a diverse and highly qualified faculty is critical to producing large and increasing numbers of highly qualified graduates over the long term.

## **B. Building Capacity for Excellence**

While increasing the number of students enrolled in college and building additional capacity to serve them, the U. T. System must simultaneously strengthen the quality of its educational programs in each of its components. In the 2000 U.S. *News and World* Report ranking of public higher educational institutions, the only institutions in Texas included in the top 50 were U. T. Austin and Texas A&M University. In contrast, California had eight of the top 50 public institutions including five in the top 10. California also leads Texas by a factor of 10 in nationally ranked Ph.D. programs, creating a lead over Texas in federal research dollars by a wide margin. These facts, combined with the effective cap on undergraduate enrollment at U. T. Austin and Texas A&M University and the goal of producing an increasing number of highly

qualified graduates, lead to the conclusion that a significant growth in capacity for excellence must be developed statewide.

Top rankings are heavily influenced by the faculty's ability to attract competitive research funding and by the high admission standards for its undergraduate student body. For Texas to create additional top-ranked institutions, it will be necessary to attract exceptionally well-prepared students into those institutions and to build a faculty which can compete at the national level for research funding. Over the next 30 years, Texas high schools need to produce at least twice as many well-prepared students as currently enter Texas universities. The U. T. System has implemented a high school Advanced Placement program to train teachers in order to expand the pool of highly qualified applicants. Through this Long Range Plan, the U. T. System must develop additional strategies to expand capacity for excellence equal to the requirements mandated for meeting parity in participation and success,

#### Centers of Excellence: Building Blocks for New Institutions of the First Choice

As a step toward development of expanded capacity for excellence, the U. T. System will create within existing universities major "Centers of Excellence." These centers will be developed in conjunction with component institutions consistent with their missions, plans, and strengths. Centers of excellence will be developed around themes and issues and will draw upon faculty from several disciplines. For example, a center of excellence in communications could draw upon psychology and sociology as well as faculty in journalism, English, foreign languages and marketing. Some of the first centers of excellence to be developed will probably be in fields of very high demand at U. T. *Austin* including business, engineering, architecture and communications.

In creating these centers of excellence, it will be necessary to recruit faculty of national reputation, build excellent research laboratories, create doctoral programs, and establish generally high standards of scholarship. Special funding will be required to provide the margin of excellence above what can be accomplished with normal formula-based appropriations. The creation of centers of excellence is a multi-year process. The first centers to be developed will be identified during academic year 2001-2002. Initial stages of development will begin as early as fall 2002. Some of these centers will become the building blocks for geographically dispersed excellent institutions. Thus, the U. T. System has the potential to develop institutions of the first choice (top 50 ranking) in every major population growth center in Texas, except Houston. This existing foundation of components is well structured for maximum efficiency in program implementation, faculty recruitment and development, and resource identification and allocation.

Using some of the centers of excellence to create multiple institutions of the first choice is a 30-year strategy distinguished by multiple benefits. Implementing this strategy will simultaneously provide increased instructional capacity and the research excellence required to accomplish the goal of greatly expanding research activity. An example: The successful recruitment of and development of first class faculty will be both a function and result of the development of centers of excellence as building blocks for geographically dispersed multiple institutions of the first choice.

Implementation of this Long Range Plan should result in one additional nationally ranked institution of the first choice in the U. T. System by 2010, another by 2020, and one more by 2030. The process of developing three additional nationally ranked institutions of the first choice in the U. T. System by 2030 will begin providing benefits to Texas in year one with an exponentially growing return year after year. Implementation of this plan will ensure that Texas is not only competitive, but will have the real opportunity of national leadership in academic and research excellence.

U. T. Austin, as the flagship university of the U. T. System with the highest national ranking of any public university in Texas and the largest academic research program, is essential to System-wide excellence both for its direct contributions and as a model for excellence for other institutions. Hence, the Board is committed to ensure it rises to a top-five ranking.

### Doctoral Programs

On a per capita basis, Texas falls short of the national average production of new doctoral degrees by over 500 per year. The national production of new doctoral degrees lacks the diversity needed to meet Texas' needs for a diverse faculty. Thus, Texas needs to create more doctoral programs and to fill them with a diverse student body.

A typical degree program produces fewer than ten new degrees per year. This suggests that Texas needs to create at least 50 new Ph.D. programs. The first new programs should be created in institutions with large numbers of research-oriented faculty. The U. T. System component institutions located in larger urban areas with diverse and growing enrollments and centers of excellence are the logical institutions to develop additional doctoral programs. The continued development of doctoral programs will be integrated into a clearly defined, incremental plan to build centers of excellence and transform U. T. System components into institutions of the first choice.

