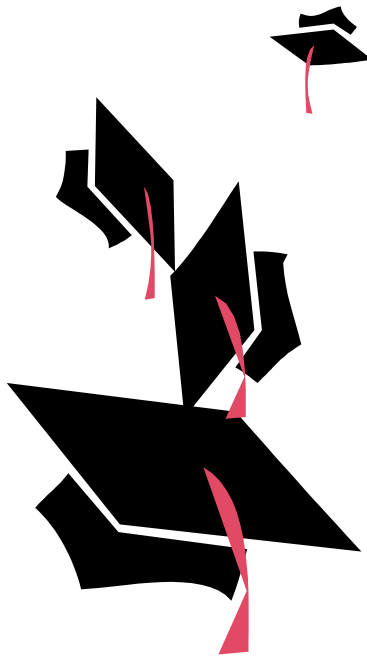


Report of the

Oklahoma Higher Education Task Force on Student Retention



February 2002

OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION



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OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION
Report of the Oklahoma Higher Education
Task Force on Student Retention

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**Oklahoma State Regents for Higher Education
Report of the Oklahoma Higher Education
Task Force on Student Retention
February 2002**

Executive Summary

BACKGROUND:

- On February 18, 2000, the Oklahoma State Regents for Higher Education appointed the Oklahoma Higher Education Task Force on Student Retention. The Task Force was a collaborative effort among the state's public and private colleges and universities to improve student retention and increase college graduation rates. A total of 36 individuals was selected from a broad-based group of educators, which included academic and student service leaders, faculty, advisors, and students.
- The State Regents assigned the Task Force a three-part charge:
 - Review Oklahoma and national data on student attrition;
 - Identify factors that contribute to student persistence in college; and
 - Recommend specific initiatives to increase student retention and graduation.

OKLAHOMA AND NATIONAL DATA ON STUDENT RETENTION AND GRADUATION

- Comparison of state and national institutional persistence rates show that freshman persistence at Oklahoma's comprehensive universities and two-year colleges is similar to or better than national peer institutions, whereas freshman persistence at Oklahoma's regional universities is significantly lower than national peers.
- Freshmen are being retained at relatively high rates within Oklahoma's higher education institutions. Oklahoma's college students are clearly taking advantage of the well-developed system of transfer among state institutions to continue their education at an institution other than the one in which they first enrolled.

	Fall 1998 Student Retention Rates			Graduation Rates*		
	Oklahoma Data (within the institution)	National Data	Oklahoma Data (within the state)	Oklahoma Data (within the institution)	National Data	Oklahoma Data (within the state)
Comprehensive	79.9%	80.0%	89.4%	49.7%	55.6%	54.5%
Regional	67.1%	76.1%	78.9%	29.3%	43.6%	35.5%
Two-Year	59.8%	52.0%	67.5%	17.6%	32.4%	18.7%

NOTE: Persistence figures reflect retention from the first to second year.

*Comprehensive and regional graduation rates, both within the institution and within the state, reflect the 1994 cohort. Two-year graduation rates within the institution reflect the 1996 cohort; within the state, the 1997 cohort.

CONCLUSIONS FOR OKLAHOMA

- The most recent statewide data show that only about 10 percent of freshmen at comprehensive universities and 21 percent of freshmen at regional universities are not enrolled somewhere in the

state the following year. However, the percentage of freshmen at comprehensive universities who fail to graduate within six years is approximately 45 percent, whereas the percentage of freshmen at regional universities who fail to graduate within six years is in the mid 60's. Therefore, Oklahoma students continue to drop out in significant numbers after the freshman year.

- Oklahoma's first-time freshmen exhibit many characteristics that do not correlate well with college persistence and graduation, including failure to take an appropriate pre-collegiate curriculum in high school, delaying entry into college after graduation, and enrolling part-time.
- Not all students attend college with the goal of earning a degree, especially in the two-year colleges. Higher education officials and policy leaders must recognize the individuality of students' goals and create environments that are responsive to those goals.

POTENTIAL BARRIERS TO STUDENT RETENTION/GRADUATION (Appendix D)

- Task Force members compiled a matrix of the major potential barriers to student retention. These barriers are divided into five categories:
 - Financial (ability to pay)
 - Academic
 - Social/emotional/personal
 - Student services/enrollment/advising
 - Future expectations/jobs

Each of these categories of barriers is subdivided into two sub-categories, each requiring different sets of strategies to improve student retention:

- Student characteristics: attributes that students bring with them to a college or university.
 - Institutional characteristics: the institutional organization and culture to which students must adapt.
- The Task Force recommends that institutions use the matrix for analyzing the unique barriers that exist at their respective institutions.

MATRIX OF COMMON INITIATIVES TO IMPROVE STUDENT RETENTION (Appendix E)

- The Task Force identified common initiatives used by Oklahoma institutions to improve student retention, including:
 - Institutional retention task forces
 - Required freshman orientation courses
 - Computer multimedia resource centers
 - Early alert systems for absences or poor academic performance

- ❑ Flexible course scheduling
- ❑ Mandatory academic advisement
- ❑ Initiatives to increase faculty/student interaction inside and outside of the classroom
- ❑ Peer tutoring
- ❑ Fast track academic programs

BEST PRACTICES WITHIN AND OUTSIDE OKLAHOMA TO IMPROVE STUDENT RETENTION

Oklahoma's Institutional Best Practices

- Oklahoma colleges and universities have undertaken numerous initiatives to enhance the retention and graduation rates of students, including:
 - ❑ Campus-wide efforts to focus on the issues of retention and graduation
 - ❑ Orientation programs and courses for new students
 - ❑ Enhanced academic advising
 - ❑ Advising and counseling programs focused on at-risk students
 - ❑ Faculty and staff professional development activities
 - ❑ Creation of learning communities
 - ❑ Workshops to enhance student skills and behaviors
 - ❑ Identifying potential drop-outs and developing intervention strategies

NATIONAL BEST PRACTICES

- The Task Force identified student retention programs that had garnered national awards based on identifiable and measurable institutional outcomes, originality and creativity, use of resources, and adaptability for use at other institutions. Examples include:
 - ❑ Gateway Program, University of Texas at Austin: The program is designed for freshmen who are regularly admitted but who have additional challenges, such as: being a first-generation college student; having lower than average ACT/SAT scores; coming from a rural area high school; or being a student-athlete. In the 1997-98 academic year, the university dismissed 4.4 percent of freshmen overall, but no students from the Gateway Program. For fall 1998, Gateway students outperformed their peers by earning a 3.04 average GPA compared to a 2.8 average GPA for freshmen overall. Implementation of the Gateway Program costs over \$200,000 annually.
 - ❑ Access Plus/Western Advantage, Missouri Western State College, St. Joseph, Missouri: This program includes enhanced orientation programs; a Freshman Year Experience Office; and Freshman Interest Groups, which are clusters of the same 20-25 students enrolled in two or

three courses together with a common theme. During the first four years of the program there was a 10 percent increase in retention, including a 15 percent increase in minority retention. Additionally, graduation rates increased 7 percent. Access Plus/Western Advantage has an annual budget of \$2.6 million.

TASK FORCE RECOMMENDATIONS

1. Focus on Persistence to Completion

- ❑ The Task Force recommends that to the extent possible, retention data should follow the student across institutions to gain an accurate picture of persistence and completion. Consequently, measures of persistence and completion should be based on data within the state, and not just within the institution.
- ❑ A more realistic time frame should be used to track students to degree completion. Current research suggests a ten-year time span for student tracking through a baccalaureate degree.
- ❑ Students enrolled in remedial classes should not be included in tracking efforts until they advance to college-level courses.
- ❑ Measures of completion should reflect student goals. For example, students who take courses to complete a certificate program should not be counted as dropouts, because a degree was not completed.

2. Improve Student Preparation for College

- ❑ Current research indicates that the single most important predictor of student academic success is the intensity and quality of a student's secondary school curriculum.
- ❑ The Task Force endorses the State Regents' December 1999 Admission Policy revision recommending that students take a fourth mathematics course, with the addition that the fourth course should include content and rigor equal to or above Algebra II.
- ❑ The State Regents should increase dissemination of information showing that students who enroll in the State Regents' recommended high school core curriculum succeed at higher rates in college.

3. Explore Collaboration Between Secondary Schools and Higher Education

- ❑ Institutions should explore collaboration with secondary schools to enhance student preparation for college.

4. Public Recognition of Individual Oklahoma High Schools Showing Improvement

- ❑ The State Regents should continue to annually recognize individual Oklahoma high schools with higher average ACT scores and superior or improved high school-to-college-going rates, as evidenced by immediate entry into institutions of higher education and low college remediation rates.
- ❑ The State Regents should more broadly disseminate the High School to College-Going Rate Indicators Reports.

5. **Presidential Leadership**

- ❑ The Task Force believes that presidential leadership is crucial to the improvement of student retention and graduation rates.
- ❑ Presidents should play an important role in strategic planning and help create institutional cultures that encourage student success and demand institutional accountability.

6. **Quality Initiative Grants For Innovative Institutional Proposals to Increase Student Retention**

- ❑ The State Regents should issue a call for innovative proposals for improving student retention and graduation rates that are applicable to other institutions.
- ❑ The State Regents should award Quality Initiative Grants through a competitive process to fund pilot projects showing promise for improving student persistence.

7. **Endorse *Brain Gain 2010* Goals and Recommend Adequate Financial Support to Achieve Those Goals**

- ❑ The Task Force endorses *Brain Gain 2010* and encourages the State Regents and colleges and universities to pursue its recommended initiatives.
- ❑ The Task Force recognizes that programs and activities that result in increased student retention cost money and encourages the legislature and the State Regents to provide adequate one-time and on-going funds to support such expenditures.

8. **More Institution-based Research**

- ❑ Institutions should perform statistically valid surveys that follow students throughout their academic careers, differentiating between full-time and part-time students and transfer students.
- ❑ Institutions should determine the educational goals of entering students, and whether such goals are being met.

9. **Encourage Institutions to Use National Research Information to Assess Institutional Effectiveness**

- ❑ Institutions should use national research information to tailor their initiatives to identify at-risk students, improve the delivery of student services, and connect students with campus resources and activities.

10. **Faculty Development**

- ❑ Institutions should provide faculty development programs to introduce new instructional skills and approaches and to enhance faculty understanding of their role in promoting student connectedness to the institution.

11. **Statewide Conference to Raise Awareness about Student Retention**

- ❑ The State Regents should hold statewide conferences on student retention and graduation every other year. These conferences should be headlined by prominent national experts to facilitate discussion of ideas for improving student retention within the state.

12. Develop an Institutional Inventory of Barriers to Retention

- ❑ Institutions should use the matrix of potential barriers to student retention (Appendix D of the report) as a model for developing an inventory of the unique set of barriers that exist at their respective institutions.
- ❑ The inventory should then be used to develop an institutional action plan to remove the barriers.

13. Evaluate the Attainment of Student Goals

- ❑ Institutions should survey 1) entering students to determine their goals and 2) current students to assess the degree to which the institution is helping them achieve their educational goals.

14. Examine Block Tuition as an Incentive to Enroll in More Coursework

- ❑ The State Regents should examine whether block or flat tuition schedules encourage students to enroll in more credit hours and attain their educational goals more quickly.

15. Develop Institutional Early Warning Systems

- ❑ Institutions should create early warning systems to increase student awareness of academic performance during the semester.

16. Evaluation and Progress Reports on Implementation of Task Force Recommendations and Results on Student Retention

- ❑ The State Regents should continue monitoring student retention and graduation rates and issue public reports evaluating the progress of institutional efforts to implement Task Force recommendations.

It is important to note that of the 16 Task Force recommendations, 10 recommendations require direct funding for implementation. As exemplified by the Gateway Program and Access Plus/Western Advantage Program described above, programs that assist students to stay in college require money. Many have particularly high per-student costs. If student retention and graduation are state priorities, then adequate funding must be provided to institutions to implement programs proven to result in increased student success.

Report of the Oklahoma Higher Education Task Force on Student Retention

I. Introduction

On February 18, 2000, the Oklahoma State Regents for Higher Education appointed the Oklahoma Higher Education Task Force on Student Retention. The Task Force was a collaborative effort among the state's public and private colleges and universities to improve student retention and increase college graduation rates. Additionally, it was another step toward meeting the goals announced in the State Regents' *Brain Gain 2010* initiative, a comprehensive plan to increase the proportion of Oklahomans 25 years and older with at least a bachelor's degree from 20 to 28 percent and an associate degree from 5 to 10 percent by 2010.

The State Regents assigned the Task Force a three-part charge:

- Review Oklahoma and national data on student attrition;
- Identify factors that contribute to student persistence in college; and
- Recommend specific initiatives to increase student retention and graduation.

Presidents of Oklahoma's public and private higher education institutions nominated to the Task Force a broad-based group of educators, which included academic and student service leaders, faculty, advisors, and students. A total of 36 individuals was selected (Appendix A, Initial Membership). Since its implementation, membership on the Task Force has evolved as personnel changes at the institutional level occurred. Appendix B provides the current Task Force roster.

The Task Force recognized that while student retention and graduation rates are the most popular measures of institutional accountability among college administrators, elected officials, and the general public, what matters most to students is that they achieve their educational goals. Institutional environments that are responsive to students' educational goals encourage success and contribute to student persistence and graduation. Shifting the focus to student success will require common and higher education institutions to create environments that promote rigorous academic preparation, provide academic and social support, and encourage the pursuit of educational and career goals. Higher education officials and policy leaders must recognize the individuality of students' goals; not all students attend college with the goal of earning a degree.

II. Oklahoma and National Data on Student Retention

Data included in this study were gathered from the State Regents' Unitized Data System (UDS), American College Testing, Inc. (ACT), the National Center for Education Statistics (NCES), and the Consortium for Student Retention Data Exchange (CSRDE) compiled by the Center for Institutional Data Exchange and Analysis (C-IDEA) at the University of Oklahoma.

