Building a Public Agenda for Kansas Higher Education

Five Strategic Areas

October 2008
Work In Progress

Kansas Board of Regents
www.kansasregents.org

"The strength of the United States is not the gold at Fort Knox or the weapons of mass destruction that we have, but the sum total of the education and the character of our people."

-Claiborne Pell
U.S. Senator, Rhode Island 1961-1997

Responsible for the creation of Pell Grants in 1973, which provide financial aid funds to U.S. college students.

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DRAFT

Introduction

Language here will focus on the following points:

Importance of postsecondary education to the economic vitality and quality of life in Kansas

History of Kansans' strong support for higher education

Description of the critically important restructuring of postsecondary education through the enactment of Senate Bill 345 – The Higher Education Reorganization Act of 1999.

List some of the accomplishments the Board of Regents has achieved in its work to implement Senate Bill 345, and pivot to note how those accomplishments have "set the table" for the development of a Public Agenda for Higher Education in Kansas.

The Public Agenda will be built around five critically important strategic questions that focus on ensuring that the state's public postsecondary education system is heading in the right direction as it seeks to deliver optimal value to the people of Kansas.

In addition, the Public Agenda provides a mechanism through which the Board of Regents seeks to advance its fundamental mission – The Board of Regents shall pursue measurable continuous improvement in the quality and effectiveness of the public postsecondary educational system in Kansas, while expanding participation for all qualified Kansans.

The Five Strategic Questions

Education Systems Alignment

- Are we satisfied that high school graduation expectations are aligned with college preparation expectations?
- Are Kansas high school graduates prepared to meet postsecondary expectations?

Participation

- Are we satisfied with the level of participation in the Kansas higher education system?
- Do participation rates adequately reflect the state's demographic composition?
- Are we satisfied with the participation of adult learners in the higher education system?

Persistence and Credential Production

- Are we satisfied with our institutional retention and completion rates?

Learner Outcomes

- Are we satisfied that those who complete our educational programs have obtained the cross-cutting competencies and skills necessary for success in work and in life?

Alignment with the Kansas Economy

- Are the programs, resources, and incentives of higher education appropriately aligned with the workforce demands of Kansas?
- Are we satisfied with the level of innovation-spurring research and discovery that is being produced within our universities?

Developing The Public Agenda
The Process

Step I -- What is the Current State of Play?

Any effective and meaningful effort to build a Public Agenda around those Five Strategic Questions must begin with a review and analysis of the available data that bears on those questions. And that is what this document seeks to present. Using the Five Questions as a framework, the document presents the available data that describes the current "state of play" as it relates to the question.

Step II – What is Our Assessment of the Current State of Play?

Once we have undertaken a review of the data presented in this document, our next step is to determine whether the current state of play (as reflected in the data) satisfies our sense of where the state's higher education system should be as it relates to each of the Five Strategic Questions. For example, an aspect of Question II focuses whether the rates of participation in our state's higher education system adequately reflects the state's demographic make-up. There is data in this document that bears on that issue and paints a picture of what we know about that question. In this step of the Agenda develop-

ment process, we are asked to determine whether we are satisfied what the data tells us about our performance in this area.

Step III – Establish Goals That Constitute "Satisfaction"

At this stage, the task will be to determine which of the data points relating to each of the questions is most salient, and then to establish measurable goals that essentially work to define the level at which you have determined that (at least for the time frame identified) the higher education system will be performing at the level that meets our aspirations for it. The goals adopted at this stage of the process will include timetables and benchmarks.

Step IV – Implementation

Having adopted a set of goals (with benchmarks and timetables), the process will shift to an implementation phase, during which institutional leaders will be called upon to take the steps necessary for the achievement of the goals that the Board has adopted for the state's higher education system.

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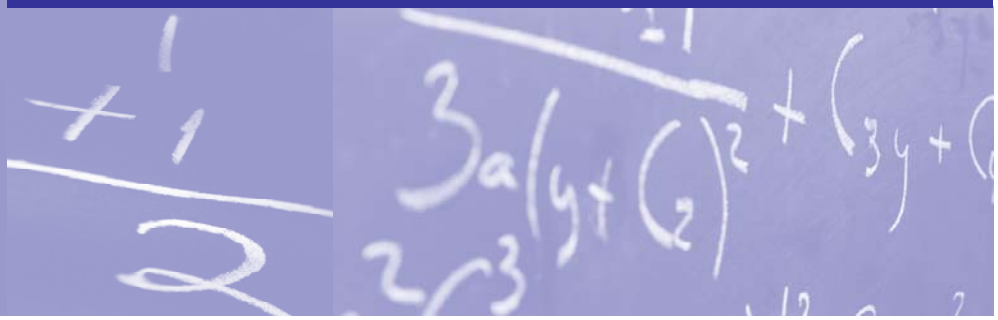
Educational Alignment

Question 1



Are we satisfied that high school graduation expectations are aligned with college preparation expectations?

Are Kansas high school graduates prepared to meet postsecondary expectations?

The information presented in this section of the document is intended to shed light on what we know about whether this state's systems of education are appropriately aligned. Meaningful and informative data that bears on this issue is difficult to find. However, we think that our examination of data related to the cohort of students who first enrolled in our system during the 2006-07 school year, sheds some light on these issues. We also present some national survey data that bears on this important alignment question as well.

Data explanation for Cohort illustrations:

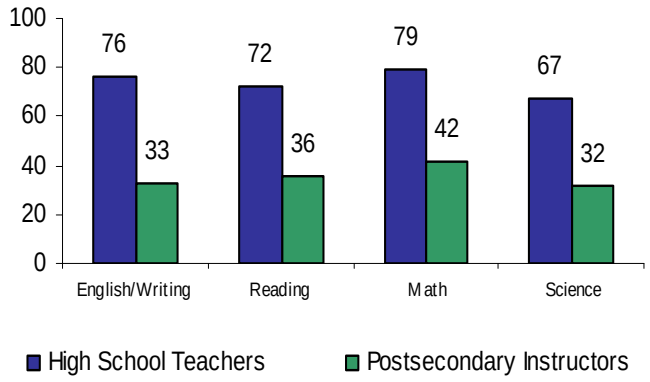
Collaborative data project between KBOR and KSDE. Found Kansas High School graduates from 2005-2006 Academic Year enrolled in Kansas higher education system in 2006-2007 (29,836 students), matched to KSDE data for 2005-2006 High School data (13,834 students). Additional analysis matched the KSPSD-KIDS students with ACT data. The resulting matches include smaller subsets of students. Each n is included at the bottom of the illustration.

Data indicated as KBOR (KSPSD) and KSDE (KIDS) matched data excludes three institutions; Kansas State University, Kaw Area Technical School, and the Kansas City Kansas Area Technical School. Key data fields were not submitted by the institutions to allow student level matching.

The complete analysis is included as an appendix at the conclusion of the data presentation.

State Standards Preparing Students for College-level Work

Percent of Teachers & Instructors responding "well" or "very well"



Aligning Postsecondary Expectations and High School Practice: The Gap Defined ACT, Inc.

Cohort Average Hours Completed (2006-2007 AY)
Disaggregated by Development Course Status

	No Developmental Course Taken	Developmental Course Taken	
		Did Not Pass	Passed
Students	9,376	1,441	3,017
Average Hours Completed*	21.98	8.17	17.73
Percent Students Completing Awards in 2006-2007 AY			
< 1 Year Certificate	69	6	15
1 Year Certificate	201	3	3
Associate's Degree or 2 Year Certificate	115	0	2

**Total number hours passed for year minus number of developmental hours passed for year.*

Based on KSPSD-KIDS matched data, 13,834 total population.

Cohort ACT Scores Disaggregated by Core Courses* Taken In High School, Self-Reported

Kansas Average Composite=21.8; National Average Composite=21.1

	Students	Average Composite
Core Taken	6,748	22.2
Less Than Core Taken	3,135	19.8

**ACT defines core courses as:*

- *4 Years English;*
- *At Least 3 Years Mathematics, including rigorous courses in Algebra I, Geometry, and Algebra II;*
- *3 Years Science, including rigorous courses in Biology, Chemistry, and Physics; and*
- *3 Years Social Studies*

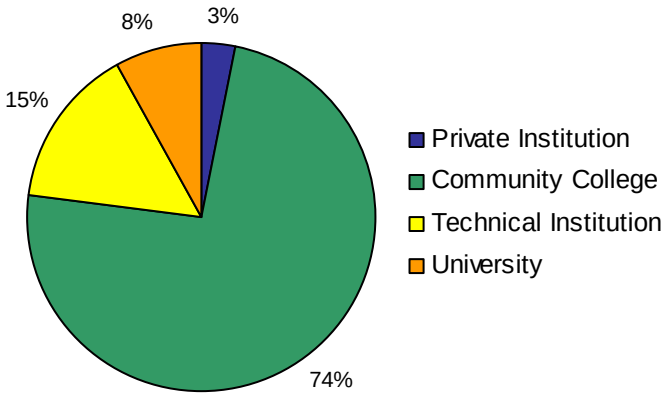
Based on KSPSD-KIDS matched data (13,834 population). Of this, 9,883 students self-reported on this item to match to ACT data.

Cohort ACT Scores
Disaggregated by Development Course Status

	No Developmental Course Taken	Developmental Course Taken	
		Did Not Pass	Passed
Students	7,709	817	2,017
ACT Composite Average	22.6	18.5	18.0

Based on KSPSD-KIDS matched data (13,834 total population). Of this, 10,543 students matched to ACT data.

Cohort High School Concurrent Enrollment (2005-2006)



Based on KSPSD-KIDS matched data (13,834 total population). Of this, 3,095 students showed Concurrent Enrollment per KIDS.