The planned, rational growth of doctoral programs will be a necessary, but not sufficient, part of reaching the goal of parity in research as can be seen in the following, comprehensive plan to meet that goal.

### Meeting the Research Challenge

A federal research development initiative will be undertaken. Through this initiative, the U. T. System will identify ways in which Texas institutions can best be prepared to meet the research needs of major federal agencies. This initiative will require extensive consultation with agency leadership coordinated through the Texas Office of State-Federal Relations. Information about future agency needs which results from these consultations will be available to all Texas institutions.

The U. T. Board of Regents will receive recommendations through initiative task forces for the creation of special research emphases, most of which can be implemented within a broader framework of "centers of excellence" at component institutions. The Board will also receive recommendations for funding the development and continuous renewal of the research infrastructure and recommendations for supporting enhanced communication with federal partners. The U. T. System will develop resource allocation criteria for use by the Board to ensure maximum rate of return on funds invested in support of research. Initiative task forces may make recommendations to create multi-institution centers or institutes to focus on specific research tasks.

More than half of the federal funding for research and development comes from the U.S. Department of Health and Human Services, primarily the National Institutes of Health (NIH). Because the human genome project promises to dramatically improve molecular targeted diagnosis and treatment of disease, the federal government is committed to doubling NIH funding. The five largest U. T. System health components received nearly half of the federal R&D funds coming to Texas primarily from NIH. These institutions represent one of the best near-term opportunities for increased federal funding in Texas, primarily from NIH. With additional investment in competitive salaries, buildings and research infrastructure, especially research laboratories, these institutions can attract a larger share of the federal funding for

biotechnology and health-related research. Joint programs with U. T. academic institutions also hold great promise for increasing research activity.

The U. T. System will attempt to close one-half of the approximately \$300 million federal research gap for the State of Texas by 2010. To achieve this goal, it will be necessary to receive recommendations by spring 2001, begin implementing task force recommendations as early as Fall 2001, and begin major faculty recruiting efforts for Fall 2002. Faculty recruited for Fall 2002 can be expected to bring new federal funding to a university within two years or by Fall 2004. Thus, for the U. T. System to close *its* share of the state research gap by 2010 will require an aggressive program of recruiting research scholars and actively supporting researchers already on the faculty.

#### Conclusion

The Long Range Plan for the U. T. System has identified the policy and programmatic initiatives as well as the physical and human resources that must be put in place to greatly expand the number of highly qualified graduates in Texas and to achieve parity in research with peer states. Section 4 provides an analysis of the resources required to implement this plan.

## 4. Resources to Implement the Long Range Plan

### Overview

For the U. T. System to lead the state in achieving the goal of parity in participation and success, it will be required to create the capacity to serve an additional 93,000 students by 2030 in high quality institutions other than U. T. Austin. In order to lead the state in achieving scholarly excellence and research parity, the U. T. System must further strengthen U. T. Austin, create System-wide centers of excellence and, ultimately, create three additional universities of the first choice. To accomplish these goals will require a substantial infusion of new resources. The following analysis will identify currently available resources, ways to grow those resources, and, once available resources are exhausted, define the public investment requirements for full implementation of the Long Range Plan. Fortunately, the required resources should be available and investing them in the U. T. System will pay high dividends for the taxpayers of Texas and other investors.

Some of that investment can be made directly by the U. T. System Board of Regents, which is responsible for managing the Permanent University Fund (PUF). Other significant resources include federal research funds, private gifts, and grants and contracts, which the System and components will continue to pursue aggressively. In addition, with the cooperation of the Legislature in removing identified external regulatory barriers and with System focus on removing internal policy and procedural barriers and making investments in technology to improve productivity, the components can gain significant cost savings which the System will fully invest in implementation of the Long Range Plan.

### Endowments, Federal, and Private Resources

#### The Permanent University Fund

The earnings from the PUF are known as the Available University Fund (AUF). These funds may be used to amortize bonds for capital expenditures, to fund the operation of System Administration, and for direct excellence funding to U. T. Austin.

Capital expenditures from bond proceeds provide for the replacement of equipment, the renewal of buildings, and the construction of new buildings at all component institutions except U. T. Brownsville and U. T. Pan American. U. T. Brownsville, U. T. Pan American, and all public universities outside The University of Texas and Texas A&M University Systems receive similar funding from the Higher Education Fund (HEF), a constitutionally dedicated first call on the general revenue fund.