A. First-Year Retention Rates of First-Time, Full-Time Freshmen

National data show that most college or university students drop out during the freshman year. Typically, the percentage of freshmen who persist is highest at the comprehensive universities and lowest among two-year colleges. UDS data show that of freshmen who began their higher education studies at an Oklahoma public college or university in the fall of 1998, 79.9 percent persisted to the second year at comprehensive universities, 67.1 percent at regional universities,

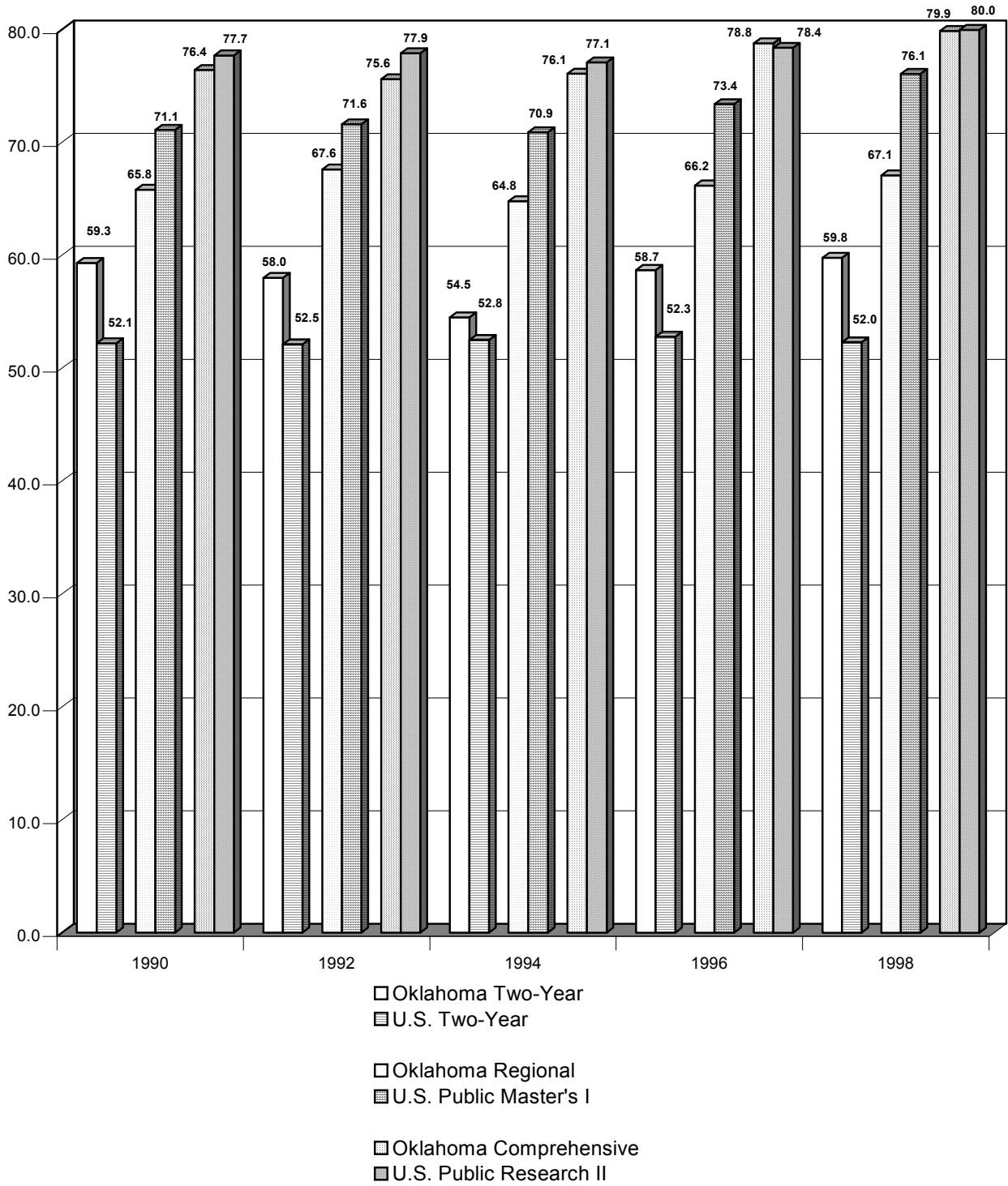
and 59.8 percent at two-year colleges. For the same cohort, national data show that 80.0 percent of freshmen persisted at Public Research II institutions (comprehensive universities), 76.1 percent at Public Master's I (regional universities), and 52.0 percent at two-year colleges.

Comparison of state and national data show that freshman retention at Oklahoma's comprehensive universities and two-year colleges is similar to or better than peer institutions, whereas freshman retention at Oklahoma's regional universities is significantly lower than national peers.¹ However, these retention rates are institutional rates that include only those freshmen who enrolled at the same institution their first and second year. Because they measure the rate at which freshmen leave a single institution, they do not accurately reflect the persistence of students within higher education.

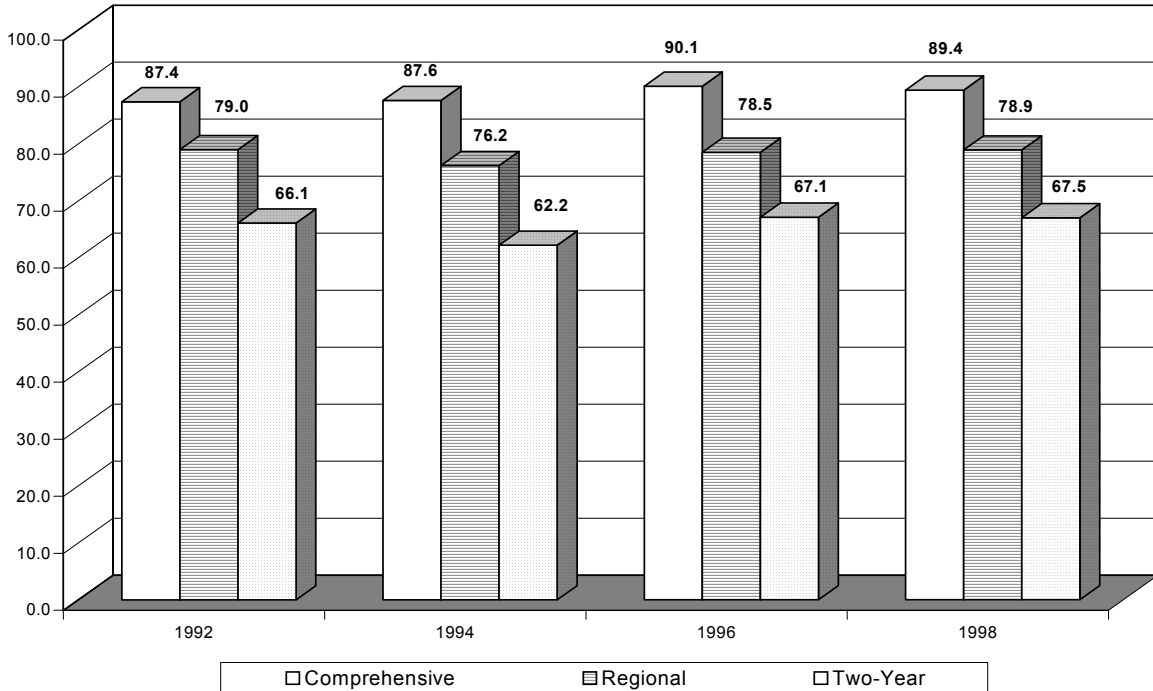
Another way to evaluate retention in Oklahoma is to consider Oklahoma higher education as a whole and to look at freshman retention rates within the state. This approach focuses on students and not institutions. Although national data are not available for comparison, state data show that first-time freshmen persist to the second year within the state at rates much higher than those of a single institution. Of those freshmen who began their studies at a public comprehensive university in the fall of 1998, 89.4 percent were still enrolled somewhere in the state the following year, compared with the 79.9 percent who were still enrolled at the institution where they had initially enrolled. Similarly, the state retention rate for public regional university freshmen was 78.9 percent, compared to the single institution rate of 67.1 percent, and the state retention rate for two-year public college freshmen was 67.5 percent, compared with the single institution rate of 59.8 percent. These data indicate that freshmen are being retained at relatively high rates within Oklahoma higher education. Oklahoma's college students are clearly taking advantage of the well-developed system of transfer among state institutions to continue their education at an institution other than the one in which they first enrolled.

¹ See Appendix C for retention rates of each public college and university.

**First-Year Retention Rates of First-Time, Full-Time Freshmen
Oklahoma (Within the Institution) vs. Nation Public Higher Education**



**First-Year Retention Rates of First-Time, Full-Time Freshmen
Oklahoma (Within the State) Public Higher Education**



B. First-Year Retention Rates by ACT High School Core Curriculum

ACT data show that a higher percentage of students who took the ACT core high school curriculum (13 courses) is retained than students who took less than the core. This trend occurs irrespective of the type of institution. However, the gap is less at comprehensive universities, which may be attributed to higher admission standards. In 1997, 86.9 percent of freshmen at comprehensive universities who had taken the ACT core curriculum while in high school persisted, compared to 80.4 percent for students who took less than the core. At regional institutions, 81.8 percent of freshmen who had taken the ACT core curriculum persisted, compared to 73.1 percent of those who did not; at two-year colleges, 72.0 percent of freshmen who had taken the ACT core curriculum persisted, compared to 66.1 percent of those who did not. These retention rates include freshmen who enrolled at the same or another institution in Oklahoma the following year. These data support the specific conclusion that the ACT core curriculum prepares students well to be successful in their first year of college, and the more general statement that students who are better prepared for college persist at higher rates than those who are less prepared.

First-Year Retention Rates by ACT High School Core Curriculum*

	1994	1995	1996	1997
Comprehensive				
Core	93.9%	90.1%	88.4%	86.9%
Less Than Core	91.7%	82.6%	76.9%	80.4%
Regional				
Core	89.0%	83.9%	81.7%	81.8%
Less Than Core	78.8%	75.2%	75.9%	73.1%
Two-Year				
Core	87.9%	78.7%	75.6%	72.0%
Less Than Core	77.7%	67.4%	72.3%	66.1%

Source: Table 2, ACT Collegiate Success Profiles

*4 units of English, 3 units of mathematics, 3 units of social studies, and 3 units of science

C. Graduation Rates of First-Time, Full-Time Freshmen

Graduation rates measure the percentage of first-time entering freshmen who obtain a degree, although the type of degree and timing differ among types of institutions. Graduation rates for comprehensive and regional universities are based on the percentage of freshmen who earn a baccalaureate degree within six years, whereas rates for two-year colleges are based on the percentage of freshmen who earn an associate degree within three years.

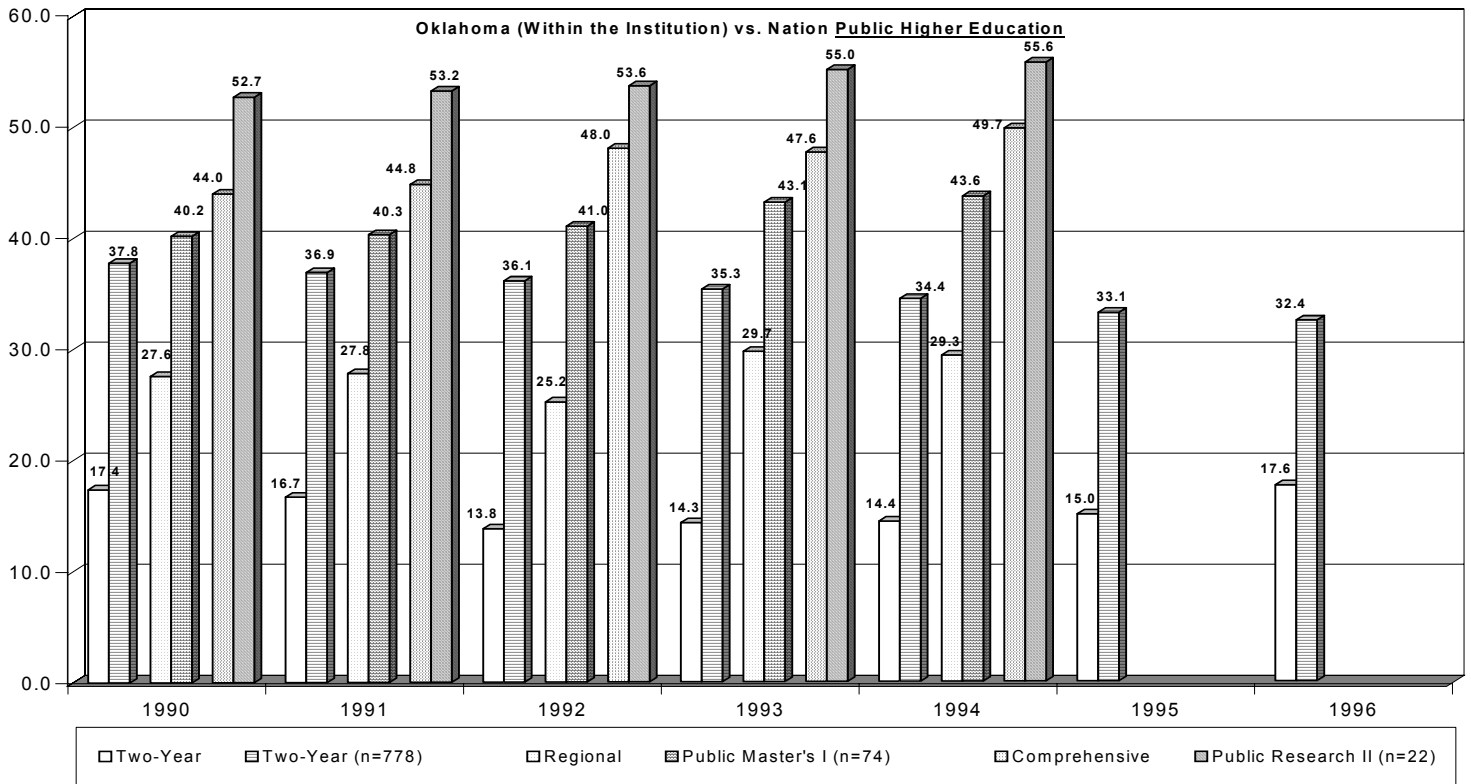
The following tables provide snapshots of student graduation rates for Oklahoma’s public institutions and similar public institutions from across the nation. The comprehensive university graduation rates in Oklahoma are in the high-40’s, whereas nationally students graduate from comprehensive universities at rates in the mid-50’s. The regional university graduation rates for Oklahoma institutions are in the high-20’s, compared to about 44 percent nationally. The graduation rates of public two-year colleges in Oklahoma are slightly above half of the national rate of approximately 32 percent.²

A more accurate way to determine the rates at which students are earning degrees is to look at graduation rates within the state. These data, which take into account those students who earned a degree at any Oklahoma college or university, show that Oklahoma students are earning baccalaureate degrees at a higher rate than indicated by institutional graduation rates, but that these rates are still lower than the national institutional averages. At the two-year level, comparison of institutional with statewide data show a small improvement in the rate at which Oklahoma students earn associate degrees; however, these rates are still below the national average.³

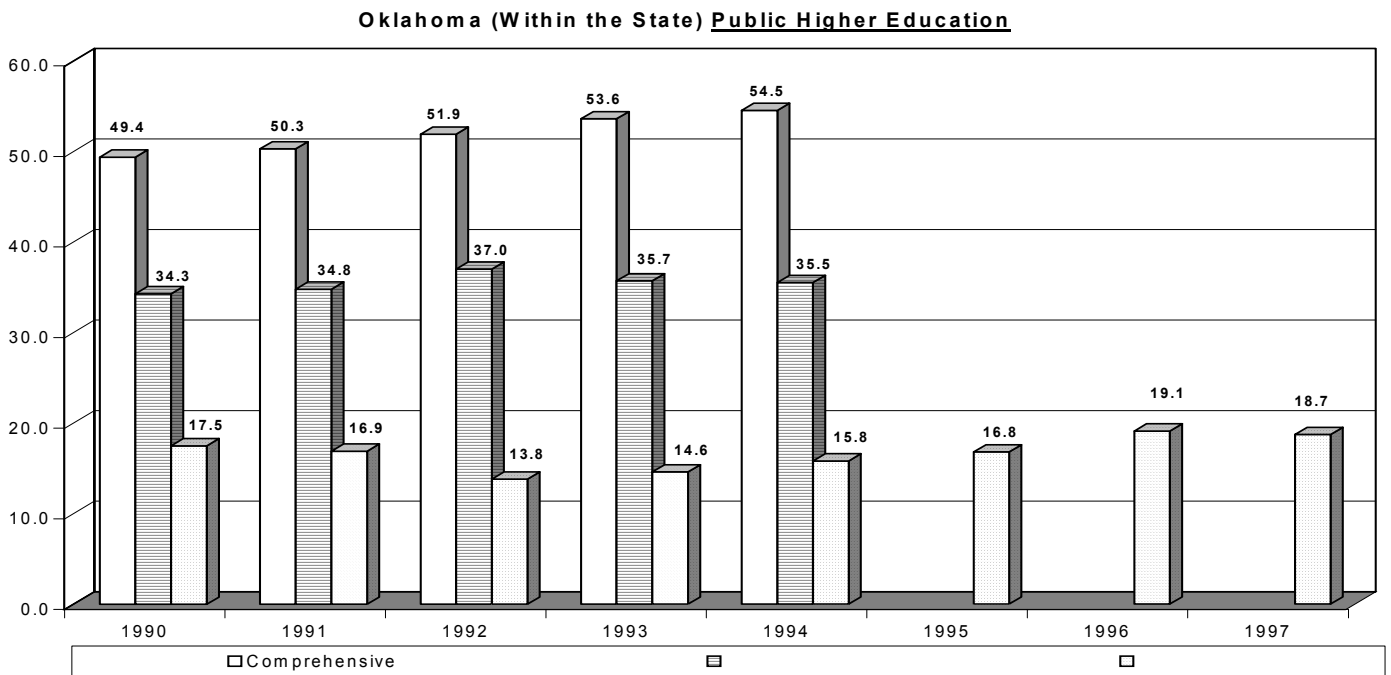
² See Appendix C for retention and graduation rates of each public college and university.