Cohort Concurrent Enrollment & Higher Education Enrollment

By Concurrent Enrollment Institution Sector

Concurrent Enrollment	Higher Ed. Enrollment	%
State University	State University	84.4
	Community College	14.4
	Technical Institution	1.2
Community College	State University	52.6
	Community College	45.3
	Technical Institution	2.1
Technical Institution	State University	26.5
	Community College	66.3
	Technical Institution	7.2
Private College	State University	71.3
	Community College	27.8
	Technical Institution	0.9

Based on KSPSD-KIDS matched data (13,834 total population). Of this, 3,095 students showed Concurrent Enrollment per KIDS.

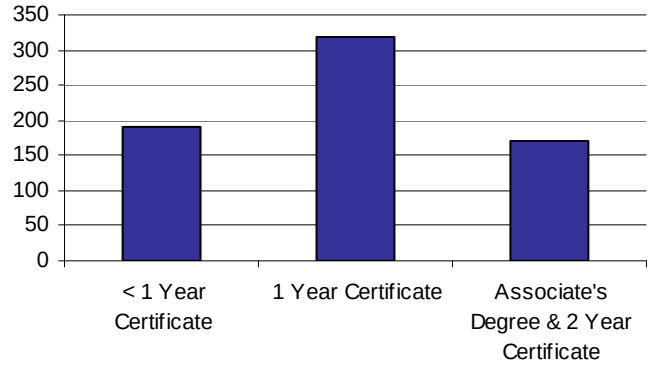
Cohort 2005-2006 Mean ACT Scores
Disaggregated by Primary Institutions
Kansas Average Composite=21.8; National Average Composite=21.1

ACT Scores	4-Year Schools	Community Colleges	Technical Institutions*
English	22.8	18.7	16.52
Math	22.7	19.4	18.7
Reading	23.7	19.9	17.92
Science	22.7	19.9	19.31
Composite	23.1	19.6	18.23

Based on KSPSD-KIDS matched data (13,834 total population). Of this, 10,543 students matched to ACT data.

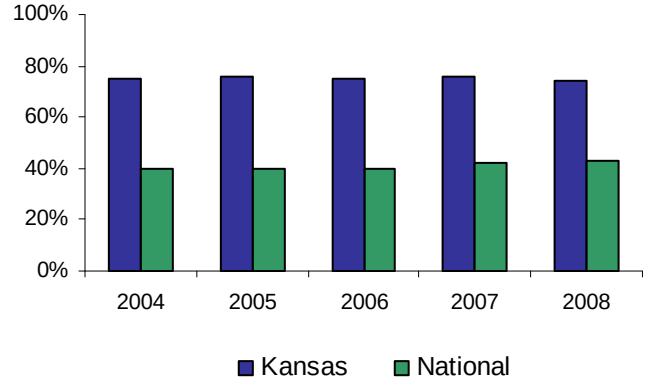
**Technical Institutions includes Schools and Colleges.*

Awards Earned in One Academic Year by 2006 High School Graduates



KSPSD AY07 collection where High School Gradation Year=2006, 680 completions from population of 19,597 students,

Percent Students Taking ACT Test



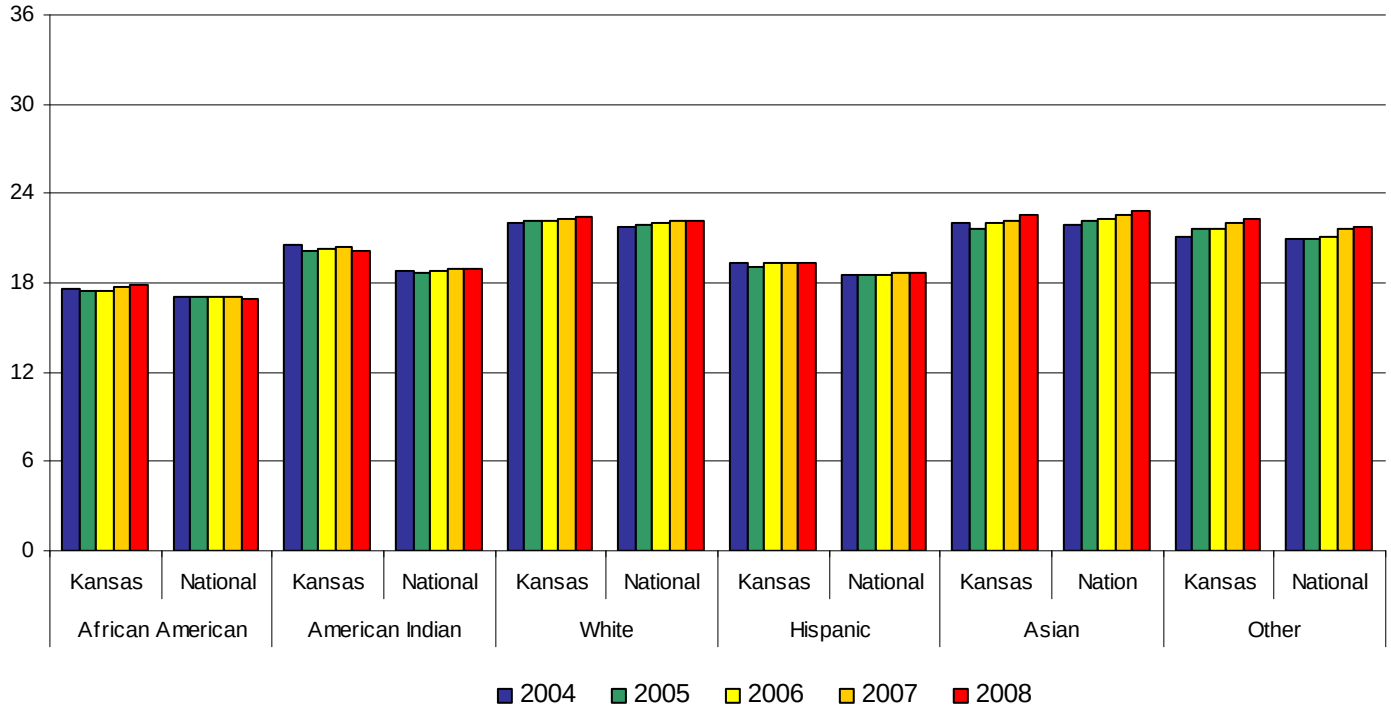
ACT

Average Student Graduation Rate (Percent)
2003-2007

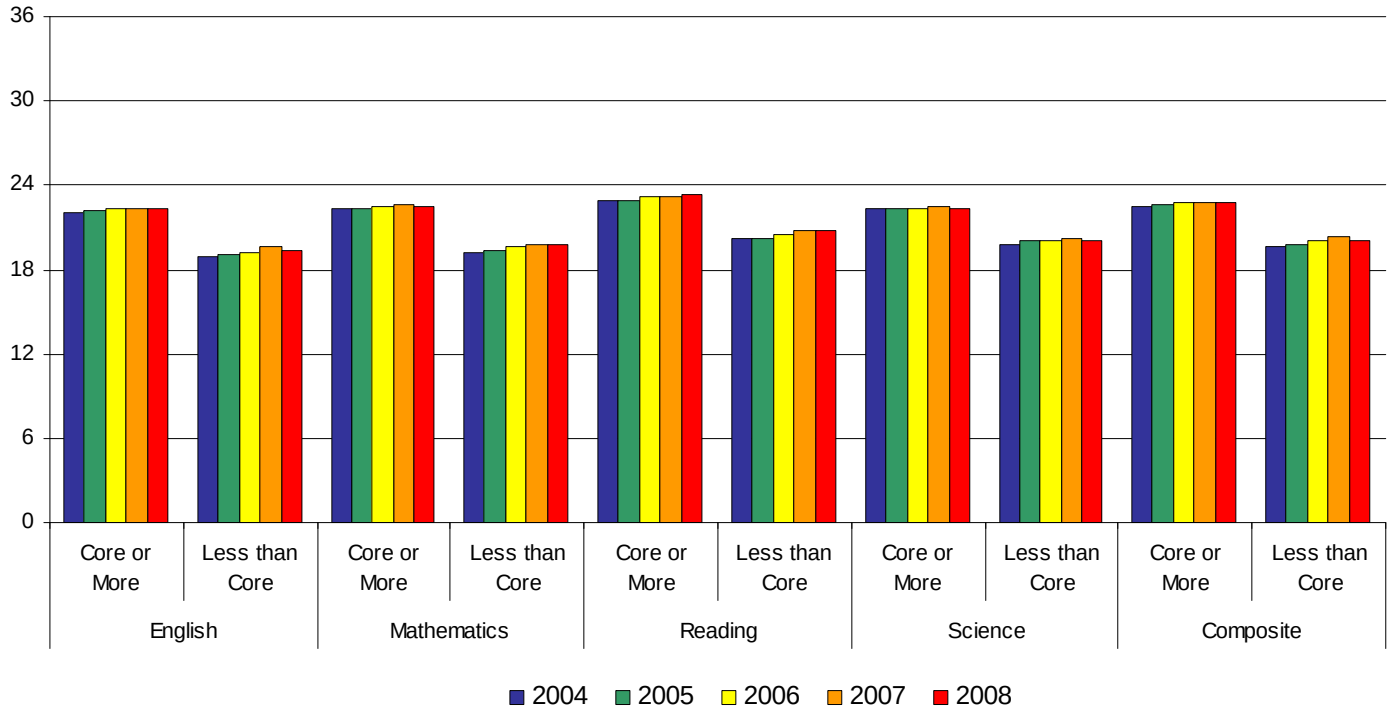
Student Characteristic	Graduation Year				
	2003	2204	2005	2006	2007
Male	84.8	86.2	87.3	88.6	89.4
Female	88.8	89.0	90.9	91.9	92.1
Reduced/Free Lunch	75.6	78.2	81.6	83.9	85.2
Special Education	82.4	86.5	86.8	87.1	95.7
Caucasian	89.2	90.1	90.9	92.8	92.8
African American	75.5	76.3	81.2	83.1	83.6
Hispanic	69.5	72.1	77.9	79.0	79.1
Native American	77.9	80.7	79.9	81.5	82.5
Asian/ Pacific Islander	89.8	90.9	92.0	91.2	92.0
Total	86.7	87.6	89.1	90.2	90.7

Kansas State Department of Education

ACT Composite Scores by Ethnicity, 2004-2008



Average ACT Scores by Level of Preparation, Compared to Core*, 2004-2008



ACT

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- *4 Years English;*
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- *3 Years Social Studies*

Question 2 Participation

Are we satisfied with the level of participation in the Kansas higher education system?