A constitutional amendment (Proposition 17, passed in November 1999) provided the U. T. System with a significant increase in PUF funding capacity. Previous to this amendment, the expansion of PUF membership in 1985 and constitutional constraints created detrimental effects on PUF-funded institutions (other than U. T. Austin) when compared with HEF institutions. The Legislature recognized this disparity through its equalization funding for these PUF members, but was unable to eliminate the disparities. This new increased capacity will not restore the unmet needs of the past 15 years and it will not be adequate to meet the increased capital requirements resultant from meeting the goals of excellence and parity participation and success rates.

This increased capacity will, however, allow the Board of Regents to allocate to the academic component PUF institutions as a group, bond proceeds equal to that which they would receive if they were participants in the HEF program, under current HEF formulas, by 2004-05 and likewise to the health components, as a group, by 2006-07. In this way, the Board of Regents is committed to maximum support for implementation of the Plan, recognizing this commitment as necessary, but not sufficient for realizing the full benefits of parity in participation and success.

The Board of Regents is committed to funding excellence at U. T. Austin at a level that will further enhance its historical flagship status and, to the extent possible, raise its status into the top-five rated public universities nationally as early as 2010. Due to these commitments for U. T. Austin and to constitutional constraints, excellence funding for component institutions, other than U. T. Austin, is not possible from AUF funds. As will be demonstrated in the following, the Board is committed to developing sources of funds, and investing those funds to support the creation of System-wide centers of excellence and, ultimately, additional institutions of the first choice in the U. T. System. In so doing, the Board recognizes its responsibility to lead by example while clearly understanding that these resources are necessary but will not be sufficient for full implementation of the Long Range Plan with respect to parity in excellence.

### Maximizing Federal Research Funding

The U. T. System will take the lead in increasing the amount of competitively awarded federal funding for research and development in Texas. With an aggressive research program, Texas could receive 110 percent of the U.S. per capita average in federal research funding by 2030. Assuming the current level, on a per capita basis and a projected population of 34 million Texans, approximately \$1.2 billion additional federal dollars would be received each year. By taking the lead for the state, the U. T. institutions which currently receive 70 percent could be expected to earn at least two-thirds of that increase or \$800 million dollars, an increase of 150 percent above the current base.

The U. T. System is committed, through the Long Range Plan, to greatly expand the number of nationally ranked Ph.D. programs and to assist the state in reaching the goal of producing an additional 8,500 advanced degrees annually. These initiatives, in conjunction with aggressive recruitment and internal development of high quality faculty and combined with the collaborative effort described below, should enable Texas to achieve parity in research.

A research initiative is currently underway. That initiative involves the four major public university systems of the state and is being supported by the Texas congressional delegation. The initiative is focused upon identifying major opportunities for collaboration among Texas institutions in obtaining federal contracts and grants. This work will include seeking authority from the Texas Legislature to use the indirect cost recovery from federal grants and contracts in a more flexible and competitive manner allowing for increased investment in the creation of System-wide centers of excellence. The U. T. Board of Regents has already made a major investment in new research capacity related to the human genome project. Additional state investments in this area can be leveraged with new federal funds to produce substantial benefits for Texas.

### Maximizing Private Support

Endowment income plus private gifts, grants, and contracts for public universities in the United States was approximately 4.7 percent of total current revenues in fiscal year 1996, the latest year for which national data is available. For fiscal year 1999, the comparable figure for the U. T. System was 7.21 percent. For U. T. Austin, it was 13.41 percent and for the other general academic components, it was 3.98. For the

health components, it was 6.22 percent. The target for U. T. component institutions other than U. T. Austin will be 10 percent of total revenue, and for U. T. Austin, it will be 20 percent. At 10 percent, these U. T. component institutions can achieve a margin of excellence that will allow them to attract federal research funds and talented faculty to teach and conduct that research, and at 20 percent, U. T. Austin will have the excellence support necessary to be a top five public university.

Compared to peer states, Texas is a low tax revenue state and, therefore, the state does not have the ability to invest in higher education at the same level as peer states. Logically, given a significantly lower state tax burden, the Texas private sector should be in a position to make a significant contribution toward filling this gap in support. Without equal levels of investment, Texas will not achieve parity in excellence and research. The U. T. System is committed to the aggressive pursuit of private sector investment in excellence and research. The System Administration will provide technical and other forms of support to the component institutions in the pursuit of geographically diverse, community based support for additional centers of excellence.