³ Ibid.

**Graduation Rates of First-Time, Full-Time Freshmen
(six years at universities, three years at two-year colleges)**



**Graduation Rates of First-Time, Full-Time Freshmen
(six years at universities, three years at two-year colleges)**



D. Students Entering College Directly from High School

In Oklahoma, the percentage of high school students considering college may be increasing as measured by the increase in the number and percentage of ACT test-takers. However, the college-going rate has not increased from 1993 to 1999, and the percentage of ACT test-takers going directly to college has decreased.

High School to College-Going Rates

	1993	1994	1995	1996	1997	1998	1999	2000	2001
High School Graduates	31,653	32,459	34,081	33,744	33,645	36,254	37,396	38,512	37,687
ACT Test Takers	20,746	21,854	23,038	22,897	24,134	25,303	26,455	27,850	27,910
Percentage	65.5%	67.3%	67.6%	67.9%	71.7%	69.8%	70.7%	72.3%	74.1%
College enrollees	18,005	17,873	18,099	17,292	19,956	20,588	20,608		
Oklahoma College-Going Rate*	56.9%	55.1%	53.1%	51.3%	58.3%	56.8%	55.1%		
Percent of ACT Test-Takers	86.8%	81.8%	78.6%	75.5%	82.7%	81.4%	77.9%		

*The Office of Accountability estimates a 6.0 percent average out-of-state college-going rate.

E. Percentage of Full-Time and Part-Time Students in Oklahoma

Research shows that students enrolled full-time have higher retention and graduation rates. In fall 2000, 76 percent of students attending Oklahoma's comprehensive universities were full-time, while 24 percent attended part-time. At Oklahoma's regional universities, 69 percent of students were full-time, while 31 percent were part-time. At Oklahoma's public two-year colleges, 41 percent of students were full-time, while 59 percent were part-time.

Full-Time and Part-Time Students

		1990		1992		1994		1996		1998		1999		2000	
Comprehensive	Full-time	32,076	74%	32,643	73%	31,932	72%	32,775	74%	35,370	76%	35,472	74%	36,484	76%
	Part-time	11,547	26%	12,044	27%	12,113	28%	11,606	26%	11,449	24%	12,407	26%	11,800	24%
	Total	43,623		44,687		44,045		44,381		46,819		47,879		48,284	
Regional	Full-time	31,484	65%	33,984	65%	34,399	66%	32,341	66%	32,148	67%	32,053	69%	32,199	69%
	Part-time	17,193	35%	17,948	35%	17,852	34%	16,293	34%	15,740	33%	14,697	31%	14,388	31%
	Total	48,677		51,932		52,251		48,634		47,888		46,750		46,587	
Two-year	Full-time	22,400	37%	25,957	39%	25,043	39%	24,545	41%	24,172	41%	24,266	41%	24,497	41%
	Part-time	38,263	63%	41,412	61%	38,659	61%	35,270	59%	35,496	59%	34,605	59%	35,061	59%
	Total	60,663		67,369		63,702		59,815		59,668		58,871		59,558	
Total	Full-time	85,960	56%	92,584	56%	91,374	57%	89,661	59%	91,690	59%	91,791	60%	93,180	60%
	Part-time	67,003	44%	71,404	44%	68,624	43%	63,169	41%	62,685	41%	61,709	40%	61,249	40%
	Total	152,963		163,988		159,998		152,830		154,375		153,500		154,429	

Source: Office of Civil Rights OCR 2300 Report, fall 2000.

Research from the NCES's report indicated that "full-time enrollment is associated with higher rates of persistence and degree attainment."

F. Consortium for Student Retention Data Exchange (CSRDE) Findings

The 2000-01 CSRDE Report presented research findings using data gathered from 344 participating institutions, as listed below. These findings are typical of the research literature on student retention. Included among the findings are the following observations:

- Most dropouts are freshmen. This study found that 21 percent of students dropped out during the first year.
- Students tend to take longer than four years to complete a bachelor's degree. In the 1960's, about one-half graduated after four years compared to about one-third in the 1980's.
- However, up to 58 percent of students eventually earn a degree.
- Private institutions tend to have higher graduation rates than public institutions, and the four-year graduation rate is higher than the two-year rate.
- Minority students tend to have lower retention and graduation rates, and the gap widens from the first-year to graduation.
- Retention and graduation rates are higher for females.
- Retention rates increase with the selectivity of institutions.
- Retention rates decrease as the percentage of part-time students increases.
- The difference in retention rates among institutions based on the Carnegie classification may be due to selectivity or other factors that may vary among types of institutions.

G. Conclusions for Oklahoma

Major conclusions that can be drawn from the data available include:

1. The most recent statewide data show that about 10 percent of freshmen at comprehensive universities and 21 percent of freshmen at regional universities are not enrolled somewhere in the state the following year. However, the percentage of freshmen at comprehensive universities who fail to graduate within six years is approximately 45 percent, while the percentage of freshmen at regional universities who fail to graduate within six years is in the mid 60's. Thus, the excellent first-year retention rates of the State System are not reflected in the graduation rates. The Oklahoma higher education pipeline continues to leak significantly after the freshman year.
2. Oklahoma first-time freshmen exhibit many characteristics that do not correlate well with college persistence and graduation. These include failure to take an appropriate pre-collegiate curriculum in high school, delaying entry into college after graduation, and enrolling part-time. The high percentage of part-time students is consistent with institutional data and experience showing that many college students in Oklahoma are working more than 20 hours a week. Although, these characteristics place students at a higher risk of not graduating, additional data are needed to determine the effect of this variable on Oklahoma's graduation rates.

3. Although degree attainment is a national standard for measuring educational success, it may not coincide with the educational goals of many students. Although there is anecdotal evidence that many Oklahoma students have other goals, it is simply not known to what extent Oklahoma students see their primary goal as getting a job, learning specific skills, or preparing to transfer, all of which can be done without completing a degree.

III. Oklahoma's Initiatives to Improve Student Preparation for College

During the late 1980s, Oklahoma's student academic performance lagged behind that of other regional states. In comparison to their peers, Oklahoma's college students showed signs of inadequate high school preparation, including lower ACT scores, higher dropout rates, and lower graduation rates. For example in 1987-88:

- Only 30 percent of Oklahoma college-bound high school seniors were taking the 13 ACT-prescribed high school courses for college preparation.
- The average Oklahoma ACT score was 19.9, which was 0.9 points below the national average of 20.8.
- OU and OSU had the lowest average ACT scores among Big 8 freshmen, 21 and 20.1 respectively, while scores among the remaining Big 8 universities averaged 22.5.
- Thirty-nine percent of Oklahoma comprehensive and regional university freshmen did not return to their institutions for their sophomore year.
- OU and OSU also had the lowest graduation rates in the Big 8, 38 percent each, compared to a range of 42 percent to 57 percent for other Big 8 universities.

To ameliorate these deficiencies, the State Regents adopted a phase-in of increased admission standards at the public comprehensive and regional universities. In 1989, the admission standards at the comprehensive universities required an ACT score in the top 50 percent or high school rank in the top 50 percent or high school GPA of 3.0 or higher. In 1990, the regional universities required for admission an ACT score in the top 66.6 percent or high school rank in the top 66.6 percent or high school GPA of 2.7 or higher.

There are currently three paths of regular admission for students who wish to enter Oklahoma's regional and comprehensive universities, while two-year colleges retain open admission standards. To be admitted at a regional university, a student must achieve an ACT score of 20, or a GPA of 2.7 and class rank in the top fifty percent, or a 2.7 GPA on the State Regents' 15-unit high school core curriculum. To be admitted to a comprehensive university, a student must achieve an ACT score of 22, or a GPA of 3.0 and a class rank in the top one-third, or a 3.0 GPA on the State Regents' 15-unit core. Additionally, OU requested an admission standard requiring an ACT score of 24 and class rank in the top thirty percent. These higher standards encourage high school students to take more academic core subjects.

To complement increased admission standards, in 1993 the State Regents adopted a three-part package to enhance high school student preparation for college. First, the State Regents approved *Student Competencies for College Success*, a document compiled by college faculty translating the required high school core curriculum into specific knowledge and skills. This publication was used to inform high school students of what they need to know to succeed as college freshmen. Second, the State Regents set a system standardized score to determine academic subject preparation for college and made remediation mandatory for underprepared students. Finally, the State Regents increased the high school core curricular requirements from 11 to 15 courses, effective fall 1997.

Additionally, in 1993 the State Regents and ACT collaborated in the Educational Planning and Assessment System (EPAS). EPAS is a voluntary student assessment and instructional support program that provides feedback to high schools about their performance in preparing students for college. EPAS also provides individual students with information about the probability of the grades that they would earn in college based on their current high school performance. This early alert system notifies high school students of specific subject areas in need of further development while they are still in high school. In 2000-01, 462 schools representing over 95 percent of Oklahoma's eighth and tenth grade students participated in EPAS.

In 1999, the State Regents were awarded a five-year, \$20.5 million grant through the U.S. Department of Education for the Gaining Early Awareness and Readiness Program (GEAR UP). GEAR UP is a federal program designed to better prepare low income middle and high school students for college through mentoring programs, scholarships, and new academic preparation and awareness programs for students and parents. Along with the State Regents' state-level GEAR UP grant, nine school districts and East Central University were awarded partnership grants estimated at \$23.5 million over five years to expand statewide preparation locally. In 2000 and 2001, an additional four grants were awarded. Redlands Community College, Southeastern Oklahoma State University, and two additional school districts now lead GEAR UP programs, as well.

GEAR UP also provides supplemental scholarship funding for students who enroll in and complete the Oklahoma Higher Learning Access Program (OHLAP), a program that provides college tuition for low income students who agree in the ninth and tenth grades to take college preparatory course work, maintain a 2.5 grade point average, and demonstrate good citizenship. Oklahoma GEAR UP will build upon the highly successful EPAS program and target resources and services to 102,878 priority students in 180 school districts in Oklahoma. The resources and services will be provided through partnerships between the State Regents, Oklahoma colleges and universities, middle schools, community-based organizations, and businesses.

Additionally, in 1999 the State Regents expanded student incentives to take academically challenging high school courses by creating a third admission option whereby students earning a minimum average GPA in the State Regents' 15 unit core curriculum could be eligible for admission to comprehensive (3.0 GPA) and regional (2.7 GPA) universities.⁴ This option includes a student incentive to take Advanced Placement and International Baccalaureate courses. Further, the State Regents strengthened the curricular requirements for admission by requiring a writing component for all English courses and recommending an additional unit of mathematics and an additional unit of laboratory science.

In June 2000, the Corporation for National Service awarded the State Regents and the citizens of Oklahoma \$5,225,000 in funding for up to three years for *Smart Start for Brain Gain: Oklahomans Serving Children and Youth in Education*. Smart Start is an important component of *Brain Gain 2010*, the State Regents' initiative to increase the number of Oklahomans who attend and graduate from college. Smart Start participants will engage in public service initiatives such as tutoring and mentoring of students to encourage their successful college preparation. At the end of the service year, Smart Start participants will receive an education award commensurate with their accrued service that can be applied to either their college attendance costs or to existing student loan balances.

As part of the State Regents' continuing efforts to increase degree attainment and promote economic development, State Regents' staff and Oklahoma's higher education institutions are working together to identify the needs of business and industry and to develop flexible degree programs to meet the educational needs of their employees. A central feature of the State Regents' efforts is helping

⁴ The University of Oklahoma has higher admission standards. Resident students must score a 24 on the ACT; or earn a 3.0 GPA and rank in the top 30 percent of their class; or earn a 3.0 GPA and a minimum ACT score of 22.

Oklahoma's higher education institutions create environments and degree programs that are supportive of adult learners and their educational, career, and personal goals. Such institutions, known as Adult Learning Focused Institutions, serve as active partners with business and industry to provide work- and career-related educational services that meet the demands and schedules of adult learners. Through these partnerships, Oklahomans will cultivate the skills and knowledge to meet the challenges of a rapidly changing work environment while contributing to their own personal growth and the economic growth of our state's business and industry.

IV. An Overview of Research on Student Retention

The study of student persistence/withdrawal behavior in postsecondary institutions has benefited from the work of a number of individuals, most notably that of Spady, Bean, Tinto, and Adelman.⁵ In particular, Tinto's model has guided much of the research on student disengagement from postsecondary institutions as well as from postsecondary education generally. Building on and expanding the work of Spady, Tinto developed a model of the persistence/withdrawal process that is based to a greater extent on the degree of "fit" between the student and the institutional environment. Adelman's research on student enrollment patterns, assessment, remedial education, and persistence has shown that rigorous academic preparation at the secondary level is equally as important as the postsecondary environment. Among his latest works is a detailed study analyzing the factors that contribute to a student's attainment of a bachelor's degree.

Tinto's model suggests that students enroll at an institution with a range of background traits (e.g., race, secondary school achievement, academic aptitude, family educational context) and initial commitments to the goal of college graduation and to the particular institution attended. Together these background traits and initial commitments to college graduation presumably influence not only how successfully the student will meet the academic expectations of the institution, but also how well he or she will become integrated into the institution's social and academic communities.

Tinto argues that dropout decisions are most immediately the product of a breakdown in commitment to staying at a given college or in commitment to securing a college degree. This breakdown, in turn, is precipitated by inadequate academic integration (marked by poor college grades, low attendance, and/or weak academic contact with faculty and students) and/or poor social integration (evidenced by low participation in extracurricular activities, little extra-academic contact with faculty and/or few friends on campus). Other factors held constant, the stronger the individual's level of social and academic integration, the greater his or her subsequent commitment to the institution and to the goal of college graduation. These subsequent commitments are seen, along with levels of integration, as having important effects on institutional persistence/withdrawal decisions.⁶ A growing number of studies testing the Tinto model generally supported the importance of person-environment fit.⁷

In "*Answers in the Tool Box*," Adelman presented findings from a research project in which he studied high school and college transcripts, test scores, enrollment patterns, and surveys of students tracked from

⁵ Spady, W. "Dropouts from Higher Education: An Interdisciplinary Review and Synthesis." *Interchange*, 1 (April 1970), 64-85; Tinto, Vincent. "Dropout from Higher Education: A Theoretical Synthesis of Recent Research." *Review of Educational Research*, 45 (Winter 1975), 89-125; Bean, J. "Dropouts and Turnover: The Synthesis and Test of a Causal Model of Student Attrition." *Research in Higher Education*, 12 (April 1980), 155-87; Adelman, Clifford "Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment." Office of Educational Research and Improvement, U.S. Department of Education (June 1999).