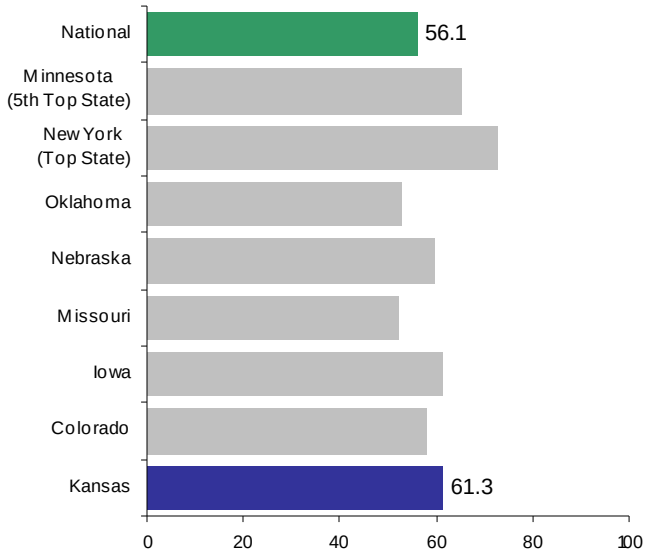
Do participation rates adequately reflect the state's demographic composition?

Are we satisfied with participation of adult learners in the higher education system?

The information presented in this section seeks to examine issues related to participation on the state's system of higher education from a variety of perspectives. Not only does it show the state's "college going rate," but also presents information related to the racial make-up of our higher education participants, as well as information related to the issue of whether our system is adequately responding to the needs of adults who could benefit from improved access to our institutions across the board.

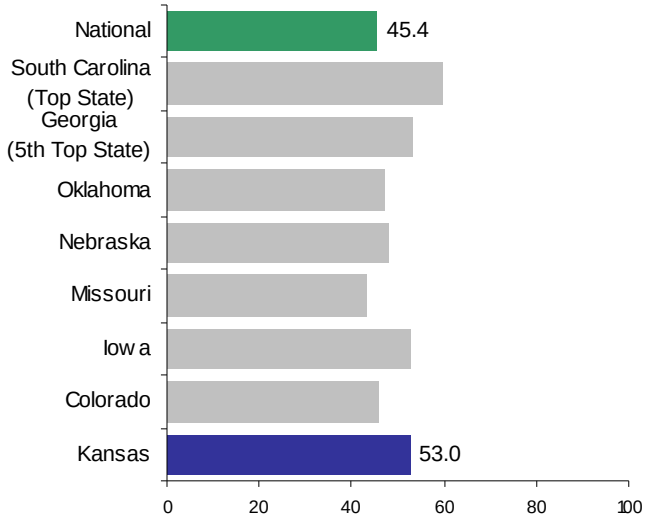
College Going Rate (2004)

High School Graduates Going Directly to College (%)



In State College Going Rate (2004)

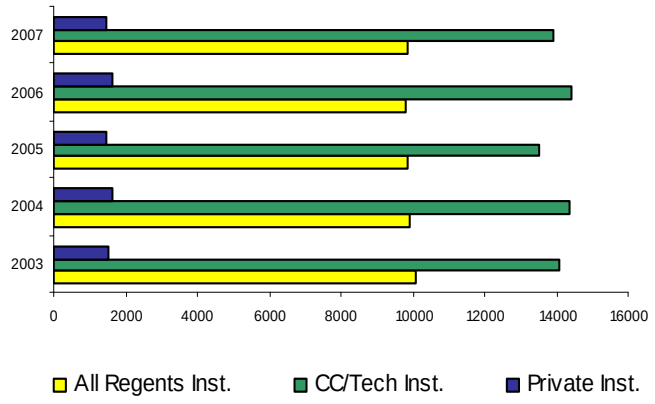
High School Graduates Going Directly to a Home State College (%)



US Department of Education, Digest of Educational Statistics, 2007

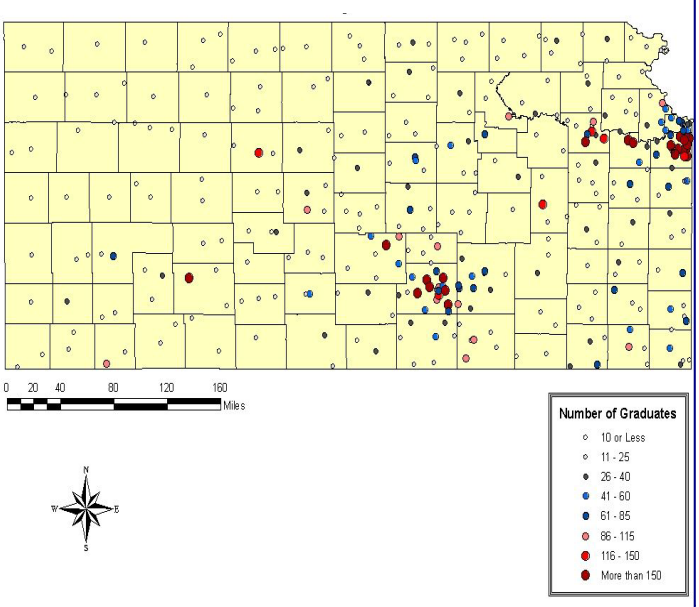
Number Kansas High School Graduates Attending Kansas Postsecondary Institutions

2003-2007, By Institution Type



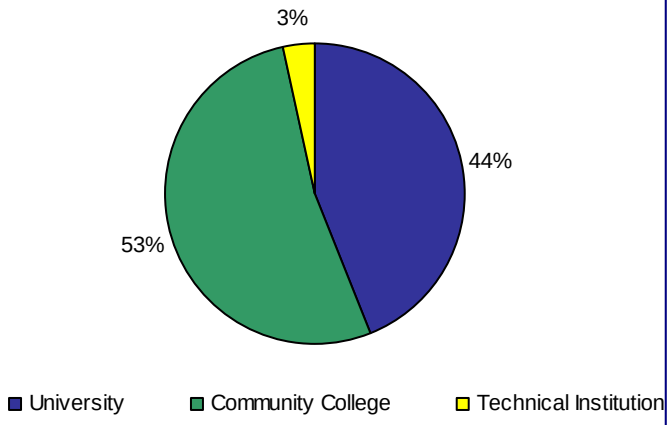
Based on Kansas Higher Education Enrollment Report.

Cohort by Geographic Area Enrolled in Higher Education



Based on KSPSD-KIDS matched data (13,834 total population).

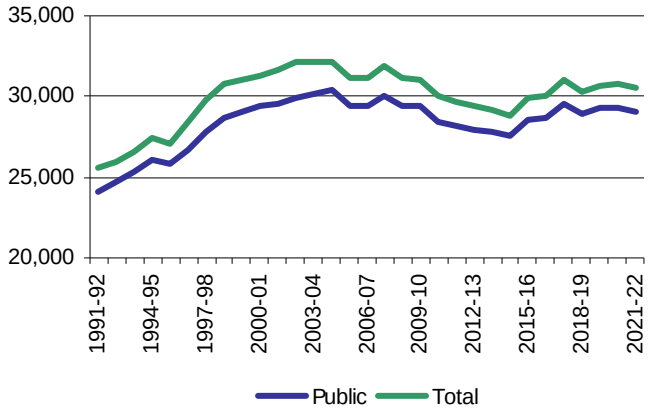
Cohort Enrollment in Postsecondary by Institution Type



Based on KSPSD-KIDS matched data (13,834 total population).

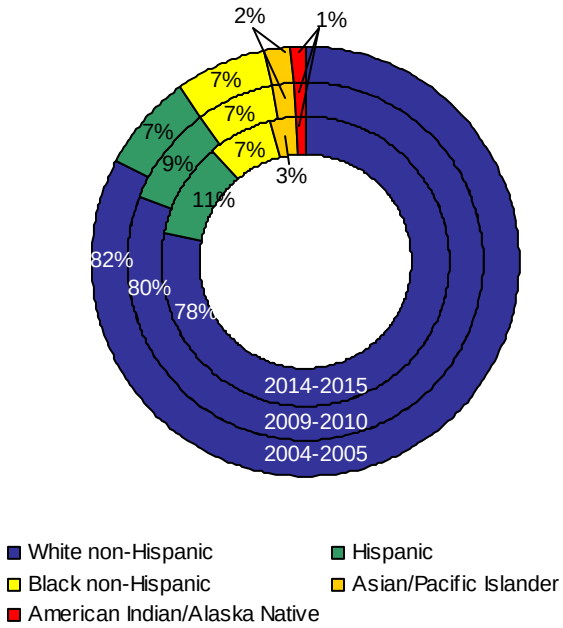
Kansas High School Graduates

1991-92 to 2004-05 Actual, 2005-06 to 2021-22 Projected



Kansas High School Graduates by Race/Ethnicity

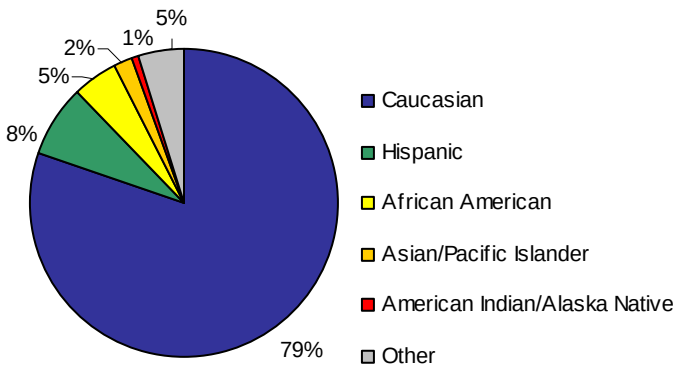
2004-05 Actual, 2009-2010 and 2014-2015 Projected