## Cost Savings and **Productivity** Enhancement

### Deregulation and Changing Policies and Procedures

Some resource requirements can be met by more efficiently using resources that would otherwise be available. To achieve that greater efficiency, the U. T. System will offer to the Texas Legislature a package of proposals to further deregulate the operation of the component institutions and to facilitate the achievement of those additional efficiencies.

Recognizing that many of the current regulations were created to ensure that universities would be accountable for the use of public funds, the U. T. System will also strengthen and improve its accountability system. That improvement will focus on final results rather than on detailed procedures for the use of resources.

### Technology

The application of digital technologies holds the promise of reducing costs or improving effectiveness. The System-wide purchase of site licenses for digitized library materials has already generated substantial savings. The use of digitized multimedia materials for instruction also shows promise. The Internet delivery of instruction directly to the workplace and homes of students reduces the demand for classrooms, parking lots, and other infrastructure but requires other types of investment in courseware and digital support systems.

Current policies and procedures associated with the state appropriations process tend to inhibit the formation of purchasing coalitions such as those used to purchase digital library site licenses. The separate appropriation of operating funds and capital funds tends to inhibit the investment in digitized instructional materials and the infrastructure necessary to support the Internet delivery of instruction. Nevertheless, the U. T. System will continue to aggressively develop the utilization of technology and to obtain the economies of scale benefits associated with acquiring these materials for all component institutions.

The Board will invest the savings realized through legislatively enacted deregulation and through the efficient use of technology in the creation of centers of excellence.

## Public Resources

### Tuition

By using student financial aid to offset the impact on low income students, it would be possible to increase the amount of tuition and fee income collected from students who are able to pay while having no effect on lower income students and their families. However, because many families of first generation college students do not understand how financial aid may offset much, if not all, of the tuition and fees charged, such a strategy should not be implemented without a carefully designed public information program directed to such families. The Legislature may be asked to authorize substantial tuition and fee increases with a corresponding financial aid and public awareness program or to deregulate tuition with assurance that such deregulation will not create affordability barriers for any potential student.

### Public Resource **Investments**

Although much can be done to increase the capacity of the U. T. System and to strengthen the quality of its programs with resources controlled by the Board of Regents or obtained from external sources, public funds provided through legislative appropriations must continue to be relied upon as the financial foundation for these programs. The U. T. Board of Regents and System must appeal to the Texas Legislature to make the investments necessary to achieve parity in participation, success, and academic and research excellence. As the state's population and economy grow, resources for this investment will be available. Through the formula funding process, the basic requirements for funding the annual instructional budgets should be readily met. However, the state does not have an effective mechanism for funding the additional construction of university buildings required to serve the increased enrollment which will result from achieving parity in participation. Some additional capital financing mechanisms will need to be created.

As mentioned above, constitutional restrictions prevent direct funding for excellence from AUF funds for PUF component institutions other than U. T. Austin. To create centers of excellence as the building blocks for the additional institutions of the first choice as described in Section 3 will also require significant targeted legislative investment

Public funds provide the foundation for the teaching, research, and service missions of the universities. However, the state public funds can be used in combination with federal funds and other outside funds to provide higher quality and more effective teaching, research, and service. Private donors, both individuals and foundations, also look for matching funds or cost-sharing. By authorizing the use of appropriated state funds for such matching, state funding can be leveraged. The greatest opportunities for such leveraging are in programs where high degrees of excellence can be achieved. In such programs, state matching funds can be used to obtain private funds and the combination will provide the margin of excellence necessary to compete effectively for federal research funds. The U. T. System is committed to identifying and implementing strategies designed to maximize leverage of state funds to achieve parity in academic excellence and research in the most efficient and timely manner possible.

The ability of the State of Texas to make these high rate of return investments over the next 30 years is expected to improve significantly. By extrapolating the State Comptroller's official 2025 projections of state personal income to 2030 and assuming tax revenues increase at the same rate as personal income, an estimated inflation-adjusted increase of \$30.06 billion in tax revenue is derived. Assuming that state expenditures for education increase at the same rate as the increase in the student age population and that other state expenditures increase at the same rate as the general population, expenditures would increase by

only \$13.86 billion. The difference of \$16.20 billion in 2030 would be available to support additional public investment in education or to pay for other state services. Some special programmatic funding considerations that will be presented to the Legislature are critical to the successful implementation of the Plan.