⁶ Tinto, Vincent. "Dropout from Higher Education: A Theoretical Synthesis of Recent Research." *Review of Educational Research*, 45 (Winter 1975), 89-125

⁷ Aitken, N. "College Student Performance, Satisfaction and Retention: Specification and Estimation of a Structural Model." *Journal of Higher Education*, 53 (January/February 1982), 32-50; Bean, J. "Dropouts and Turnover: The Synthesis and Test of a Causal Model of Student Attrition." *Research in Higher Education*, 12 (April 1980), 155-87; Munro, B. "Dropouts from Higher Education: Path Analysis of a National Sample." *American Educational Research Journal*, 18 (Summer 1981), 133-41.

high school sophomore year in 1980 until 1993.⁸ Among Adelman's principal findings is the conclusion that a student's completion of a rigorous high school curriculum has the strongest continuing influence on bachelor's degree attainment. Of all secondary curricula, the level of mathematics completion is the single most influential factor on bachelor's degree completion. For example, Adelman's work revealed that finishing a math course beyond the level of Algebra II more than doubles the odds that a student who enters postsecondary education will complete a bachelor's degree. As a result, college admission standards that emphasize standardized test scores, high school grade point average, or class rank are more likely to result in lower degree completion rates than those standards that take into account the completion of a rigorous core curriculum.

Additional findings from *Answers in the Toolbox* both serve to confirm and challenge traditional ideas about student success. For example:

- The classic form of student transfer, in which a student earns at least a semester's worth of credit hours at a two-year college before moving to the four-year college, produces a very high likelihood of bachelor's degree completion;⁹
- The type and amount of remediation matter in relation to degree completion. Increasingly, state and local policy seeks to restrict – if not eliminate – the amount of remedial work that takes place in four-year colleges. But there is a class of students whose deficiencies in preparation are minor and can be remediated quickly without excessive damages to degree completion rates;¹⁰
- Students who attend four-year colleges and who earn fewer than 20 credit hours in their first year of college severely damage their chances of completing a bachelor's degree;¹¹
- When nearly 60 percent of undergraduates attend more than one institution and 40 percent of this group does not complete degrees, institutional graduation rates are not very meaningful. It is not wise to blame a college with superficially low graduation rates for the behavior of students who swirl through the system;¹²
- Although institutions may retain students, it is individual students who complete degrees, no matter how many institutions they attend. Adelman says to follow the student, not the institution;¹³

Adelman's research is pertinent to educators and policy makers in states considering policy changes in K-12 education, college admission, remediation, and appropriations. In Oklahoma, the combined effect of K-12 education reforms, increased college admission standards, and the EPAS, GEAR UP, and Smart Start initiatives has created an environment for improving bachelor's degree attainment. A copy of the Executive Summary for *Answers in the Toolbox* is attached (Appendix F).

Lessons Learned from Research on Student Persistence¹⁴

Almost every program, person, or procedure on a college campus has the potential to influence student retention. During the last two decades, college administrators and faculty have increasingly turned to

⁸ Adelman, Clifford "Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment." Office of Educational Research and Improvement, U.S. Department of Education (June 1999).

⁹ Ibid. at 99, 80-82.

¹⁰ Ibid. at ix.

¹¹ Ibid. at 70-71, 81.

¹² Ibid. at ix.

¹³ Ibid. at xi.

¹⁴ Tinto, Vincent. Colleges as Communities: Taking Research on Student Persistence Seriously. *The Review of Higher Education*, 21 (Winter 1998), 167-77.

retention scholarship to promote new programs for improving student retention. The result has been the proliferation of a wide variety of first-year programs, such as freshman seminars and mentoring programs, which are designed to enhance the likelihood that students will persist to degree completion. Although there have been numerous programmatic changes in student affairs, comparable changes in the academic or administrative sides of the house have not been forthcoming.

In terms of institutional organization and culture, conflicting axioms remain: “when everyone is responsible, no one is responsible; when no one is responsible, nothing gets done. And the job is simply too big for one person or office to handle.”¹⁵ Improving retention requires that all of the partners in an institution focus on the needs of students.

Research shows that student involvement matters. The more academically and socially integrated students are on a college or university campus – that is, the more they interact with other students and faculty – the more likely they are to persist.¹⁶ Further, the more they see those interactions as positive and themselves as integrated into the institution and as valued members of it, the more likely it is that they will persist.¹⁷

While academic and social integration influence student persistence in different ways, they interact to foster persistence. Students are likely to persist when they are either academically or socially integrated, and more likely to persist when both forms of integration occur.¹⁸ Although research shows that one type of integration can be a vehicle for integration in the other – that is, the two forms of integration are reciprocal – their impact upon learning tends to be asymmetrical. In most cases, academic integration seems to be the more important form of involvement.

Academic and social involvement, it seems, matters somewhat differently in diverse educational settings and influence students in different ways. The clearest differences arise between two- and four-year institutions. Evidence suggests that academic and social integration are more important to persistence in the four-year institutions than in the two-year institutions.¹⁹ But such differences are more likely the reflection of the varying academic and social attributes of institutions and the students they serve than of the underlying process of persistence.

This dynamic is most evident when the experiences of students in a small, residential four-year college are compared with students attending an urban two-year institution. Among many differences, student time on the two-year campus is much more limited to class time than it is for residential students. For them, the classrooms and laboratories of the college are typically the only places where they meet their peers and interact with faculty. For that reason alone, experiences in those academic settings – that is, academic involvement – should be relatively more important to persistence than they are in residential settings where social involvement also influences persistence.²⁰

¹⁵ Levitz, Randi S., Noel, Levitz, Richter, Beth J. *Strategic Moves for Retention Success*. New Directions for Higher Education, no. 108, Winter 1999, 40. San Francisco: Jossey-Bass Publishers.

¹⁶ Astin, A. Student Involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25(3), 297-308; Mallette, B.I., and Cabrera A. Determinants of Withdrawal Behavior: An exploratory study. *Research in Higher Education*, 32(2), 179-194; Pascarella, E.T. and Terenzini, P. Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of the Tinto Model. *Journal of Educational Psychology*, 52(2), 60-75.

¹⁷ Rendon, L. Validating culturally diverse students: Toward a new model of learning and student development. *Innovative Higher Education*, 9(1), 33-52.

¹⁸ Stage, F. Reciprocal effects between the academic and social integration of college students. *Research in Higher Education*, 30 517-530.

¹⁹ Braxton, J.M., Sullivan, A., and Johnson, R.M. Appraising Tinto’s theory of college student departure. In J. Smart (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 12, 107-164). New York: Agathon Press.

²⁰ Tinto, Vincent. Colleges as Communities: Taking Research on Student Persistence Seriously. *Journal of Higher Education*, 68(6) (1997).

Research has shown that there are many different pathways to integration, and that involvement or integration may take place inside and/or outside the classroom. Terenzini²¹ and Rendon,²² for instance, observe that some students, especially those in the community college, find integration or validation outside the classroom. They argue that experiences outside the classroom influence subsequent experiences in college and, in turn, influence persistence. At the same time, Tinto, Russo, and Kadel²³ find the opposite occurs – namely, involvement in the classroom becomes a vehicle for involvement beyond the classroom. Clearly, the academic and social systems of colleges overlay both classroom and college settings in such a way that experiences within and beyond the classroom both impact student persistence.

Student involvement matters most during the first year of college. Attrition is, for most institutions, most frequent during the first year of college. Nearly half of all leavers depart before the start of the second year. It therefore follows that the impact of involvement upon student persistence is greatest in the first year, especially during the first ten weeks when the transition to college is not yet complete and personal affiliations are not yet cemented. Student persistence from the first to second year of college is among the most important determinants of an institution's graduation rate.²⁴ If an institution has a first-to-second year attrition rate of 30 percent for a freshman class, the attrition rate after the second year is usually less than half that (15 percent), and continues to decline in a like manner every year.²⁵

V. Potential Barriers to Student Retention/Graduation (Appendix D)

Drawing from institutional experience, Task Force members compiled a comprehensive list of the potential major barriers to student retention. These potential barriers are divided into five categories: financial (ability to pay); academic; social/emotional/personal; student services/enrollment/advising; and future expectations/jobs. Each of these categories of barriers is subdivided into two sub-categories. The first sub-category is student characteristics, which are attributes that students bring with them to a college or university. The second sub-category is institutional characteristics, which encompasses the institutional organization and culture to which students must adapt.

The two sub-categories of barriers require different sets of strategies to promote student retention and graduation. To remove barriers that derive from student characteristics, institutions must first determine what characteristics their students bring with them that are placing them at risk of not persisting or graduating. Based on this information, institutions must develop programs directed at the students to counteract the effects of these negative characteristics. To remove institutional barriers, institutions must carefully examine their structure and culture to identify and change those attributes that are creating barriers to student retention.

The Task Force recommends that institutions use this matrix as a model for analyzing the unique set of potential barriers that may exist at each institution, and that this analysis provide the basis for an institutional action plan to remove any barriers found to be present.

²¹ Terenzini, P., et. All. The transition to college: Diverse students, diverse stories. *Research in Higher Education*, 35(1), 57-73 (1994).

²² Rendon, L. Validating culturally diverse students: Toward a new model of learning and student development. *Innovative Higher Education*, 9(1), 33-52.

²³ Tinto, V., Russo, O., and Kadel S. Constructing educational communities: Increasing retention in challenging circumstances. *Community College Journal*, 64, 26-30 (1994).

²⁴ Levitz, Randi S., Noel, Levitz, Richter, Beth J. *Strategic Moves for Retention Success*. New Directions for Higher Education, no. 108, Winter 1999, 36-48. San Francisco: Jossey-Bass Publishers.

²⁵ Ibid.

VI. Matrix of Common Initiatives to Improve Student Retention (Appendix E)

Research on student retention indicates that improving student persistence involves several interrelated and common initiatives on both the system and institutional levels. On the system level, the State Regents' Course Equivalency Project (CEP) provides course equivalency information to facilitate student transfer within the Oklahoma State System of Higher Education. The CEP database contains faculty-generated course equivalency information for thousands of courses offered at public institutions in Oklahoma. The CEP benefits students who anticipate transferring to other institutions by providing access to information about which institutions will automatically credit their course work as being equivalent. From the CEP, students can also reach available home pages of system institutions to find more detailed information about course descriptions, prerequisites, or degree requirements. The CEP enables academic advisors to quickly access accurate, up-to-date course equivalency information, thereby helping students make well-informed decisions about their education planning. Informed educational planning can shorten the time it takes students to complete a degree and limit costs.

Oklahoma's colleges and universities, both public and private, have developed a variety of initiatives to enhance the retention and graduation rates of their students. Members of the Task Force identified nine different categories of initiatives that are being used by multiple Oklahoma institutions. Although the list is not exhaustive, it reflects the variety and breadth of current efforts by Oklahoma's colleges and universities to improve retention.

- ❑ Institutional retention task forces: A select group of institutional leaders including faculty, students, and administrators study student retention issues and explore and recommend programs for improving retention on their respective campuses.
- ❑ Required freshman orientation courses: These courses are designed to increase the level of interaction between students and faculty (academic integration) and among first-year students (social integration).
- ❑ Computer/multimedia resource centers: Multimedia resource centers provide students with computer assisted learning software for instructional and tutorial purposes.
- ❑ Early alert systems for absences or poor academic performance: These systems track student attendance and academic performance to alert faculty and administrators so they may offer assistance. Examples include mid-term grade reports for freshmen and monitoring freshman attendance.
- ❑ Flexible course scheduling: Flexible scheduling includes offering courses at a variety of times and in a variety of settings to accommodate students with non-traditional schedules. Course times may vary from the traditional 8:30 a.m. Monday, Wednesday, and Fridays classes to intensive weekend classes to three-hour classes each Saturday morning.
- ❑ Mandatory academic advisement: Students are required to consult with their academic advisors prior to completing the enrollment process to ensure their proposed schedules conform to the requirements of their respective degree plans and educational objectives. Proper course sequencing helps to save money by ensuring all courses meet a requirement within the student's degree plan. Additionally, academic advisement allows students to develop a rapport with an institutional professional who can serve as a source of information to smooth the transition to college life.
- ❑ Initiatives to increase faculty/student interaction inside and outside of the classroom: These initiatives include, but are not limited to, faculty residency fellows who live in the student

residence halls, first-year seminars taught by tenured faculty, and faculty mentoring programs where first-year students can work for tenured faculty on research projects.

- ❑ Peer tutoring: Peer tutoring provides students with academic support from fellow students who have taken courses in the subject in which they require assistance. Peer tutoring allows students to develop a sense that they are immersed in a learning community where their colleagues, as well as faculty, are sources of academic support.
- ❑ Fast track academic programs: These programs allow students to accelerate the completion of a degree program by taking sequences of intensive courses, instead of traditional courses meeting for an entire semester.

VII. Best Practices Within and Outside Oklahoma to Improve Student Retention

Best practices are activities that produce superior results. Because institutions vary with regard to educational mission, student characteristics, and admission standards, there is no single “best practice” for improving student retention. Institutional best practices encompass those activities that successfully meet the needs of the student population served by a specific institution. Best practices do not have to be unique. In fact, institutional best practices are often identified from programs at other institutions and adapted to meet the needs of another.

A. Oklahoma’s Institutional Best Practices

Oklahoma colleges and universities have undertaken numerous initiatives to enhance the retention and graduation rates of students. These include the following examples of best practices.

Campus-wide efforts to focus on the issues of retention and graduation:

These efforts are intended to focus the attention of faculty, staff, students, administrators, and the various other institutional stakeholders on the importance of retention and graduation and to lead to institutional actions to enhance student success. Examples include:

- Forming a university-wide a task force to develop strategies for improving student performance in remedial courses;
- Forming a student recruitment and retention committee to develop new ideas and programs for increasing student involvement on campus and improving student retention;
- Making student retention a high profile campus issue. Administrative support has become strong and visible, progress reports on retention are frequent, and the level of awareness among the campus community remains high; and
- Establishing a campus communications committee representing both faculty and students to address matters of concern.

Orientation programs and courses for new students:

These activities are designed to get new students off to a good start by providing them upfront the information they will need to be successful. Examples include:

- Creating a special semester-long orientation course for freshmen designed to enhance student transition to college life;
- Use of an orientation day for first-time freshmen to help their transition to college life;
- Creation of a several day-long pre-semester orientation program for all new students;
- Creating an on-line course designed to help students identify the skills needed to succeed in the college environment, as well as to familiarize students with the campus resources available to them. From this course, students learn to set up campus e-mail accounts and develop a learning and time-management plan. The program also utilizes pre- and post-tests to evaluate a student's knowledge base and skill levels in certain key areas, including learning styles, career exploration, campus resources, research and writing, and life skills;
- A focused, first-week program designed to involve freshmen in campus life, including a student organization fair, student activities, and interaction with local businesses and merchants; and
- Establishing a summer enrollment program involving new students and parents. Approximately 50 students and parents attend each day and are involved in such activities as general information sessions, parent sessions, assessment for proper course placement, academic advising, and enrollment. Each day, staff from academic and student affairs meet with parents to provide information related to university services and programs. Parents are an integral part of the retention formula, and they are best able to assist and encourage their student if they have been introduced to university services and expectations.