Knocking at the College Door, March 2008
Western Interstate Commission for Higher Education

Kansas Population Ethnicity (2006)

Percent

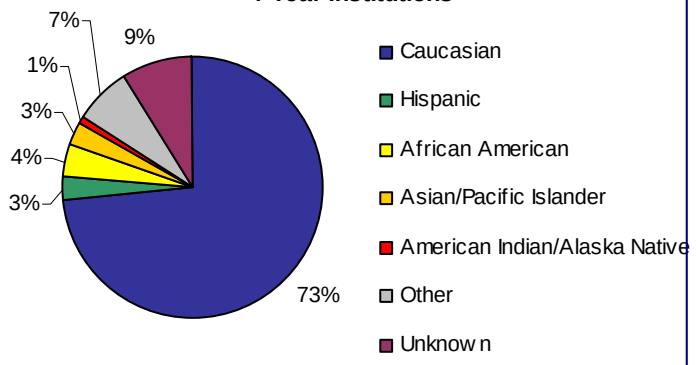


US Census Bureau, 2006 Estimates

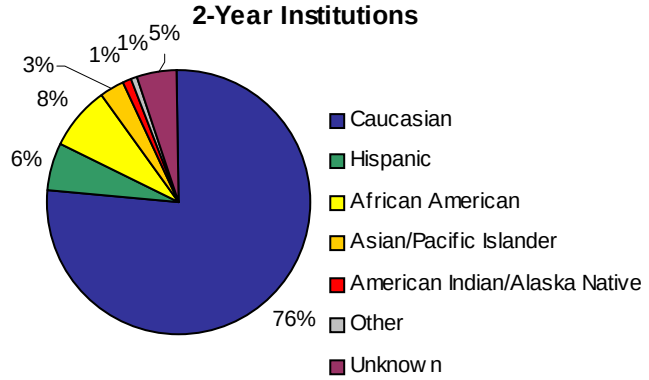
Kansas Higher Education Population Ethnicity (2006)

Percent

4-Year Institutions

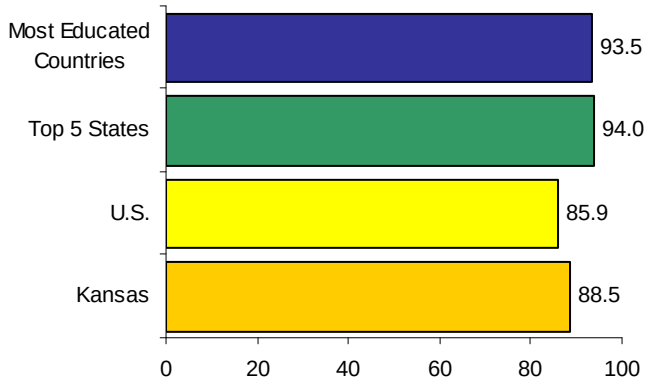


2-Year Institutions



Kansas Board of Regents

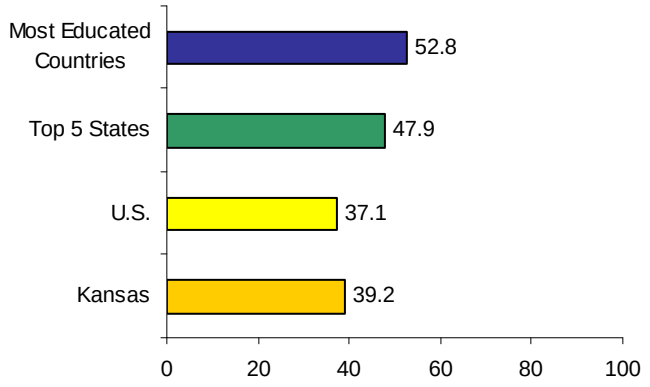
Percent Young Adults Completed High School



**Top 5 States: North Dakota, Hawaii, Vermont, New Hampshire, Maine & South Dakota (tie)*

Percent Young Adults Completed College

Associate's Degree or Higher

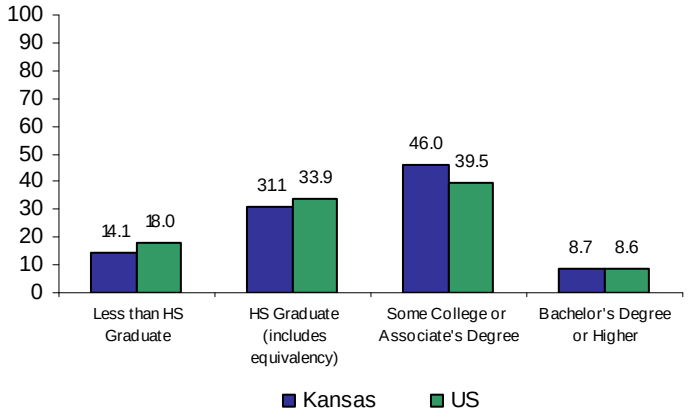


**Top 5 States: Massachusetts, Minnesota, New York, North Dakota, New Hampshire*

Kansas Profile of Adult Learners, 2008
The Council for Adult and Experiential Learning (CAEL) and The National Center for Higher Education Management Systems (NCHEMS)

Educational Attainment 18-24 Year Olds

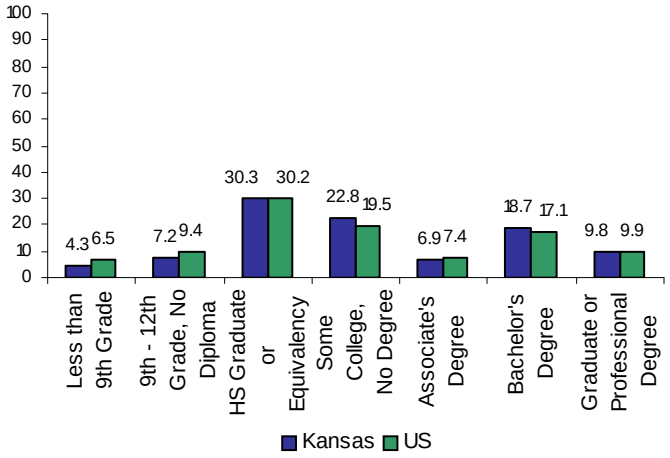
Kansas and United States (%)



US Census Bureau, 2006 Estimates

Educational Attainment 25 Year Olds and Older

Kansas and United States (%)



US Census Bureau, 2006 Estimates

Public Higher Education Participation Among Kansans 25 Years Old & Older

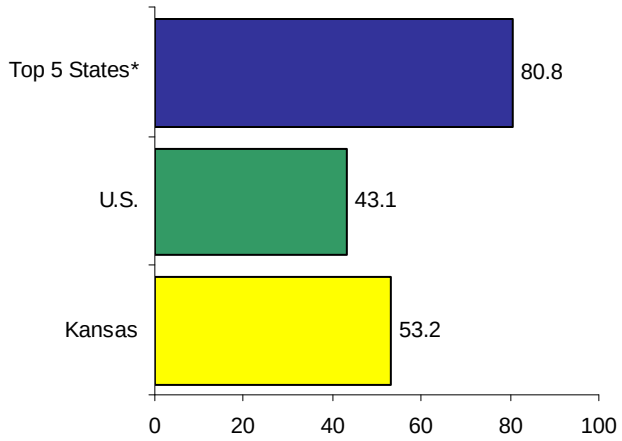
Total Kansas Population 25+ 1,771,185

	Population	%
Enrolled at University	26,979	1.52
Enrolled at Community College	41,510	2.34
Enrolled at Technical College	1,318	0.07
Enrolled at Technical School	484	0.03
NOT Enrolled in Public Higher Education	1,073,894	60.63

US Census Bureau, 2006 Estimates & KBOR

18-24 Years Old with No High School Diploma

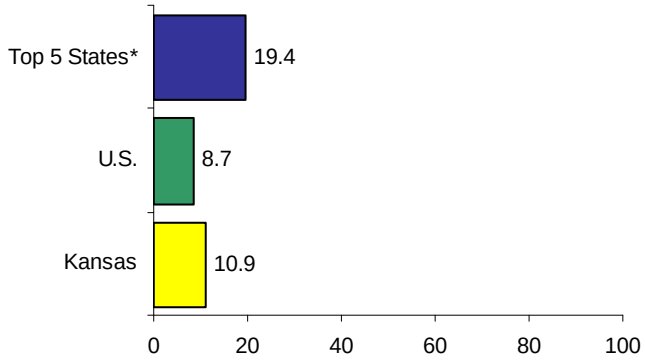
GED's Awarded per 1,000 Adults



**Top 5 States: Maine, Montana, North Dakota, Wyoming, Utah*

25-44 Years Old with No High School Diploma

GED's Awarded per 1,000 Adults

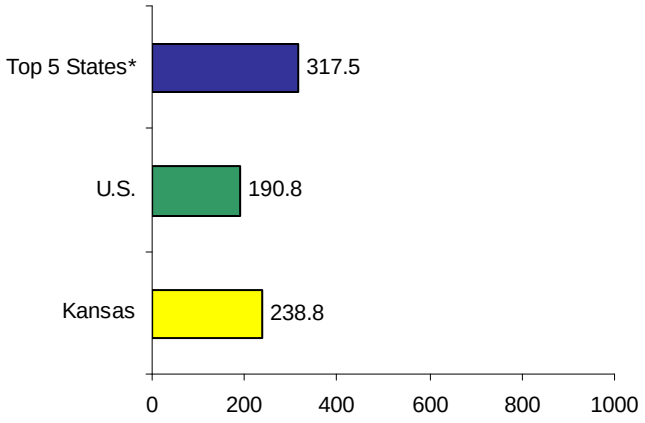


**Top 5 States: Wyoming, Alaska, Montana, North Dakota, Wisconsin*

Kansas Profile of Adult Learners, 2008
The Council for Adult and Experiential Learning (CAEL) and The National Center for Higher Education Management Systems (NCHEMS)