### Formula Funding

Changes in the formula funding process recently adopted by the Legislature have given the universities much more flexibility in the utilization of appropriated funds. Currently, the biggest concern with the formula is the relatively low level of aggregate funding. At current levels, it will be nearly impossible to compete for the very best faculty needed to build the much larger and stronger system of higher education recommended by this Board, the Texas Higher Education Coordinating Board, the Special Commission on 21st Century Colleges and Universities, and others.

A few relatively minor but significant changes to the formula would further improve the effectiveness of the formula process. In addition to recognizing the discipline and level of courses, it would be appropriate to recognize the student's level of preparation or college readiness for introductory level courses. To be effective, additional instructional resources should be used to help less well-prepared students make the transition to college.

The research mission should also be included in the formula funding process. At the present time, 50 percent of the indirect cost recovery from external contracts and grants is treated as the equivalent of state general revenue and used to fund appropriated formula amounts. If that recovered indirect cost were left for the institution to utilize as an addition to its appropriated funds, there would be a strong incentive to recover more and create a resource for meeting matching grant requirements.

Funding of the research mission could also be linked to the funding of centers of excellence. For the centers of excellence concept to be effectively implemented, it will be necessary to provide enrichment funding for undergraduate instruction, base level funding for doctoral programs, and matching funds for research in the disciplines associated with each center of excellence. There are currently no mechanisms in the formula driven appropriations process that would lead to effective funding of the proposed centers.

Because the funding formula is driven primarily by enrolled students, there is no mechanism for supporting the K-16 initiative or other interactions with public schools, community colleges and the regional organizations which help prepare students for entrance into college. Adding a funding element based upon the number of school districts, community college districts, or other partners in a local K-16 council should be considered.

### Student Financial Aid

The Legislature has recently adopted a new student financial aid program that links the availability of aid to both financial need and quality of preparation for college. As the state gains experience with this program, it will be refined and expanded. Further expansion of this program could be linked with increasing the amount of tuition and fees charged to the less needy students. Alternatively, the Legislature might choose to link an institutional student aid program to greater institutional authority in the establishment of tuition and fees. The additional revenues could be used to offset the high costs of building the increased capacity required by expanding student populations resultant from successful implementation of plans to increase participation.

### New Buildings and Building Renewal

Construction and other major capital expenditures are currently financed with the PUF/HEF, some designated tuition, and occasionally legislatively authorized tuition revenue bonds. These mechanisms have been adequate for renewing the existing plant and funding the relatively slow growth that has occurred during the past decade. These mechanisms are inadequate to finance the projected enrollment growth, research program development and capacity expansion outlined in Section 2 or the capital investments that will be required to develop centers of excellence and ultimately, three additional universities of the first choice. Thus, new capital financing mechanisms must be found.

Because University of Texas component institutions are located in the rapidly growing major population centers, they will face some of the greatest need for capital funding. Without new, constitutionally acceptable methods of using general revenue to finance the construction of additional university capacity, the U. T. System will not be able to provide the campus spaces and programs necessary to serve the next wave of incoming students as we move toward achieving parity in participation and success.

## Conclusion

Achieving parity in participation and success rates and in academic and research excellence in higher education will, in large measure, be responsible for the continuation and improvement of the social, political, and economic vitality of Texas in this century. If parity is not achieved, Texas will lag far behind the rest of the U.S. in economic and social development.

The U. T. System is well placed to lead the way in Texas in meeting this task as is demonstrated in Section 1. The importance and size of this challenge as defined in Section 2 requires a long term plan, thirty years of investment, and thirty years of innovation and diligence, all of which must start now if Texas is to secure the benefits of an increasingly highly educated population across the state.

The U. T. System Board of Regents, understanding the urgency to take the first step on a long road and the significance in value to the state, is committed to implementing the Long Range Plan described in this document.

As a signal to other, necessary partners, the U. T. System has committed its resources for investment in this Plan as described in Section 4. While the resources required are large, the rate of return to the state and its people on the investment of those resources in this Plan will dwarf the initial investments. System resources are necessary but not sufficient for full implementation of the Plan. Full implementation and the efficiencies of investing through a rational, long range plan designed to achieve clearly articulated goals through clearly defined strategies will only be realized in a U. T. System partnership with the private sector and the state's public sector through legislative support.

It is the hope of the Board of Regents that this Plan will become the foundation for a broad and deep commitment by each partner to the future of Texas as reflected in the critical role that higher education will play in the quality of that future. Through this unilateral commitment of its resources, the Board of Regents stands ready to forge a compact with the State of Texas to make the objectives of this Lone Range Plan a reality.