Enhanced academic advising:

Good academic advising is a cornerstone to academic success. Many institutions are refocusing on this function and providing additional resources to enhance advising programs. Examples include:

- Making academic advising a high priority on campus. The importance of advising is included in the rhetoric of the institution and funds are prioritized to hire and train additional advisers;
- Improving the timing and frequency of contact between new students and campus advisors;
- Increasing the number of professional staff advisers, both at the institutional and departmental levels; and
- Creating a university and college/division-wide councils of academic advisers to foster communication and coordination among advisers in different academic units. These bodies become advocates for administrative and academic changes to improve student services and performance.

Advising and counseling programs focused on at-risk students:

These efforts are designed to focus attention on those students who are at the greatest risk of not succeeding academically. They include students entering the institution who have low test scores and/or grades and continuing students who are performing at a low academic level. Examples include:

- Creation of an advising/counseling program targeted at those freshmen who are at the highest risk of not being successful academically, as assessed by ACT or SAT scores and high school GPAs. Students are assigned to academic advisors in the freshman advising unit and sign contracts in which they agree to participate in programs designed to assist them in being successful academically. Students in the program meet regularly with their advisors, are required to enroll in the freshman orientation course, and are advised for the next semester prior to the advising period for other students; and
- Maintaining a database of students who are on enrollment contracts and using this information to identify students who are not meeting the conditions of their contracts and to trigger advisers to contact the students to remind them of their obligations.

Enhancement of connectedness to the institution:

Research shows the students most likely to persist and graduate are those who feel connected to the institution at a personal and emotional level. Many institutions are taking steps to enhance this sense of connectedness. Examples include:

- Expansion of student activities to provide more social interaction and extra-curricular learning opportunities. The number of campus speakers, cultural awareness programs, and other student activities has been increased, and the number of student clubs and organizations has increased approximately 150 percent over the past three years;
- Creation of an award program that recognizes 25-30 students each year for their involvement in in-class and out-of-class activities. These students are given increased personal attention, including recognition for their achievements, which is a critical ingredient in involving and integrating students into the university;
- Creation of a freshman seminar program in which professors teach an academic topic of special interest to them to a small group of freshman students (25 maximum). The intent is to let the professor share his or her enthusiasm about the subject to involve students in the excitement of academic pursuits. Surveys are conducted each semester to determine the strengths and weaknesses of the course, and these results are used to revise the course the next time it is offered;
- Enhancing campus life opportunities, including increasing and diversifying intramural activities; renovating the Student Center, dormitories, cafeteria, and other buildings housing student-centered functions; extending library hours; and increasing support and funding for Student Government and activities;
- Creating a program to involve students as leaders of academic activities. These include a new orientation/enrollment process, freshman orientation classes, and campus events; and

- Creating student advisory committees at departmental and college levels to facilitate student input into the decision making processes of the unit and institution.

Faculty and staff development activities:

Educating faculty and staff about retention and graduation issues and involving them in developing solutions to problems is key to institutional success. Many institutions are seeking to involve faculty and staff through various developmental activities. Examples include:

- Participating in a campus-wide assessment of student retention with external consultants, such as the Noel-Levitz USA Group on retention management, to enhance the understanding of faculty, staff, administration, and students about issues related to retention and graduation;
- Creating a grant program to fund faculty members to undertake initiatives designed to improve student success and retention; and
- Using federal funds to provide faculty development opportunities in student advising and mentoring.

Enhancement of general student support services:

These activities are designed to enhance the support services that are key to helping students continue their education and be successful. Examples include:

- Modifying the financial aid system to make scholarship awards for an entire year instead of one semester at a time;
- Placing financial aid applications on-line to shorten the qualification and notification process;
- Making a major commitment of resources to enhancing student support services, including reorganizing and expanding of the office of student services; and
- Obtaining federal funds to improve student support services. This five-year program will result in the creation of a student academic and social-support infrastructure designed to accept and properly place new students, monitor student progress, provide appropriate interventions and services for individual students, and create a comprehensive program of campus life opportunities.

Creation of learning communities:

Learning communities are groups of students who take courses together and form a mutually supporting community of learners. Examples of efforts to create learning communities in Oklahoma's colleges include:

- Creating a learning community program, through which a group of first-time, full-time freshmen will be enrolled in a slate of related first-year classes with faculty serving as mentors. Other components of the program may include offering specific housing to the members of the learning community as well as offering additional advisement. Retention

rates at the end of the year will be compared to the general population of first-time, full-time entering freshmen;

- Revising the general education program to create smaller classes and extensive interconnectivity between classes;
- Developing learning communities within a cluster of developmental courses; and
- Creating a block of freshman courses in which new freshmen are enrolled in groups of 20-24 and providing peer and faculty tutor/mentors who meet with each group on a regular basis.

Collection of data to understand better the issues/problems:

Before developing solutions to problems, it is important first to understand what the problems really are. Institutions are seeking ways to enhance the use of data to identify problems regarding student retention to guide the process of developing solutions and then evaluating the effects of the solutions that are implemented. Examples include:

- Creating a data warehouse that allows the institution to quantify the effects of retention programs on student retention and graduation.

Workshops to enhance student skills and behaviors:

When students are identified as having problems, there need to be programs available to which students can be sent for help with their specific problems or deficiencies. Many institutions have developed a series of short workshops that focus on topics and skills that are important to student success. Examples include:

- Creating workshops to enhance the skills and behaviors of students. Topics include: time management; stress management; personal financial management; attention and listening; group and cooperative learning; note taking; getting organized; critical thinking; test preparation; and a host of other areas important to improving student academic success and retention.

Providing students with electronic access to information:

Students are responsible for their own behaviors and performances but they need to have access to good information to make informed decisions. Many institutions are using technology to enhance student access to important information. Examples include:

- Installing computer kiosks around the campus that allow student to access institutional and individual student information; and
- Sending e-mails to all students to provide regular updates and reminders regarding withdrawal deadlines, dates for pre-enrollment advising, information about special programs and services, etc. This helps to disseminate information to students while serving as a vehicle for answering frequently asked questions. It also makes it easy for a student to send an email back to his/her advisor with specific questions and issues.

Tutoring programs:

Tutoring is a proven means of helping students perform better in their classes. Examples of efforts to provide tutoring include:

- Enhancing tutoring of students at the freshman and sophomore levels through the use of supplemental instruction; and
- Using students who have successfully completed courses as tutors for currently enrolled students. This is typically done in a group setting.

Identifying potential drop-outs:

To identify potential drop-outs and to develop intervention strategies, many institutions are contacting their current students who have not enrolled for upcoming terms. Examples include:

- Conducting a student outreach phone-a-thon targeting students who enrolled and attended during the fall semester, but did not enroll during the spring semester;
- At the end of the pre-enrollment period, contacting by mail or email all current students who did not pre-enroll for the upcoming semester to find out why they have not enrolled and to troubleshoot any problems that may be preventing the student from returning to school; and
- Using a questionnaire during the student withdrawal process to collect information and data to help identify the reasons that students withdraw prematurely, especially any problem areas at the institution. This also allows counselors to attempt to intervene to assist withdrawing students with any problems and to encourage them to persist.

B. Statewide Conference on Student Retention and Graduation

As an additional initiative to fulfill its charge, the Task Force announced in November 2000 that a statewide conference on student retention would be held as a forum for Oklahoma educators, administrators, and policy makers to generate dialogue and promote the sharing of ideas and information among public and private campuses. The conference was held November 2, 2001 at Rose State College.

The Statewide Conference on Student Retention and Graduation had a three-part goal:

- to increase awareness of the importance of student retention and graduation;
- to examine current barriers to student persistence and degree completion; and
- to present both national and local initiatives which have resulted in higher student retention and graduation rates.

Dr. Clifford Adelman, whose research on student enrollment patterns, assessment, remedial education, and persistence contributions is described earlier in this report, served as keynote speaker. Dr. Adelman shared a national perspective of the contributing factors to student persistence and degree attainment. Representatives of two programs identified by the Task Force as examples of national best practices in student retention also served as conference speakers. These programs are described in detail in Section VII, Part C (below).

Dr. Ge Chen from the University of Texas at Austin shared information about the Gateway Program. Dr. Judith Grimes, Director of Student Success Programs at Missouri Western State College, presented the Access Plus/Western Advantage program. Additionally, State System and independent institutions were invited to submit proposals outlining successful campus initiatives to identify and eliminate barriers to student persistence and degree completion. Eight State System institutions submitted 16 proposals. Following competitive review and selection, institutional representatives of both comprehensive universities, two regional universities, and two community colleges presented retention initiatives with demonstrated success in improving student retention.

The statewide conference confirmed the Task Force conjecture that programs and activities that result in increased student retention cost money. Many programs, such as Gateway and Access Plus/Western Advantage, are particularly expensive; annual program costs for Gateway and Access Plus/Western Advantage are \$211,200 and \$2.6 million, respectively.

Conference attendance and institutional representation included over 330 individuals representing 27 public institutions, 6 private institutions, the State Department of Education, and the Oklahoma Student Government Association.

C. National Best Practices

While Oklahoma institutions offer the traditional common initiatives plus many innovative best practice programs, there is much to be learned from award winning programs in other state systems of higher education. The following best practices are proven examples of effective, innovative programs that have improved student retention and graduation.

- ❑ **Gateway Program, University of Texas at Austin:**²⁶ For the past four years, a group of freshmen has been identified as students who would benefit from extra support delivered through the Gateway Program. The program involves the collaboration of several academic departments and has the goal of raising student retention and graduation rates. The Gateway Program is designed for freshmen who are regularly admitted but who have additional challenges such as: being a first-generation college student; having lower than average ACT/SAT scores; coming from a rural area high school; or being a student-athlete. Gateway is designed to assist these students with adjusting to the challenges of a new environment. Gateway is a two-year program that currently serves approximately 100 incoming freshmen. The program begins with a special session for students and their parents, which is held during summer orientation. The Gateway Program concludes at the end of the sophomore year. Core elements of the program include: small classes taught by tenured faculty; weekly meetings with peer advisors who are former Gateway participants; an early alert questionnaire first administered during the first week of classes to identify and prioritize each student's support needs; one-on-one meetings with Gateway support staff to discuss identified support needs; free tutoring, writing workshops, and supplemental instruction; and monthly group activities such as staging a theatrical performance, ice cream social, or internship fair. In the 1997-98 academic year, the university dismissed 4.4 percent of freshmen overall, but no students from the Gateway program. For fall 1998, Gateway students outperformed their peers by earning a 3.04 average GPA compared to a 2.8 average GPA for freshmen overall. Due to the program's success, the university is committing additional funds to expand the program to reach a larger population.

²⁶ Recipient of a 1999 Noel Levitz Retention Excellence Award. Nominees for awards are judged on identifiable and measurable institutional outcomes, originality and creativity, use of resources, and adaptability for use at other institutions. Winners are selected by a national panel comprising leading campus-based retention practitioners.

- ❑ **Transfer Student Retention Program, College of Charleston, Charleston, South Carolina:**²⁷ Four out of every 10 new students are transfer students at the College of Charleston. The retention of transfer students is critical to the college and to the achievement of its mission. Using the approach described below, retention rates have climbed, and the college has realized increased student enrollment. Components of the comprehensive transfer retention program include, but are not limited to: an accurate transfer course inventory that allows the college to tell students quickly and accurately which courses will transfer; “open house” advising at two-year feeder schools in which students can learn which courses will transfer prior to leaving the two-year institution; advising sessions at new student orientation that go beyond credit evaluation and result in a plan for degree completion; formalized articulation agreements with other postsecondary schools in the state; and the administration of two surveys: one for new transfer students and one for enrolled transfer students who indicate their intent to transfer elsewhere. The College of Charleston reports that no new funding was initially needed for these initiatives. Instead, a collaborative effort among student support service offices and deans and department chairs provided the initial support to start the program. Funding was then provided for additional staffing and services based on the program’s enrollment results and assessment and evaluation data. As a result of the program, the college’s retention rate of first-time, full-time transfer students has increased from 61 percent to 73.9 percent since 1986 when the program was initiated. The substantial increase in juniors and seniors has led to an infusion of additional tuition revenue and increased graduation rates.
- ❑ **Access Plus/Western Advantage Program, Missouri Western State College, St. Joseph, Missouri:**²⁸ Missouri Western State College (MWSC) is a public, open admission, state-supported institution providing a blend of traditional liberal arts and sciences and career-oriented degree programs. MWSC offers associate and baccalaureate degrees, as well as certificate programs. To increase student persistence and graduation rates, the college implemented Access Plus/Western Advantage, a comprehensive student support program. Components include enhanced orientation programs; a Freshman Year Experience Office offering services such as “drop in” advising and advising workshops for student advisors; a large team of freshman advisors consisting of faculty and staff; Freshman Interest Groups, which are clusters of the same 20-25 students enrolled in two or three courses together with a common theme; expanded academic support, including tutoring and supplemental instruction through the college’s Center for Academic Support; and the creation of a Unity Services Office to help address diversity issues on campus. More than one-half of the college’s faculty participate in the Program. In addition, the college has a Freshman Year Experience Office solely dedicated to freshman support services. The staff of this office contacts all freshmen with less than a 2.0 GPA at midterms and again at the end of the semester. Staff also encourages students who do not pre-register to complete the registration process. During the first four years of the program there was a 10 percent increase in retention, including a 15 percent increase in minority retention. Additionally, graduation rates increased 7 percent.
- ❑ **First-Year Learning Team (FLight) Program, Southeast Missouri State University:**²⁹ The FLight program was implemented in Fall 1997 as a result of the university’s strategic plan initiatives to offer a top-quality curriculum, increase student success and retention, and optimize and stabilize enrollment by serving students more effectively. The underlying emphasis of the FLight program is to encourage students to interact with each other and faculty members very early in the semester through a blend of curricular and co-curricular

²⁷ Ibid.

²⁸ Ibid.

²⁹ Recipient of the 1998-99 CSRDE Effective Retention Program Award.

activities. First-year learning teams are comprised of 25 first-semester, first-year students, both commuter and residential, who are enrolled in a cluster of three courses connected by a theme or area of interest. FLIGHT students who live on campus reside together in a common residence hall. Each learning team is anchored by the course GS101, Creative and Critical Thinking, whose instructor also acts as a faculty advisor. Veteran students known as peer mentors work closely with FLIGHT students to provide academic and social support, guidance, and leadership. Peer mentors and the FLIGHT faculty members also work closely to create a sense of community, foster a team environment, and ensure that FLIGHT members living on and off campus receive equal opportunity and treatment. In fall 1998, 106 first-time students enrolled in the FLIGHT program.

- **The Freshman Year Initiative at Fayetteville State University: A Comprehensive Approach to Student Success:**³⁰ The Freshman Year Initiative (FYI) is a comprehensive program of student support designed to improve the academic success of freshmen. Implemented in 1996, FYI is coordinated by the University College and involves collaboration with the university's advisement/mentoring office, freshman seminar program, student support services, mathematics laboratory, and writing center. At the university, approximately 70-80 percent of the entering freshmen are first-generation students with low ACT scores and lower socioeconomic backgrounds. In view of the number of students with attributes that place them at risk of dropping out of the university, FYI is designed as a safety net to identify and provide extra assistance to those students who experience special difficulties in their first year. At the same time, the program avoids imposing unnecessary constraints on students who demonstrate little need for assistance.