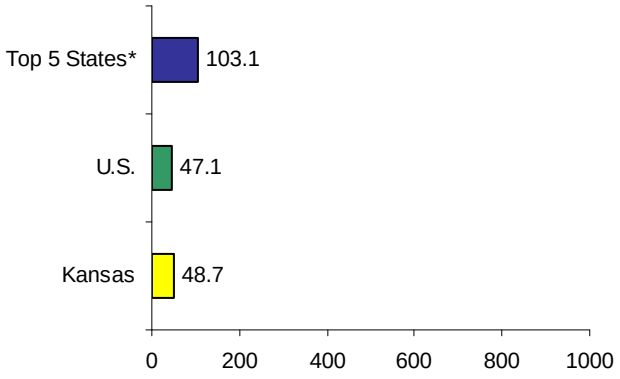
College Participation with Only a High School Diploma
Adults Served per 1,000

Age 25-39



**Top 5 States: Arizona, Utah, New Mexico, Iowa, North Dakota*

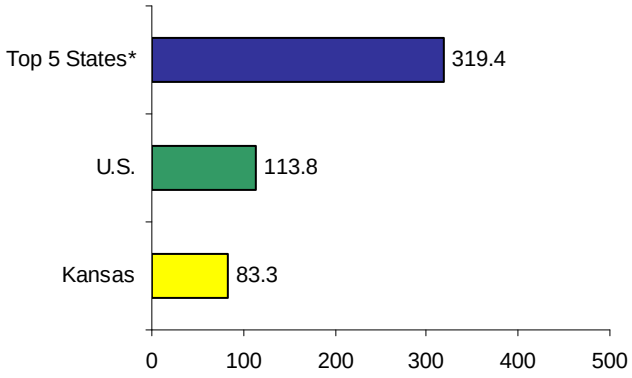
Age 40-64



**Top 5 States: Arizona, California, New Mexico, Alaska, Washington*

Kansas Profile of Adult Learners, 2008
The Council for Adult and Experiential Learning (CAEL) and The National Center for Higher Education Management Systems (NCHEMS)

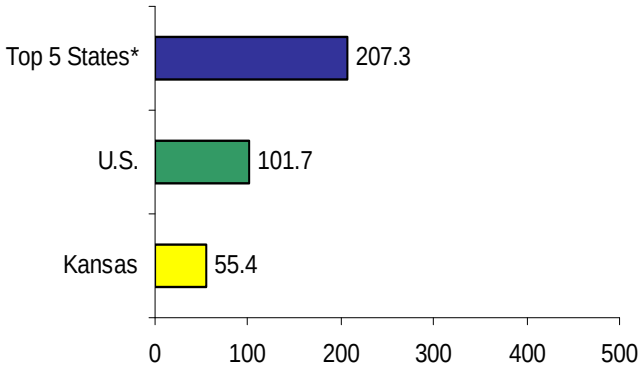
Enrolled in English as a Second Language Programs with Little or No English Proficiency
Adults Served per 1,000 Adults Aged 18-64



**Top 5 States: Minnesota, Maine, Vermont, North Dakota, New Hampshire*

Kansas Profile of Adult Learners, 2008
The Council for Adult and Experiential Learning (CAEL) and The National Center for Higher Education Management Systems (NCHEMS)

Adults Enrolled in State-Administered Adult Education Program with Less than a High School Diploma
Adults Served per 1,000 Adults Aged 18-64



**Top 5 States: Florida, Utah, Minnesota, South Carolina, Connecticut*

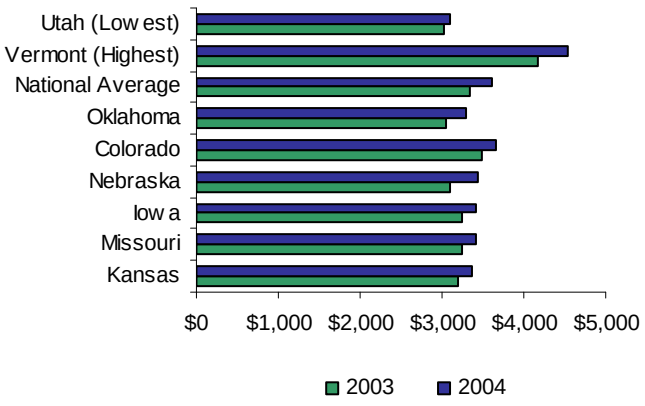
Kansas Profile of Adult Learners, 2008
The Council for Adult and Experiential Learning (CAEL) and The National Center for Higher Education Management Systems (NCHEMS)

Kansas Adult Basic Education Completers (2004-2007)
Completers Entering Higher Education with Goal of Entering Postsecondary (%)

Enter Higher Education	14.4

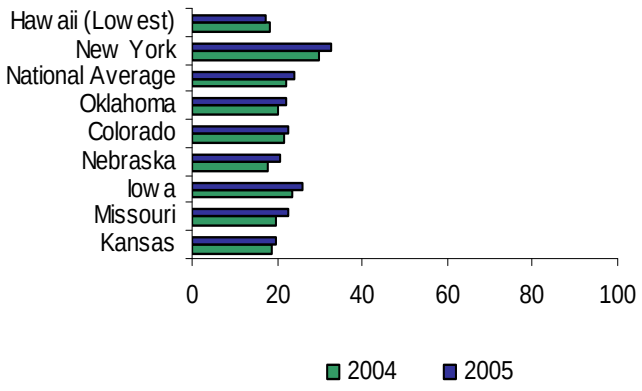
KBOR, Total Adult Learners (2004-2007) 7,952

Average Loan Borrowed per Year



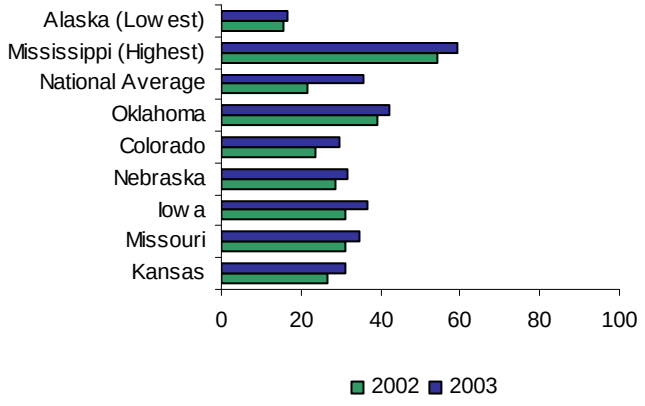
NCES FFELP Report

Percent Family Income Needed to Pay for College
Public Community College



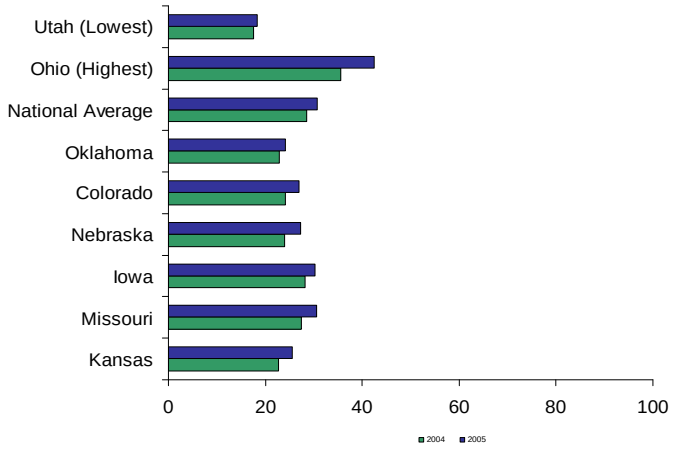
Measuring-Up

Percent of Undergraduate Students with Pell Grants



NCHEMS

Percent Family Income Needed to Pay for College
Public 4-Year Institution



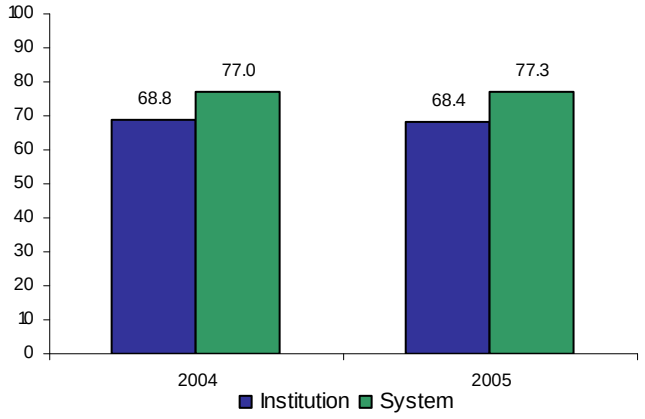
Measuring-Up

Question 3 Persistence

Are we satisfied with our institutional retention and completion rates?

This section presents information that bears on the question of whether students who chose to launch themselves into one of the programs of study that our system of higher education offers are being retained and ultimately obtaining their credential at an appropriate level.

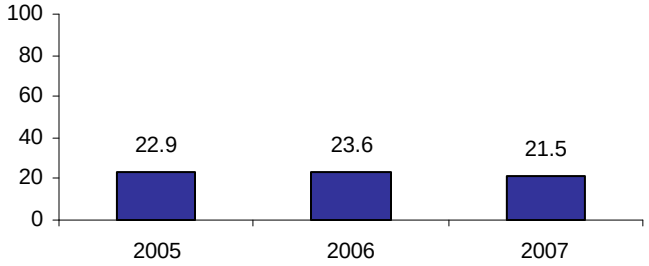
Kansas Higher Education System Retention Rates
One Year Rates for Institution and System Retention (%)



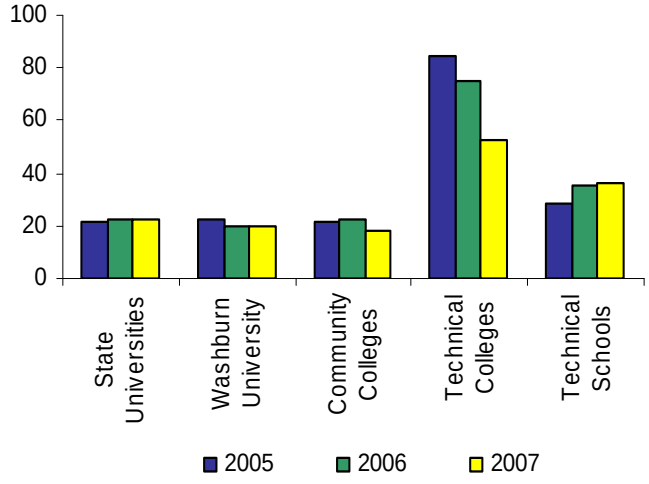
Kansas Board of Regents

Kansas Higher Education Completion Rates
Undergraduate Completions per 100 Undergraduate FTE
Academic Years 2005-2007

System Retention



Sector Retention

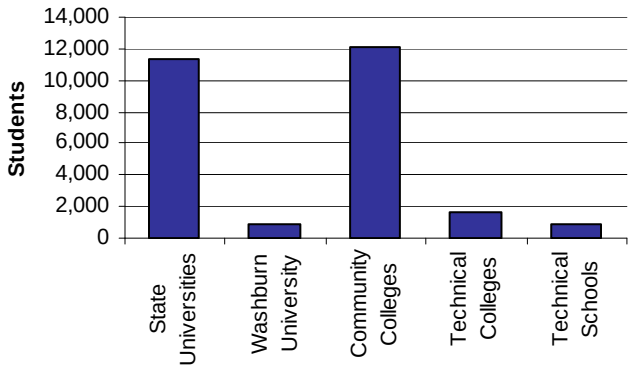


Kansas Board of Regents

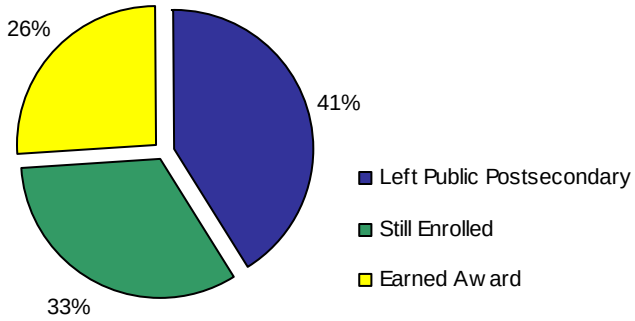
Retention and Completion Snapshot

Among students enrolling as a first-time-freshman in 2003 (27,406 students), KBOR completed an analysis of those students' completion and retention in the public higher education system at the conclusion of the 2007 Academic Year.

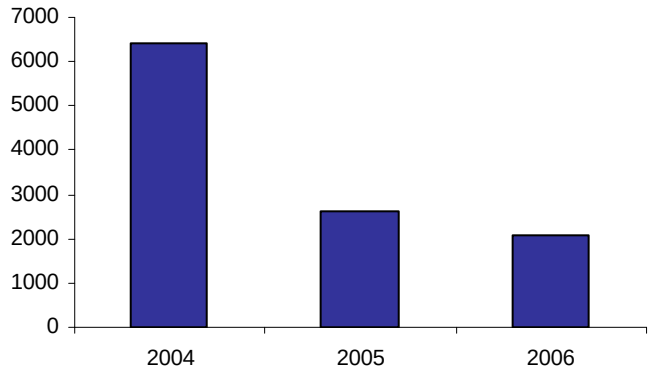
2003 First-Time-Freshmen Enrollment
By Sector



Retention Rate Snapshot
For Students Enrolled as First-Time-Freshmen in 2003, Through Conclusion of Academic Year 2007



Students Who Left Public Postsecondary Without Degree
Enrolled as First-Time-Freshmen in 2003, Through Conclusion of Academic Year 2007



The most common definition for completion allows a 150% timeframe for students to complete awards. This snapshot only includes 4 years, impacting the overall completion rate for bachelor's degrees and higher. Of the 26% that earned an award, the table below provides awards earned by type and the percent of students earning that award based on the total 2003 First-Time-Freshmen Class (27,406).

Completion Rate Snapshot
Academic Years 2003-2007

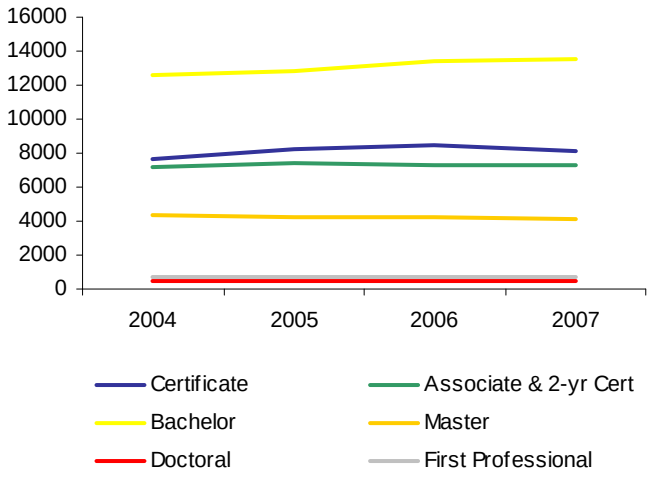
Award Earned	Students	%
Technical Certificate	1,425	5.27%
Associate's Degree	2,540	9.39%
Bachelor's Degree	3,085	11.41%
Master's Degree	17	0.06%

Students may earn multiple degrees during the reporting time-frame, however only the highest degree earned is counted. Students are reported with the highest degree earned based on where they entered as first-time-freshmen in AY 2003.

Completion Rate Snapshot by Award Type
Academic Years 2003-2007

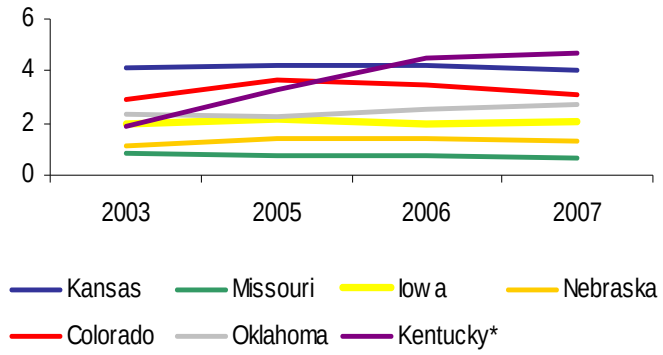
	Technical Certificate	Associate's Degree	Bachelor's Degree	Master's Degree
State Universities	97	205	2,685	11
Washburn University	19	47	118	—
Community Colleges	638	21,41	276	6
Technical Colleges	423	113	3	—
Technical Schools	248	34	3	—

Higher Education System Degree Completions
Number of Awards 2004-2007

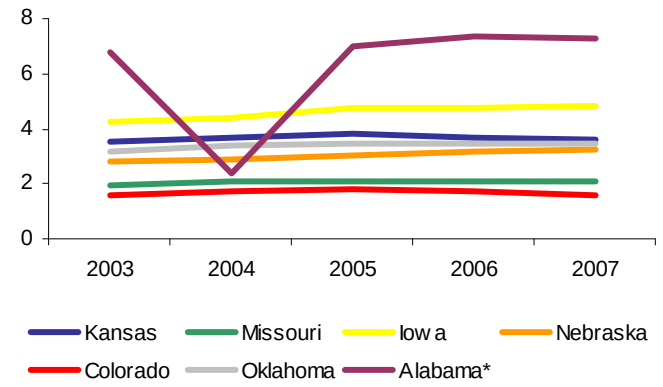


IPEDS

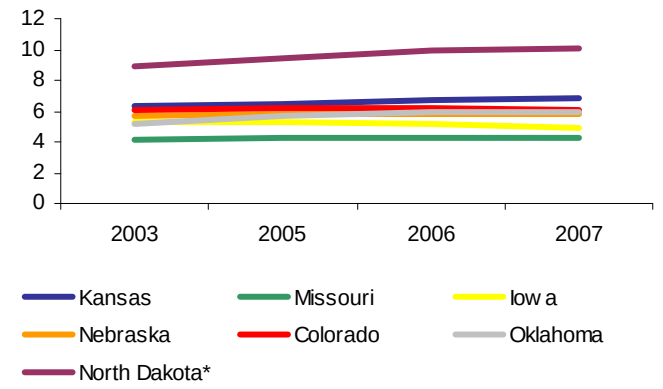
Certificates Awarded per 1,000 People 20 and Older
Number of Awards 2004-2007



Associate's & 2-Year Certificates Awarded per 1,000 People 20 and Older
Number of Awards 2004-2007



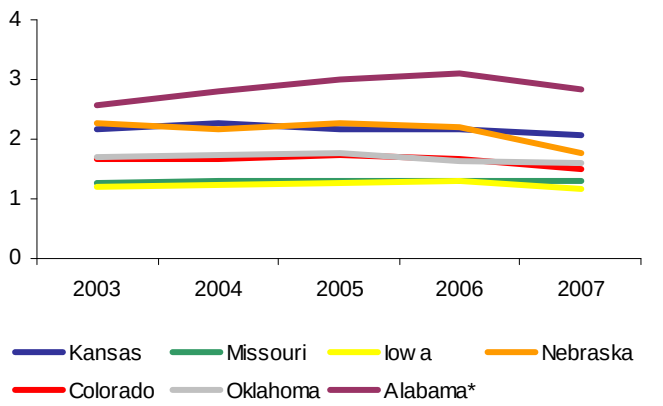
Bachelor's Degrees Awarded per 1,000 People 20 and Older
Number of Awards 2004-2007