Freshmen participating in the FYI program 1) enrolled in Freshmen Seminar I and II, a two-semester course sequence, which covers a wide range of topics designed to facilitate transition to university life including: university history, policies, and procedures; study skills; health issues; 2) meet with representatives from career services, financial aid, counseling center, and the library; 3) complete intensive readings from a variety of academic disciplines; and 4) participate in activities designed to enhance the students' ability to work in groups and make presentations. A student mentor called a Peer Academic Leader (PAL) is assigned to each section of Freshmen Seminar to provide academic and social support, counseling, and leadership. Additional attributes of the FYI program include an early alert system to provide midterm grade reports to freshmen and their academic counselors during each semester and continued monitoring of former FYI students as they progress through their academic programs. Since the implementation of this program, the university has seen increases each year in one-year retention rates.

VII. Task Force Recommendations

In fulfilling the Task Force's final charge as assigned by the State Regents, the Task Force recommends the following initiatives to increase student retention and graduation.

1. **Focus on persistence to completion:** In developing policies and strategies to promote student success in higher education, the focus should be on persistence to completion. This measure is more complex than the traditional measures of first-to-second year retention rates and six-year (baccalaureate degrees) and three-year (associate degrees) graduation rates of first-time entering freshmen. Current research suggests several factors to be taken into account for a true measure of student success. First, data should follow the student, not the institution. Patterns of student mobility are complex, and today's students typically attend more than one institution on their way

³⁰ Recipient of the 1999-2000 CSRDE Effective Retention Program Award.

to completion. Therefore, to the extent permitted by data, students should be followed across institutions to gain an accurate picture of persistence and completion. For Oklahoma, this means that measures of persistence and completion should be based on data within the state, and not just within the institution. Second, given the increasingly longer times to degree completion, a realistic time frame should be used to track students. Adelman recommends following students for at least 10 years after they first enter higher education.³¹ Third, tracking should only begin when students are ready for college-level work; students enrolled in remedial classes should not be included in the cohort until they advance to college-level courses. Fourth, given that students enter higher education to meet a variety of goals, measures of completion should reflect those goals. For example, students who enroll simply to complete a certificate program should not be counted as dropouts because an associate or baccalaureate degree was not completed. Similarly, students who take courses at one school to prepare to transfer to another should not be counted as dropouts, because they fail to complete an associate or baccalaureate degree at the institution where they started.

- 2. Improve Student Preparation for College:** According to current research, the single most important predictor of student academic success is the intensity and quality of a student's secondary school curriculum. Adelman's findings reveal that a student's completion of a rigorous high school curriculum has the strongest continuing influence on bachelor's degree attainment.³² Additionally, the highest level of mathematics studied has the strongest influence on success, and a math course beyond Algebra II more than doubles the probability that a student will complete a bachelor's degree.³³ Consistent with these findings, the Task Force encourages broad dissemination of information showing that students who enroll in the State Regents' recommended high school core curriculum succeed at a higher rate than students who do not. Moreover, the Task Force endorses the State Regents' December 1999 Admission Policy revision recommending that college-bound students take a fourth mathematics course, with the addition that the fourth course should include content and rigor equal to or above Algebra II.
- 3. Explore Collaboration Between Secondary Schools and Higher Education:** The effect of a rigorous secondary school curriculum goes beyond access to higher education and directly affects student success in college. The Task Force encourages secondary schools and institutions of higher education to explore collaborative efforts that enhance student preparation for college. For example, schools could collaborate to develop programs that encourage students to take additional mathematics and science courses by integrating technology into the curriculum.
- 4. Public Recognition of Individual Oklahoma High Schools Showing Improvement:** The Task Force recommends that the State Regents continue to annually recognize individual Oklahoma high schools with higher average ACT scores and superior or improved high school-to-college-going rates, as evidenced by immediate entry into institutions of higher education and low college remediation rates. Based on a preliminary suggestion from the Task Force, the Council on Instruction with the assistance of State Regents' staff developed the criteria on which the recognition is based. It is further recommended that the State Regents more broadly disseminate the High School to College-Going Rate Indicators Reports, which include four components: (1) high school to college-going rate by high school site; (2) headcount, semester hours, and grade point average of first-time freshmen in fall semester by high school site; (3) mean ACT score of high school graduates by high school site; and (4) remediation rates by high school site.

³¹ Adelman, Clifford "Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment." Office of Educational Research and Improvement, U.S. Department of Education (June 1999).

³² Ibid.

³³ Ibid. at 16-18.

- 5. Presidential Leadership:** Presidential leadership is crucial to the improvement of student retention and graduation rates. Institutional presidents play an important role in strategic planning and creating an institutional culture that encourages student success and demands institutional accountability. As noted in *Strategic Moves for Retention Success*,³⁴ “Virtually every program, person, and procedure on campus has the potential to have an impact on students, and therefore on retention. But there are conflicting axioms: when everyone is responsible, no one is responsible; when no one is responsible, nothing gets done. And the job is simply too big for one person or one office to handle.”

As institutional leaders, presidents not only help to define the performance expectations of faculty and students, they bear the ultimate burden of accountability to a growing body of constituents, which includes parents, students, coordinating and governing boards, state legislators, and the general public. The growing trend nationally of relating student retention and graduation rates to institutional accountability and funding underscores the importance of presidential leadership. The combined effect of these pressures should keep student retention at or near the top of every president’s agenda.

- 6. Quality Initiative Grants for Innovative Institutional Proposals to Increase Student Retention:** The Oklahoma State Regents for Higher Education use Quality Initiative Grants to encourage and to fund innovative institutional pilot projects on a competitive basis. The Task Force recommends that the State Regents issue a call for innovative proposals designed to improve student retention and graduation. For example, successful proposals might include, but should not be limited to, peer advising programs that pair first-year students with upper class students, or block programming where the same group of first-year students take general education coursework together for the purpose of developing a community of learners. Another example of a needed pilot program is assessing students’ goals upon entry to college and monitoring their progress throughout the students’ college careers. Through a competitive process, the State Regents should select for funding pilot projects that demonstrate promise for improving student persistence and that are applicable to other Oklahoma institutions of higher education. Successful projects must include a comprehensive evaluation component.
- 7. Endorse *Brain Gain 2010* Goals and Recommend Adequate Financial Support to Achieve Those Goals:** The goal of *Brain Gain 2010* is for Oklahoma to meet or exceed the national average for the educational attainment of citizens 25 years or older by the year 2010. The State Regents’ legislative budget requests in the last two fiscal years have included funding for Brain Gain initiatives at both the system and campus levels. These funding requests included multiple strategies to increase the persistence and graduation of college students. To date, no money has been allocated to fund these programs. It is increasingly evident that programs and activities that result in increased student retention cost money. The Task Force endorses the goals and the programs and activities outlined in *Brain Gain 2010* to increase the number of college graduates. The Task Force encourages the legislature and the State Regents to provide adequate one-time and on-going funds to support the expenditures associated with programs that result in higher student graduation.

³⁴ Levitz, Randi S., Noel, Levitz, Richter, Beth J. *Strategic Moves for Retention Success*. New Directions for Higher Education, no. 108, Winter 1999, 40. San Francisco: Jossey-Bass Publishers.

- 8. More Institution-based Research:** Increasing student persistence requires direct knowledge of students' needs and expectations. The Task Force recommends that institutions perform statistically valid surveys to identify factors that students perceive to be important in improving persistence. The Task Force also recommends that freshman students be followed throughout their academic careers, not just to the beginning of their sophomore year. Additionally, the surveys should differentiate between full-time and part-time students and transfer students. The Task Force also recommends that research be carried out to determine the educational goals of Oklahoma students and to develop means to assess both the appropriateness of these goals and how well these goals are being met. Such assessments would augment the traditional measures of rates of persistence and graduation and permit a more sophisticated analysis of how well Oklahoma's college and universities are meeting the needs of their students.
- 9. Encourage Institutions to Use National Research Information to Assess Institutional Effectiveness:** Improving student persistence requires institutions to know more about their entering students than is contained in high school transcripts and admission applications. For example, assessing the goals of entering students and monitoring their progress toward those goals will reveal information about institutional effectiveness. The Task Force encourages institutions to use national research information to tailor their initiatives to identify at-risk students, improve the delivery of student services, and connect students with campus resources and activities. For example, institutions may choose to participate in ACT's Research and Information Service programs or in the Center for Institutional Data Exchange and Analysis.
- 10. Faculty Development:** Increasing student persistence rates requires not only academic and social integration among students on college campuses but also sustained, quality faculty instruction. Enhancing faculty understanding of the importance of promoting students' sense of connectedness to the institution is an important step toward increasing retention and graduation rates. The Task Force encourages Oklahoma's higher education institutions to provide faculty development programs to introduce new instructional skills and approaches. For example, institutions could provide faculty development for reorganizing the classroom to promote shared, collaborative learning. Other workshops could train faculty as to the importance of their roles in the academic and social integration of students.
- 11. Statewide Conferences to Raise Awareness about Student Retention:** Raising institutional and community awareness of the factors underlying student retention is an important step toward promoting collaborative efforts to improve student success. The Task Force recommends holding statewide conferences on student retention and graduation every other year. These conferences should be headlined by prominent national experts to provide a forum to discuss ideas for improving student retention within the state. The conferences would provide college and university faculty and administrators with the opportunity to participate in discussions with retention scholars and institutional researchers.
- 12. Develop an Institutional Inventory of Barriers to Retention:** The Task Force recommends that institutions use the matrix of potential barriers to student retention (Appendix D) as a model for developing an inventory of the unique set of barriers that exist at each institution. This inventory should then be used in the process of developing an institutional action plan to remove the barriers.

- 13. Evaluate the Attainment of Student Goals:** Attainment of student goals and student satisfaction are measures of institutional effectiveness. The Task Force encourages institutions to survey entering students to determine student goals and current students to assess the degree to which the institution is helping them achieve their educational goals. Assessment of student satisfaction will enable institutions to improve the delivery of student services and increase satisfaction.
- 14. Examine Block Tuition as an Incentive to Enroll in More Coursework:** Students identify financial issues among the many factors in their decisions to drop out of college. The Task Force recommends the State Regents examine whether block or flat tuition schedules encourage students to enroll in more credit hours and attain their educational goals more quickly. In a flat or block tuition schedule, students enrolled in a specified range of credit hours would pay a flat or block rate, as opposed to paying a variable fee based on the number of credits hours enrolled.
- 15. Develop Institutional Early Warning Systems:** A student's academic performance is a critical factor in the decision to persist. A number of Oklahoma's institutions employ early warning systems to alert students about excessive absences and poor academic performance. The Task Force recommends that institutions create comprehensive early warning systems to increase student awareness of academic performance during the semester. Increasing awareness of academic performance as early as possible during the semester will enable students to change academic strategies if necessary and take advantage of institutional resources.
- 16. Evaluation and Progress Reports on Implementation of Task Force Recommendations and Results in Student Retention:** Improving Oklahoma's student retention and graduation rates requires a long-term commitment from institutional leaders and policy makers. The Task Force recommends that the State Regents continue to monitor student retention and graduation rates and the issuance of public reports evaluating the progress of institutional efforts to implement the Task Force Recommendations.

It is important to note that of the 16 Task Force recommendations, 10 recommendations require direct funding for implementation. As exemplified by the Gateway Program and Access Plus/Western Advantage Program, which were selected as best practice models and presented at the Statewide Conference on Retention and Graduation, programs that assist students to stay in college require money. Many have particularly high per-student costs. If student retention and graduation are state priorities, then adequate funding must be provided to institutions to implement programs proven to result in increased student success.

APPENDICES

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**First-Year Persistence Rates
First-Time Full-Time Freshmen
Within the Institution**

Fall Cohorts

Institution	1990	1991	1992	1993	1994	1995	1996	1997	1998
OU	76.9%	76.0%	75.2%	76.4%	77.0%	77.9%	79.4%	78.7%	78.7%
OSU	73.7%	72.4%	73.6%	74.0%	73.1%	71.8%	75.6%	79.9%	79.7%
Comprehensive	76.4%	75.8%	75.6%	76.5%	76.1%	76.5%	78.9%	80.0%	79.9%
UCO	58.8%	59.3%	62.5%	64.3%	63.9%	65.0%	60.6%	64.9%	65.5%
ECU	61.8%	62.5%	63.7%	61.9%	63.7%	66.0%	63.4%	62.0%	65.2%
NSU	65.1%	68.3%	65.0%	60.8%	63.6%	59.4%	63.3%	66.2%	62.4%
NWOSU	62.6%	65.6%	64.0%	61.0%	64.2%	58.2%	57.8%	55.9%	56.2%
SEOSU	65.7%	63.7%	66.1%	66.7%	63.1%	62.8%	63.4%	68.5%	66.1%
SWOSU	63.6%	61.4%	64.0%	58.4%	59.1%	63.8%	65.4%	68.1%	67.1%
CU	66.9%	64.2%	62.5%	64.2%	59.9%	61.7%	63.9%	61.4%	53.9%
LU	59.9%	61.4%	67.6%	69.8%	63.3%	68.1%	69.6%	75.3%	73.7%
OPUS	55.3%	58.5%	61.8%	66.4%	56.1%	58.4%	67.4%	52.2%	62.1%
USAO	63.4%	67.0%	62.6%	59.6%	53.4%	57.1%	48.3%	58.0%	64.0%
Regional	65.8%	66.6%	67.6%	66.4%	64.9%	66.2%	66.2%	68.0%	67.1%
CSC	56.6%	53.9%	76.9%	47.6%	53.0%	59.5%	56.7%	55.8%	56.1%
EOSC	54.0%	57.9%	55.3%	55.9%	54.4%	57.9%	61.9%	55.3%	61.2%
MSC	51.8%	43.5%	39.9%	43.4%	39.2%	46.0%	49.8%	50.0%	48.4%
NEOAMC	49.8%	49.3%	46.7%	46.2%	43.2%	52.4%	54.1%	53.9%	50.7%
NOC	54.5%	58.2%	53.1%	57.4%	50.4%	51.0%	58.9%	54.2%	59.5%
RSU*	51.6%	N/A	46.7%	86.9%	N/A	45.1%	45.6%	50.0%	48.4%
TCC	58.9%	60.2%	59.2%	53.6%	53.8%	57.4%	57.9%	51.3%	57.4%
OSUTB-OKC	42.6%	29.9%	14.3%	28.6%	45.9%	40.8%	45.0%	47.4%	49.5%
OSUTB-OKM	59.0%	54.8%	53.6%	51.6%	52.9%	57.0%	54.6%	58.7%	58.3%
WOSC	49.4%	52.8%	51.1%	50.2%	50.6%	48.8%	59.4%	57.0%	47.3%
RCC	53.2%	57.0%	50.8%	54.2%	51.8%	48.6%	45.1%	54.6%	55.9%
CASC	54.3%	49.6%	46.9%	49.1%	50.6%	54.1%	62.6%	59.0%	60.8%
SSC	53.5%	55.5%	51.2%	47.9%	53.5%	45.9%	48.1%	49.9%	50.2%
Rose	52.1%	51.6%	52.1%	49.8%	46.0%	48.8%	52.7%	46.2%	52.9%
OSCC	57.4%	47.4%	49.8%	51.5%	54.0%	55.5%	52.8%	51.2%	56.4%
Two-Year	59.3%	58.0%	58.0%	57.4%	54.4%	56.9%	59.0%	57.4%	59.8%

Source: OSRHE Student Data Report, Oklahoma Higher Education 1999-2000

* Institution began offering 4-year degrees fall 2000. N/A: data not available.

**First-Year Persistence Rates
First-Time Full-Time Freshmen
Within the State**

Fall Cohorts

Institution	1990	1991	1992	1993	1994	1995	1996	1997	1998
OU	88.4%	89.7%	87.9%	89.0%	88.7%	89.8%	91.1%	89.9%	89.4%
OSU	89.5%	87.8%	86.8%	87.3%	86.4%	86.8%	89.0%	90.2%	89.5%
Comprehensive	88.9%	88.7%	87.4%	88.2%	87.6%	88.4%	90.1%	90.0%	89.4%
UCO	79.2%	81.0%	81.3%	81.4%	80.7%	84.6%	82.7%	82.7%	83.7%
ECU	81.7%	79.6%	79.2%	78.1%	79.6%	80.5%	79.1%	78.4%	77.3%
NSU	79.9%	81.6%	82.5%	78.5%	77.6%	80.1%	79.2%	81.7%	79.4%
NWOSU	73.5%	77.7%	75.7%	79.8%	76.8%	74.9%	74.1%	71.0%	73.4%
SEOSU	76.0%	75.5%	76.6%	75.2%	73.9%	73.4%	77.4%	79.8%	74.0%
SWOSU	81.9%	80.8%	80.9%	78.7%	78.4%	83.1%	82.3%	84.4%	84.4%
CU	75.3%	71.9%	72.4%	69.9%	66.7%	73.4%	69.1%	69.5%	63.3%
LU	67.5%	69.5%	76.3%	77.8%	73.3%	73.4%	79.0%	83.0%	84.4%
OPUSU	66.5%	67.0%	70.7%	72.0%	60.1%	62.8%	81.4%	73.9%	75.9%
USAO	79.0%	80.8%	77.0%	76.0%	74.7%	74.9%	71.8%	73.3%	77.1%
Regional	77.6%	78.4%	79.0%	77.6%	76.2%	78.8%	78.5%	79.7%	78.9%
CSC	66.3%	65.3%	83.2%	62.7%	64.4%	69.5%	63.8%	64.8%	65.8%
EOSC	67.4%	70.4%	67.4%	68.0%	63.0%	70.3%	70.8%	64.3%	73.1%
MSC	67.7%	62.9%	59.2%	59.2%	55.4%	59.3%	65.2%	62.9%	61.0%
NEOAMC	66.0%	63.8%	61.9%	60.3%	60.2%	68.1%	66.2%	66.9%	63.6%
NOC	67.0%	70.0%	64.2%	71.7%	64.2%	65.1%	70.3%	70.7%	70.3%
RSU*	63.4%	N/A	62.7%	97.9%	N/A	54.6%	57.7%	64.4%	63.8%
TCC	74.0%	72.7%	71.8%	66.5%	66.7%	69.1%	71.1%	65.6%	69.6%
OSUTB-OKC	71.8%	62.2%	40.0%	62.9%	64.9%	62.1%	65.3%	63.6%	67.5%
OSUTB-OKM	67.2%	65.7%	62.1%	60.6%	62.2%	64.9%	64.1%	66.3%	70.0%
WOSC	68.6%	68.5%	64.1%	66.2%	63.8%	62.4%	68.2%	69.7%	60.2%
RCC	69.8%	71.0%	68.7%	72.1%	69.5%	61.8%	65.3%	71.2%	74.2%
CASC	64.3%	62.0%	57.3%	59.1%	60.5%	65.3%	72.5%	68.3%	68.7%
SSC	65.3%	68.1%	66.4%	60.3%	64.3%	58.6%	60.1%	61.7%	62.4%
Rose	68.1%	65.2%	65.5%	63.6%	60.5%	61.0%	66.5%	61.4%	63.2%
OCCC	72.5%	61.8%	64.3%	67.2%	67.8%	69.3%	70.2%	67.0%	72.8%
Two-Year	68.6%	66.2%	66.1%	66.3%	62.2%	65.1%	67.1%	65.8%	67.5%

Source: OSRHE Student Data Report, Oklahoma Higher Education 1999-2000

* Institution began offering 4-year degrees fall 2000. N/A: data not available.

Graduation Rates
First-Time Full-Time Freshmen
Within the Institution
Six-year Graduation Rate

Fall Cohorts					
Institution	1990	1991	1992	1993	1994
OU	43.7%	44.9%	45.8%	47.1%	50.1%
OSU	44.3%	44.7%	50.5%	48.0%	49.2%
Comprehensive	44.0%	44.8%	48.0%	47.6%	49.7%
UCO	25.7%	27.4%	26.6%	29.0%	29.3%
ECU	31.5%	33.5%	29.2%	33.1%	34.8%
NSU	31.8%	31.8%	28.4%	27.5%	26.1%
NWOSU	29.6%	33.0%	29.0%	31.1%	29.7%
SEOSU	32.6%	29.6%	30.8%	34.6%	34.0%
SWOSU	30.1%	30.8%	25.8%	29.8%	32.3%
CU	23.0%	22.1%	17.6%	25.8%	21.9%
LU	23.2%	21.0%	18.5%	28.3%	33.3%
OPSU	13.2%	9.5%	6.0%	31.8%	22.3%
USAO	24.5%	25.1%	26.9%	27.5%	24.2%
Regional	27.6%	27.8%	25.2%	29.7%	29.3%

Three-year Graduation Rate

Fall Cohorts					
Institution	1993	1994	1995	1996	1997
CSC	18.7%	18.8%	17.6%	20.4%	23.2%
EOSC	29.3%	27.6%	31.3%	37.8%	31.6%
MSC	13.6%	14.1%	17.0%	17.9%	18.8%
NEOAMC	21.9%	21.5%	19.6%	28.3%	25.9%
NOC	10.4%	17.9%	18.8%	26.9%	27.2%
RSU*	9.0%	N/A	11.2%	10.1%	8.8%
TCC	9.2%	9.1%	10.3%	11.1%	11.4%
OSUTB-OKC	N/A	14.7%	6.3%	8.7%	5.7%
OSUTB-OKM	24.3%	22.3%	24.5%	23.7%	30.4%
WOSC	15.6%	12.1%	24.2%	19.0%	24.6%
RCC	18.9%	12.7%	17.5%	17.1%	24.4%
CASC	17.4%	29.8%	29.4%	31.5%	34.2%
SSC	18.6%	19.7%	17.3%	17.8%	17.0%
Rose	4.4%	1.8%	3.4%	3.9%	4.5%
OSCC	7.0%	10.1%	9.3%	9.4%	10.2%
Two-Year	14.3%	14.4%	15.0%	17.6%	18.0%

Source: OSRHE Student Data Report, Oklahoma Higher Education 1999-2000

* Institution began offering 4-year degrees fall 2000. N/A: data not available.

Graduation Rates
First-Time Full-Time Freshmen
Within the State
Six-year Graduation Rate

Fall Cohorts

Institution	1990	1991	1992	1993	1994
OU	47.5%	48.5%	49.4%	53.3%	54.0%
OSU	51.6%	52.3%	54.5%	53.9%	55.1%
Comprehensive	49.4%	50.3%	51.9%	53.6%	54.5%
UCO	32.0%	33.0%	35.5%	34.1%	35.9%
ECU	39.0%	39.0%	37.4%	39.6%	41.0%
NSU	35.8%	36.6%	38.0%	33.8%	32.1%
NWOSU	36.1%	38.3%	39.1%	41.2%	37.0%
SEOSU	35.8%	33.7%	40.4%	38.3%	39.2%
SWOSU	41.1%	40.1%	41.8%	39.5%	42.5%
CU	32.8%	29.9%	29.0%	30.3%	26.4%
LU	23.9%	29.3%	35.8%	29.7%	33.8%
OPSU	24.5%	21.7%	17.1%	33.6%	25.7%
USAO	31.9%	26.6%	36.5%	31.7%	30.2%
Regional	34.3%	34.8%	37.0%	35.7%	35.5%

Three-year Graduation Rate

Fall Cohorts

Institution	1993	1994	1995	1996	1997
CSC	19.6%	21.1%	20.8%	21.8%	24.1%
EOSC	30.5%	29.4%	33.6%	40.3%	31.9%
MSC	13.9%	15.9%	18.3%	20.3%	19.6%
NEOAMC	22.1%	20.5%	25.2%	30.0%	27.5%
NOC	11.3%	19.7%	21.0%	27.9%	28.2%
RSU*	9.2%	N/A	12.8%	12.4%	9.5%
TCC	9.8%	10.3%	11.7%	11.7%	11.8%
OSUTB-OKC	2.9%	13.2%	7.6%	9.7%	5.7%
OSUTB-OKM	25.3%	25.3%	23.5%	24.3%	31.0%
WOSC	15.6%	13.2%	22.0%	19.8%	25.8%
RCC	10.8%	11.7%	15.4%	18.6%	24.4%
CASC	18.6%	33.0%	30.9%	35.8%	35.6%
SSC	18.9%	23.4%	17.7%	17.6%	17.4%
Rose	5.4%	3.0%	4.5%	4.8%	4.9%
OCCC	7.4%	11.0%	13.2%	11.7%	10.5%
Two-Year	14.6%	15.8%	16.8%	19.1%	18.7%

Source: OSRHE Student Data Report, Oklahoma Higher Education 1999-2000

* Institution began offering 4-year degrees fall 2000. N/A: data not available.

Potential Barriers to Student Retention

Financial (Ability to Pay)		Academic		Social/Emotional/Personal	
Student Characteristic	Institutional Characteristic	Student Characteristic	Institutional Characteristic	Student Characteristic	Institutional Characteristic
Real lack of financial resources to pay the cost of attending college.	Inadequate non-loan financial aid.	Lack of adequate academic preparation.	The institution does not offer the student's desired degree or major or the student can not get into his/her desired program.	Failure to bond with the institution so they leave because of stronger ties with home and a former life.	Inadequate faculty development: faculty are not trained in educational process and group facilitation.
Perceived lack of financial resources to attend college.	In some areas of the state, it is difficult for students to work and be enrolled at the same time (low wages; travel distances).	Lack of adequate communication on the part of the institution or lack of understanding on the part of student of the transfer policy.		Dissatisfaction with life on campus or in the community.	Inadequate student counseling services (for the purpose of assisting students with adjustment disorders).
	The annually increasing costs of attending college (tuition, fees, room and board, and books).	Lack of behavioral skills required to be successful academically: study skills, test taking skills, note taking skills, etc.	Lack of contact with professors outside of the classroom.	The mobility of the student population (e.g., military personnel or their dependents).	Inadequate quantity and quality of extracurricular activities, especially on weekends.
	Inadequate financial aid services provided by the college.	Feeling that courses are tedious and/or irrelevant to their goals/studies.	Lack of intervention on the part of faculty and staff with students who are at risk or who appear to be at risk.	Priorities that make completing a degree less important than other things: e.g., the need to maintain a particular life style (car, stereo, etc.) over paying for college.	Delivering a mixed message as to the relative importance of academic pursuits versus involvement in social activities and organizations, e.g., fraternities.
		Declaring a major too late or changing majors well into academic career.	Inadequate support and resources for students with special needs and disabilities.	Homesickness or feeling of being too far from family or friends.	Lack of incentives to students to make progress in their studies.
		Failing to attend class.	Lack of mentors, especially for first-generation students.	Time management: lack of appreciation for the time it takes to complete a college course successfully and failure to devote adequate time outside of class.	Sink or swim attitude: hands-off approach to helping students make the transition into college.

Financial (Ability to Pay)		Academic		Social/Emotional/Personal	
Student Characteristic	Institutional Characteristic	Student Characteristic	Institutional Characteristic	Student Characteristic	Institutional Characteristic
			Lack of tutors and other forms of academic support, especially for general education and developmental courses.	Personal and family problems.	Lack of diversity among faculty and staff to serve as role models.
			Insufficient number of sections of courses that students need to graduate.	A market mentality: feeling that the students deserve a good grade just because they paid for the class.	Lack of programs targeted specifically for at-risk students.
			Poor quality of classrooms and resources, whether that be technology or seating.	Student's unique culture affects his/her expectations (ethnicity, first-generation, geographic location, etc.).	
			Inflexible scheduling of courses and emphasis on seat time rather than competencies.	Student expectation for academic performance higher than actual performance.	
			Inconsistency of policy implementation among institutions; poor interinstitutional communication of policies, e.g., transfer.	A lack of self-discipline and/or motivation.	
			Lack of faculty engagement of students, both in and outside the classroom.	Burnout: it takes too long to obtain a degree.	
				Conflicts with personnel and other students at the institution.	
				Lack of previous academic success.	
				Lack of clear educational goals.	

Student Services/Enrollment/Advising		Future Expectations/Jobs	
Student Characteristic	Institutional Characteristic	Student Characteristic	Institutional Characteristic
Lack of direction or goal.	An attitude that promotes anonymity and fails to focus on the student as an individual.	Enrolling without intending to graduate; students attend because of convenience, cost, parental control, etc., with plans to transfer as soon as possible.	Lack of job orientation courses to provide student information about job availability, job requirements, interview skills, job placement, etc.
Lack of skills in administrative procedures: students not knowing whom to turn to when they have a problem.	Lack of a programmatic intervention strategy, early warning of student withdrawal, lack of training in academic advisement.	Lack of clear goals beyond a degree.	Lack of mentoring for graduates during their first year of practice out of college.
	Bureaucratic organizational procedures that frustrate students.	Lack of understanding of the long-term economic importance of earning a degree as opposed to just getting a job.	Lack of general career counseling opportunities.
	Lack of face-to-face academic advisement and counseling.		
	Poor customer service from beginning to end of the student experience.		
	Inadequate training of academic advisers.		
	Lack of training of faculty and staff in retention and other related areas.		
	Inadequate support network for commuting students.		
	Enrollment management issues, e.g., on-line/phone registration.		
	Interinstitutional competition for students.		

Common Initiatives to Improve Student Retention

Institutions	Institutional Retention Task Force	Required Freshman Orientation Course	Computer/Multimedia Resource Centers	Early Alert System for Absences or Poor Academic Performance	Flexible Scheduling	Mandatory Academic Advising	Initiatives to Increase Faculty/Student Interaction In and Out of Classroom	Peer Tutoring	Fast Track Academic Programs
CASC	X	X	X	X	X	X	X	X	X
CSC	X		X	X	X	X		X	
CU	X	X	X		X	X	X	X	
ECU	X	X	X		X	X	X	X	
EOSC	X	X	X	X	X	X		X	
LU	X	X	X	X	X	X	X	X	X
MSC		X	X	X	X	X		X	X
NEOAMC	X	X	X	X		X		X	
NOC	X	X	X	X	X	X		X	X
NSU	X	X	X	X	X	X	X	X	X
NWOSU	X	X	X	X	X	X		X	X
OBU	X		X	X		X	X	X	
OC		X							
OCCC	X		X	X	X	X	X	X	X
OCU	X		X	X		X			
OPSU	X	X	X	X	X	X		X	
ORU	X		X	X	X	X	X	X	X
OSU	X	X	X		X	X	X	X	
OSUTB-OKC	X		X	X	X	X		X	X
OSUTB-OKM	X	X	X		X	X	X	X	
OU	X		X	X	X		X	X	
RCC	X	X	X	X	X	X		X	X
RSU	X	X	X	X	X	X	X	X	
Rose	X		X		X		X	X	X
SEOSU	X		X	X	X	X	X	X	
SNU	X	X		X		X	X		X
SSC	X	X	X	X	X	X		X	X
St. Gregory's	X	X	X	X	X	X			
SWOSU	X	X	X		X	X		X	
SWOSU-SAYRE		X	X	X	X	X		X	X
TCC	X		X	X	X		X	X	X
UCO			X		X		X	X	
USAO	X	X	X	X	X	X	X	X	X
WOSC	X		X	X	X	X		X	

NOTE: Private institutions that did not respond to the inquiry were omitted from the matrix.