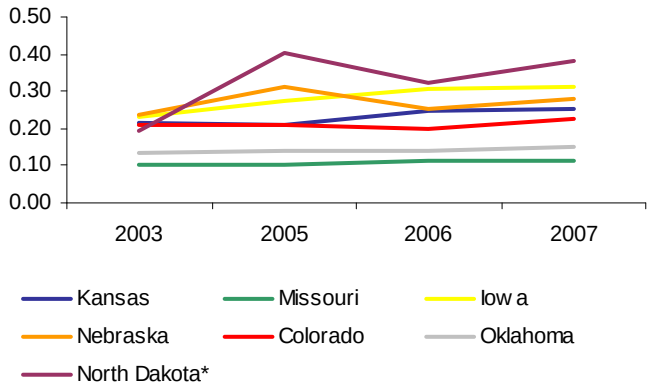
IPEDS & Census

**Highest Performing State*

Master's Degrees Awarded per 1,000 People 20 and Older
Number of Awards 2004-2007



Doctoral Degrees Awarded per 1,000 People 20 and Older
Number of Awards 2004-2007



IPEDS & Census

**Highest Performing State*

4-Year Institution Retention Rates
One Year Rates for Institution Fall 2003-Fall 2007 (%)

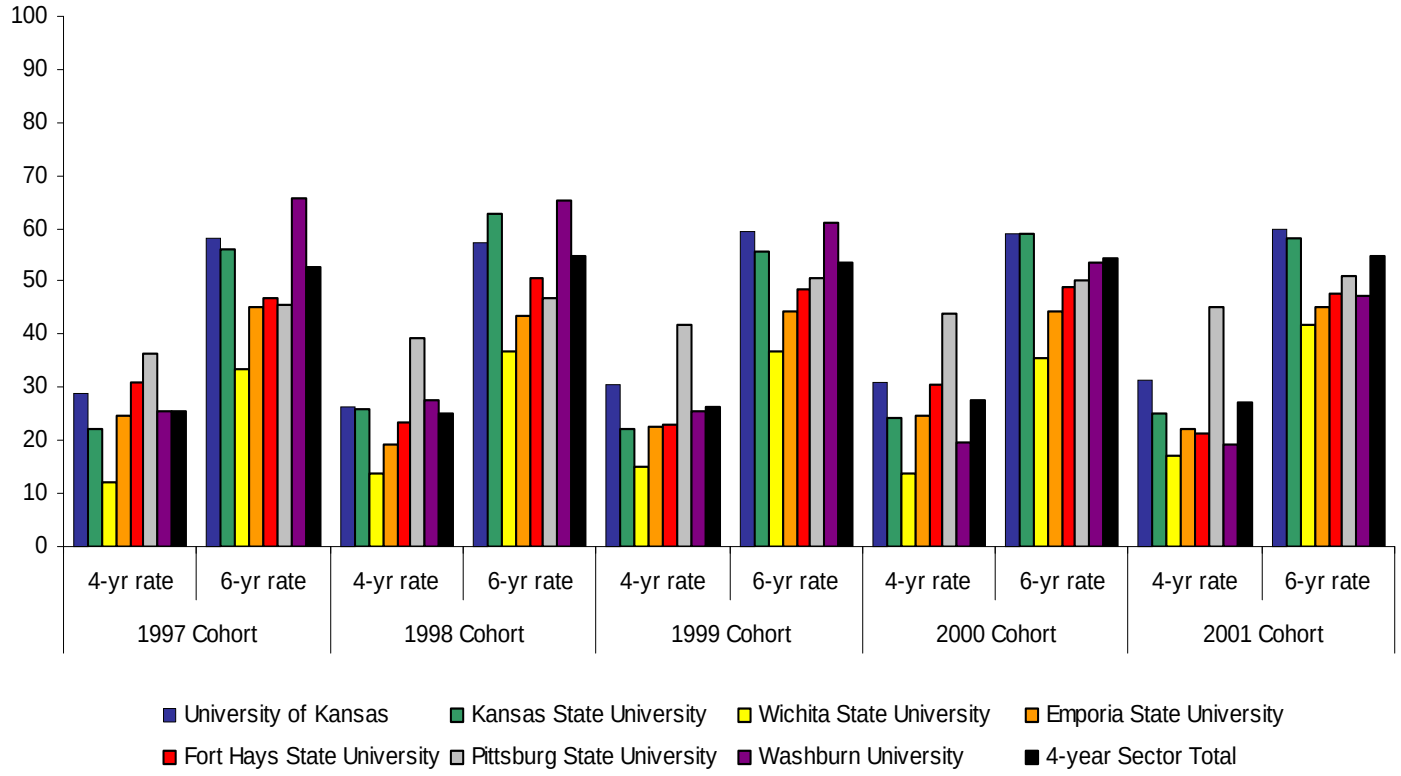
Institution	Fall 03-Fall 04	Fall 04-Fall 05	Fall 05-Fall 06	Fall 06-Fall 07
Emporia State University	67	68	74	72
Fort Hays State University	72	64	68	66
Kansas State University	81	80	79	79
Pittsburg State University	75	77	75	74
University of Kansas	83	82	80	79
Wichita State University	67	69	70	67
Washburn University	69	69	66	61

IPEDS

Top Performers Nationally, Retention Rates Fall 2006-Fall 2007. Regional Institutions: The College of New Jersey, 95%. Research Institutions: The University of California-Berkeley, University of California-Los Angeles, and University of Virginia-Main Campus, 97%

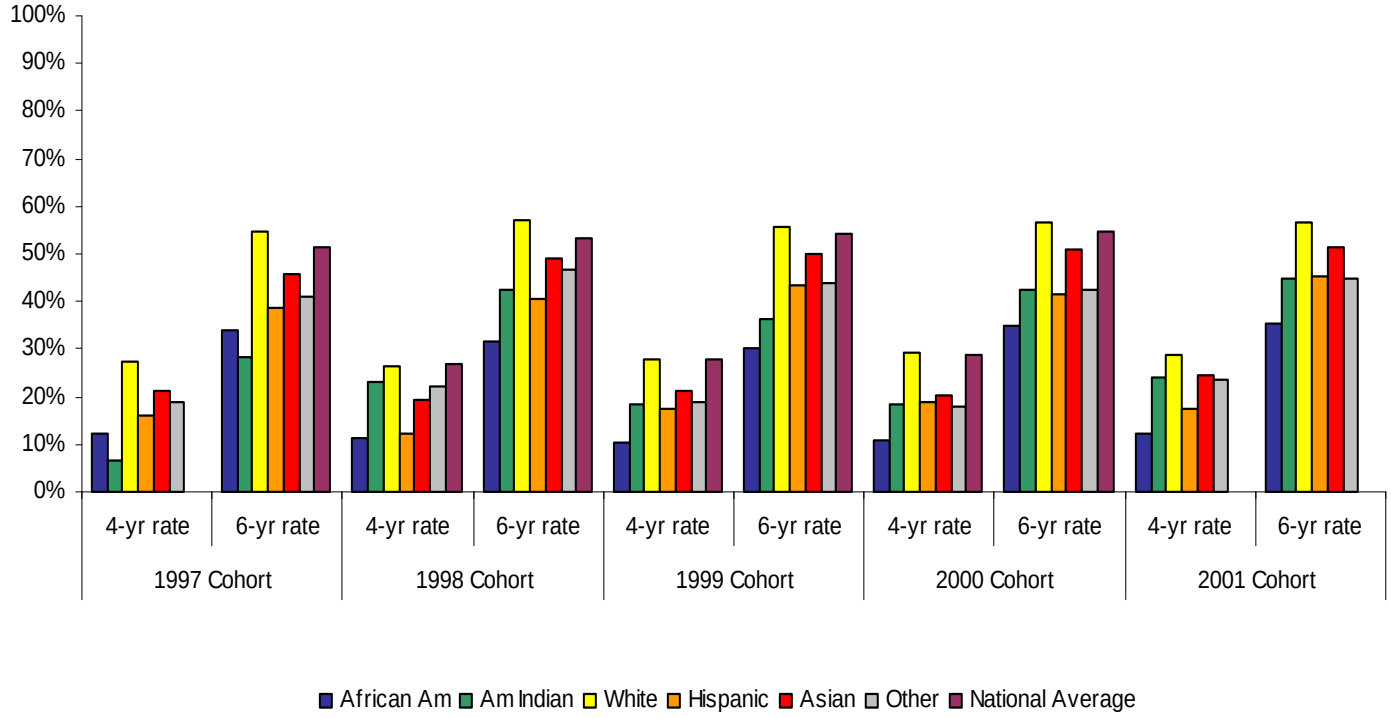
4-Year Institution Graduation Rates

1997-2001 Cohorts, 4-Year and 6-Year Rates (%)



4-Year Institution Graduation Rates by Race

1997-2001 Cohorts, 4-Year and 6-Year Rates (%)



IPEDS

Top Performers Nationally—Graduation Rates (2004)

Regional Institutions: The College of New Jersey-67.7% (4-Year), 83.4% (6-Year).

Research Institutions: The University of Virginia-Main Campus-84.2% (4-Year), 93.2% (6-Year).