See Next Page for List of Abbreviations

Institutional Legend

CASC - Carl Albert State College
CSC - Connors State College
CU - Cameron University
ECU - East Central University
EOSC - Eastern Oklahoma State College
LU – Langston University
MSC – Murray State College
NEOAMC - Northeastern Oklahoma A&M College
NOC - Northern Oklahoma College
NSU - Northeastern State University
NWOSU - Northwestern Oklahoma State University
OBU - Oklahoma Baptist University
OC - Oklahoma Christian University
OSCCC - Oklahoma City Community College
OCU – Oklahoma City University
OPSU - Oklahoma Panhandle State University
ORU - Oral Roberts University
OSU - Oklahoma State University
OSUTB-OKC – Oklahoma State University Technical Branch, Oklahoma City
OSUTB-OKM - Oklahoma State University Technical Branch, Okmulgee
OU – University of Oklahoma
RCC - Redlands Community College
RSU - Rogers State University
Rose - Rose State College
SEOSU - Southeastern Oklahoma State University
SNU - Southern Nazarene University
SSC - Seminole State College
St. Gregory's - St. Gregory's University
SWOSU - Southwestern Oklahoma State University
SWOSU-SAYRE - Southwestern Oklahoma State University, Sayre Campus
TCC - Tulsa Community College
UCO - University of Central Oklahoma
USAO - University of Science and Arts of Oklahoma
WOSC - Western Oklahoma State College

**Answers in the Tool Box:
Academic Intensity , Attendance Patterns, and
Bachelor's Degree Attainment**

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Executive Summary

Answers in the Tool Box is a study about what contributes most to long-term bachelor's degree completion of students who attend 4-year colleges (even if they also attend other types of institutions).

Degree completion is the true bottom line for college administrators, state legislators, parents, and most importantly, students—not retention to the second year, not persistence without a degree, but completion.

This study tells a story built from the high school and college transcript records, test scores, and surveys of a national cohort from the time they were in the 10th grade in 1980 until roughly age 30 in 1993. The story gives them 11 years to enter higher education, attend a 4-year college, and complete a bachelor's degree. In these respects—based in transcripts and using a long-term bachelor's degree attainment marker—this story is, surprisingly, new.

This study was motivated by four developments in higher education during the 1990's:

- (1) The growing public use of institutional graduation rates as a measure of accountability, and the tendency in public policy and opinion to blame colleges for students' failure to complete degrees and/or for failure to complete degrees in a timely manner.
- (2) An ever expanding proportion of high school graduating classes entering postsecondary education, and new federal policies encouraging even more students to enter or return to higher education. Our system is being challenged simply to maintain, let alone improve, college graduation rates.
- (3) The increasing tendency, overlooked in both policy and research, for students to attend two, three, or more colleges (sometimes in alternating patterns, sometimes simultaneously) in the course of their undergraduate careers.
- (4) The rising heat of disputes involving admissions formulas at selective colleges where affirmative action policies have been challenged. These disputes, carried into the media and hence dominating public understanding, involve two indicators of pre-college attainment—grades/class rank *versus* test scores—without any reference to high school curriculum and its role in the degree completion rates of the mass of minority students.

The story of what contributes most to bachelor's degree attainment works toward six ordinary least squares regression equations that progressively add blocks of key variables following the progress of students from high school into higher education and through the first true year of attendance. The penultimate model (the fifth in the series) accounts for about 43 percent of the variance in bachelor's degree completion [p. 74]. The sixth equation simply indicates that one

hits a plateau of explanation at this point. For a story-line such as this, 43 percent is a very high number. A five-step logistic regression then provides both a dramatic underscoring of the principal findings and some enlightening variations.

There are 11 variables in the penultimate linear regression model. The two most important variables, accounting for the bulk of the model's explanatory power are:

- "Academic Resources," a composite measure of the academic content and performance the student brings forward from secondary school into higher education. This measure is dominated by *the intensity and quality of secondary school curriculum* [Part I and Appendix C].
- Continuous enrollment once a true start has been made in higher education.

In the logistic version of the penultimate model, the same 11 variables (out of 24) are statistically significant, but those displaying the strongest relationships to degree completion (the highest "odds ratios") are all post-matriculation phenomena: continuous enrollment, community college to 4-year college transfer, and the trend in one's college grades.

Among the 11 variables, the following are not usually found in similar analyses:

- Proportion of undergraduate grades indicating courses the student dropped, withdrew, left incomplete, or repeated. [pp. 54-56]
- A final undergraduate grade point average that is higher than that of the first "true" year of attendance. [pp. 72-73]
- Parenthood prior to age 22. [pp. 37-38]
- Whether the student attended more than one institution and did *not* return to the first institution of attendance, a situation that includes, but transcends, the classical community college to 4-year college transfer pattern. [p. 46]

The only demographic variable that remains in the equation at its penultimate iteration is socioeconomic status, and by the time students have passed through their first year of college, SES provides but a very modest contribution to eventual degree completion. No matter how many times (and in different formulations) we try to introduce race as a variable, it does not meet the most generous of threshold criteria for statistical significance.

Selected Findings

High School Background

- High school curriculum reflects 41 percent of the academic resources students bring to higher education; test scores, 30 percent; and class rank/academic GPA, 29 percent [p. 21]. No matter how one divides the universe of students, the curriculum measure produces a higher percent earning bachelor's degrees than either of the other measures [p.

15]. The correlation of curriculum with bachelor's degree attainment is also higher (.54) than test scores (.48) or class rank/GPA (.44) [p. 19].

- The impact of a high school curriculum of high academic intensity and quality on degree completion is far more pronounced-and positively-for African-American and Latino students than any other pre-college indicator of academic resources. The impact for African-American and Latino students is also much greater than it is for white students. [pp. 84-86]
- Of all pre-college curricula, the highest level of mathematics one studies in secondary school has the strongest continuing influence on bachelor's degree completion. Finishing a course beyond the level of Algebra 2 (for example, trigonometry or pre-calculus) more than doubles the odds that a student who enters postsecondary education will complete a bachelor's degree. [pp. 16-18]
- Academic Resources (the composite of high school curriculum, test scores, and class rank) produces a much steeper curve toward bachelor's degree completion than does socioeconomic status. Students from the *lowest* two SES quintiles who are also in the *highest* Academic Resources quintile earn bachelor's degrees at a higher rate than a majority of students from the top SES quintile. [pp. 24-25]
- Advanced Placement course taking is more strongly correlated with bachelor's degree completion than it is with college access. [pp. 19-20]
- Graduating from high school "late" does not influence bachelor's degree completion provided that one enrolls in higher education directly following receipt of the diploma and attends a 4-year college at some time [p. 68-69].

College Attendance Patterns

- The proportion of undergraduate students attending more than one institution swelled from 40 percent to 54 percent (and among bachelor's degree recipients, from 49 to 58 percent) during the 1970s and 1980s, with even more dramatic increases in the proportion of students attending more than two institutions. Early data from the 1990s suggest that we will easily surpass a 60 percent multi-institutional attendance rate by the year 2000. [pp. 42-45]
- Students beginning in highly selective 4-year colleges and those starting out in open door institutions have the highest rates of multi-institutional attendance, though for very different reasons. [p. 45]
- The number of institutions attended by students has no effect on degree completion. [p. 68].

- The fewer schools attended, the more likely the student was enrolled continuously, and the less likely a 4-year college was part of the attendance pattern. [p. 48] Yet 70 percent of the students who attended a 4-year college at any time were continuously enrolled. [p. 54]
- Sixteen (16) percent of postsecondary students (and 18 percent of bachelor's degree completers) engaged in alternating or simultaneous enrollment patterns. Some 70 percent of this group attended three or more institutions. [pp. 45-46]
- Some 40 percent of students who attended more than one institution crossed state lines in the process, and their bachelor's degree completion rate was higher than that for multi-institutional students who remained within state borders. [p. 49-50]
- Students who expected to earn a bachelor's degree, started in a 2-year institution, but never attended a 4-year college have a lower SES profile and a considerably lower academic resources profile than students with the same expectations and starting point but who did attend a 4-year school. Family income, however, plays no role in the different attendance patterns of these students. [pp. 57-59]

Degree Completion

- For students who attend 4-year colleges at some time, the only form of financial aid that bears a positive relationship to degree completion after a student's first year of college attendance is employment (principally College Work-Study and campus-related) undertaken (a) while the student is enrolled and (b) for purposes of covering the costs of education. [pp. 64-65]
- The long-term national *system* bachelor's degree completion rate by age 30 for all *students* who attend 4-year colleges is 63 percent; for all those who earn more than 30 credits, the rate exceeds 70 percent. [pp. 28-29] For those who start in highly selective colleges, the rate exceeds 90 percent. [p. 52]
- While only 26 percent of students who began their undergraduate careers in community colleges formally transferred to 4-year institutions, their bachelor's degree completion rate was over 70 percent. [pp. 53-54] The classic form of transfer, in which the student earns at least a semester's worth of credits before moving to the 4-year college, produces a very high likelihood of bachelor's degree completion. [pp. 80-82]
- The mean elapsed time to complete a bachelor's degree for this cohort was 4.72 *calendar* years, or 5 full academic years. For students in the highest quintile of pre-college academic resources, the mean time was 4.45 calendar years. For students who were continuously enrolled, it was 4.33 calendar years. [Appendix D]

- Thirty-nine percent of 4-year college students who were assigned to remedial reading courses completed bachelor's degrees, compared with 60 percent of students who took only one or two *other* types of remedial courses, and 69 percent of those who were not subject to remediation at all. [p. 74]
- Students who attend 4-year colleges and who earn fewer than 20 credits in their first calendar year of postsecondary experience severely damage their chances of completing a bachelor's degree. [pp. 70-71, 81]

Conclusions That Follow from These Findings:

- When nearly 60 percent of undergraduates attend more than one institution and 40 percent of this group do not complete degrees, institutional graduation rates are not very meaningful. It is not wise to blame a college with superficially low graduation rates for the behavior of students who swirl through the system.
- Analysis of institutional effects on degree completion is compromised when students attend two or more institutions. One wastes precious research time trying to figure out which type of experience in institution X had an impact if the student also attends institutions Y and Z. There are some exceptions to these principles, e.g. when the second institution involves a study abroad semester.
- When the academic intensity and quality of one's high school curriculum is such a dominant determinant of degree completion, and both test scores and (especially) high school grade point average or class rank are so much weaker contributors to attainment, college admissions formulas that emphasize test scores and (especially) high school grade point average or class rank are likely to result in lower degree completion rates.
- The type and amount of remediation matters in relation to degree completion. Increasingly, state and local policy seeks to constrict-if not eliminate-the amount of remedial work that takes place in 4-year colleges. But there is a class of students whose deficiencies in preparation are minor and can be remediated quickly without excessive damage to degree completion rates.

What We Learned: Variables to Discard

Examples of stock building-block variables that are discarded because of weak architecture:

- Highest level of parents' education. As reported by students, these data are uneven and unreliable. In the most recent of the national longitudinal studies, the *highest* degree of agreement between students and parents on this score was 72 percent in the case of fathers with "some college." One out of six students would not even venture a guess as to their parents' education. [pp. 37-38]

- "Persistence" defined in temporal terms, e.g. from the 1st to 2nd year of college. Transcripts reveal an enormous range in the *quality* of arrival at the putative 2nd year: some 30 percent of those who were "retained" or "persisted" arrived with either less than 20 credits or 3 or more remedial courses. [p. 27]
- "Academic track" (sometimes called "college preparatory") in secondary school curriculum, whether reported by students or by schools. When the transcripts for a third of the students on the "academic track" show 8 or fewer Carnegie units in core academic subjects, it is obvious that the transcripts-not the label-must be the source (of judgment. [p. 10]
- "Part-time" enrollment in postsecondary education. Students change status from term to term. Part-year enrollment may be more important than light credit loads. Most importantly, students change status within a given term, by dropping, withdrawing from, or leaving incomplete large portions of their credit loads. The "DWI Index" (ratio of drops/withdrawals/incompletes to total courses attempted) derived from transcript records is far more important than what the student says in an interview about full-time/part-time status. [pp. 54-56]

...and Variables Reconstructed

- Academic intensity and quality of high school curriculum. This is the most elaborate construction in the study. It includes Carnegie units in 6 academic areas, accounts for highest mathematics studied, remedial work in English and math, and advanced placement. The construction results in a criterion-referenced scale with 40 gradations. [pp. 12-14, and Appendix C]
- Educational aspirations. Traditionally defined on the basis of a single question asked in the senior year of high school. Reconstructed on the bases of 6 pairs of questions asked in both 10th and 12th grades, and on the principles of consistency and level. The result is a statement of "anticipations; " not "aspirations. " [pp. 33-36]
- First institution/date of attendance in postsecondary education. Redefined from college transcript data to exclude false starts and incidental attendance in the summer following high school graduation. [pp. 44-46]
- Transfer. The classic form of community college to 4-year college transfer is now a subset of a larger multi-institutional attendance pattern universe defined here in terms of 9 sets of institutional-type combinations. Transfer as we knew it has been replaced by what one might call "portfolio building." [pp. 46-49] But the classic form of transfer is an extremely effective route to bachelor's degree completion.

What We Learned: Principles to Guide Research and Evaluation

- Institutions may "retain" students, but it's *students* who complete degrees, no matter how many institutions they attend. So follow the student, not the institution.
- Common sense can tell us what's likely to be important at every step toward the degree. A fierce empiricism will validate common sense.
- Before one accepts a variable simply because it has been used for decades or because a federal agency paid for it, one must examine the bricks and mortar of that variable very carefully. Where the architecture is faulty, the data must be fixed or the variable discarded-or one will never tell a true story.
- We should not compute bachelor's degree attainment rates for people who never set foot in a bachelor's degree-granting institution.
- The most useful data lie in the details, not the generalities.

The monograph concludes with "tool box" recommendations to those who execute policy regarding both pre-college opportunity-to-learn and post-matriculation advisement. The tool box metaphor is a logical consequence of the analysis. It says that if we are disappointed with uneven or inequitable outcomes of postsecondary education, we must focus our efforts on aspects of student experience that are realistically subject to intervention and change. We do not have tools to change intentions or perceptions, or to orchestrate affective influences on students' decisions. The events of students' life course histories through their 20s lie largely beyond the micromanagement of collegiate institutions. But we do have the tools to provide increased academic intensity and quality of pre-college curricula, to assure continuous enrollment, to advise for productive first-year college performance, and to keep community college transfer students from jumping ship to the 4-year institution too early.

The recommendations thus address dual enrollment, direct provision of secondary school curriculum by college instructors, an 11-month rolling admissions cycle for all 4-year colleges, using Internet situated courses to keep college students continuously enrolled (even for one course), implementation of institutional policies restricting the extent of course withdrawals/incompletes/repeats, realistic credit loads, and advisement that is both sensitive and sensible.

The story and its analyses are derived from and apply to a cohort whose history covers the period 1980-1993. There is another and more contemporary cohort whose history, beginning in 1988, is still in progress. Will the story-line change? Will the analyses be validated? Will we have attained greater equity in degree-completion rates for minority students? Have attendance patterns become even more complex, and more oriented toward competences and certifications as opposed to degrees? Only a full data-gathering for this cohort in the year 2000 and the collection of its college transcripts in 2001 will tell.