2-Year Institution Retention Rates

One Year Rates for Institution Fall 2003-Fall 2007 (%)

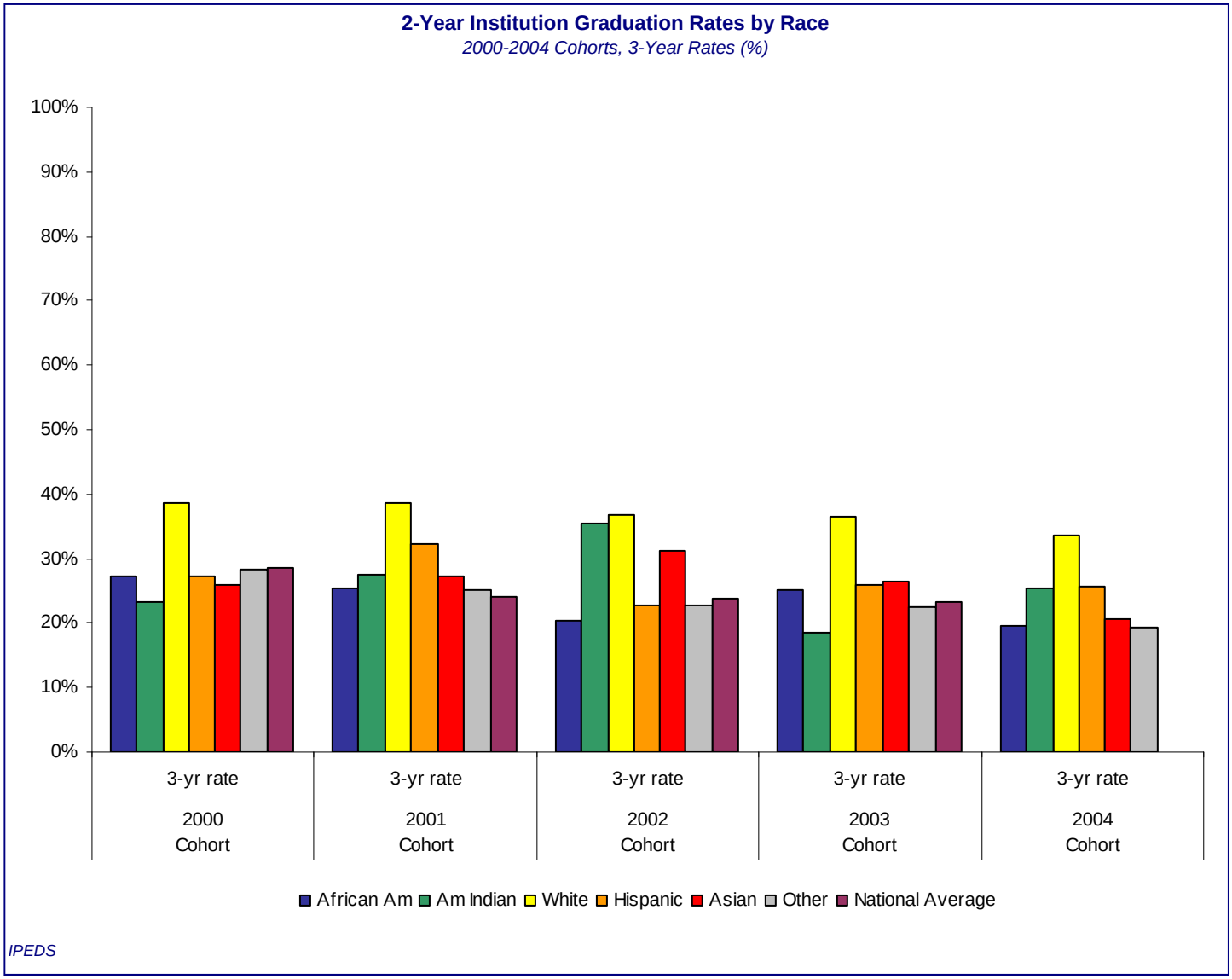
Institution	Fall 03-Fall 04	Fall 04-Fall 05	Fall 05-Fall 06	Fall 06-Fall 07
Allen County	54	54	52	59
Barton County	61	65	60	55
Butler County	57	58	59	59
Cloud County	60	54	53	60
Coffeyville	57	52	52	52
Colby	65	88	67	67
Cowley	60	65	56	56
Dodge City	50	47	51	49
Flint Hills	57	72	55	85
Fort Scott	54	68	55	60
Garden City	62	51	57	58
Highland	38	35	34	37
Independence	43	39	22	31
Johnson County	55	52	58	50
KCKATS	75	76	83	72
KCKCC	51	58	56	58
KAW	0	30	74	0
Labette	45	79	41	51
Manhattan	62	68	69	72
Neosho	41	43	33	50
NCKTC	84	85	85	76
NECTC	66	83	74	72
NWKTC	88	82	84	88
Pratt	50	58	56	60
Salina	74	77	80	83
Seward	54	51	51	57
SWKTS	75	81	90	87
WATC	47	44	60	61
Top National Performer Fall 2006-Fall 2007	JF Drake State Technical College			
	98%			

IPEDS

2-Year Institution Graduation Rates

2000-2004 Cohorts, 3-Year Rates (%)

Institution	2000	2001	2002	2003	2004
Allen County	30.7	28.5	32.5	38.7	29.2
Barton County	39.6	40.7	41.4	35.5	33.9
Butler County	20.0	28.7	26.8	24.3	23.1
Cloud County	35.0	38.4	35.9	35.8	32.9
Coffeyville	33.4	41.7	38.0	64.8	30.4
Colby	50.9	50.3	53.9	51.8	49.4
Cowley	33.1	40.3	37.6	33.7	38.1
Dodge City	27.4	35.3	28.7	34.1	22.0
Flint Hills	74.7	70.6	68.7	80.0	61.7
Fort Scott	42.2	36.2	38.0	34.6	35.0
Garden City	31.6	34.3	32.2	33.7	33.6
Highland	26.0	36.9	16.2	33.3	23.5
Independence	51.3	42.8	37.4	31.7	34.2
Johnson County	16.5	14.2	14.1	14.5	11.3
KCKATS	59.2	62.8	61.9	61.1	66.1
KCKCC	27.0	27.2	15.4	12.1	15.7
KAW	98.9	24.6	88.9	80.6	64.2
Labette	31.6	13.9	12.8	12.0	23.1
Manhattan	76.8	65.3	59.9	46.9	56.8
Neosho	18.5	24.6	22.0	21.1	23.6
NCKTC	100.0	76.6	76.9	66.4	78.0
NECTC	100.0	76.6	76.9	66.4	78.8
NWKTC	89.4	87.3	88.6	82.3	76.0
Pratt	33.8	28.3	36.7	28.8	36.7
Salina	74.5	70.4	73.2	74.1	78.7
Seward	34.8	34.0	26.7	30.7	31.7
SWKTS	51.9	72.9	80.3	81.4	78.1
WATC	44.6	74.6	55.3	62.6	64.4
Top National Performer 2004	Mitchell Technical Institute				
	93.7%				


2-Year Institution Graduation Rates by Race
2000-2004 Cohorts, 3-Year Rates (%)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
3-yr rate
2000 Cohort
3-yr rate
2001 Cohort
3-yr rate
2002 Cohort
3-yr rate
2003 Cohort
3-yr rate
2004 Cohort
African Am
Am Indian
White
Hispanic
Asian
Other
National Average
IPEDS

Question 4 Outcomes

Are we satisfied that those who complete our educational programs have obtained the cross-cutting competencies and skills necessary for success in work and life?

Meaningful and informative date bearing on this important area of strategic focus is generally not available. However, academic leaders within the Kansas system of higher education are embarked on a process that should enable us to get our arms around this challenging issue. This section of the document presents a paper describing the effort currently underway.

The System Council of Chief Academic Officers (SCOCAO) has discussed the question of assessing general education learning outcomes in four common areas:

1. communication (particularly reading and writing);
2. thinking/problem solving;
3. computer use/information literacy; and
4. collaboration/working with others.

Kansas' six public universities and Washburn University are participating in the Voluntary System of Accountability (VSA), which is designed to "improve public understanding of how public colleges and universities operate." Its basic tool is the "College Portrait," which consists of a reporting template that organizes data elements as follows:

1. consumer information,
2. student experiences and perception, and
3. student learning outcomes.

The VSA reports on student learning outcomes in two ways:

1. institutions describe their methods of evaluating student learning, including linking "institution-specific outcomes data such as program assessments and professional licensure exams"; and
2. participation in a VSA pilot project designed to "measure student learning gains in critical thinking (including analytic reasoning) and written communication."

The universities participating in VSA are using the National Survey of Student Engagement (NSSE), which surveys students about their experiences and perceptions of student engagement at their respective campuses. While an indirect measure of student learning, each specific item on the survey represents an experience that is empirically linked to gains in student learning.

In addition to the above activities, individual campuses use a variety of other evaluative tools tailored to their respective missions and the character of their student populations. The following, while not comprehensive, provides representative examples of campus assessment activity.

- **The University of Kansas** assesses six general education goals, with faculty using standardized questions to measure each goal and students self-rating on the same goals. The University established a Senate Task Force in 2007 to examine issues surrounding undergraduate learning, with particular attention paid to the basic competencies that all graduates of the University should attain, and has plans to administer the Collegiate learning Assessment (CLA).
- **Kansas State University's** Office of Assessment works directly with academic college administrators and College Assessment Review committees on their assessment activities and to develop annual progress reports. The University Assessment Facilitators Committee includes representatives from both academic and student service units in an effort to integrate assessment into the university culture.
- **Wichita State University** employs a multi-tiered assessment structure, including assessment of general education courses, program assessment, and university level assessment that includes the NSSE, a Graduate Student Exit Survey, and use of the Collegiate Learning Assessment (CLA).

- **Emporia State University** requires undergraduate majors to develop goals for the "*basic skills and cultural literacy* components of general education."
- **Pittsburg State University** has developed an assessment taxonomy to structure the University's assessment activities that includes assessment of General Education, the Undergraduate Major, as well as the assessment of non-academic units where student learning occurs.
- **Fort Hays State University** has a campus-wide assessment committee to coordinate its assessment activities. Fort Hays uses a range of assessment instruments to assess student learning in its General Education and individual academic programs.
- **Washburn University** has a University Assessment Committee that helps establish assessment goals and meets regularly with departmental assessment liaisons.

Question 5 Economic Alignment

Are the programs, resources, and incentives of higher education aligned with the workforce demands of Kansas?

Are we satisfied with the level of innovation-spurring research and discovery that is being produced within our universities?

Invention Disclosures: A type of new discovery documentation that is reported to the institution. One disclosure may lead to multiple patent applications and patents. There may be several years between an initial disclosure and the awarding of a patent.

In FY2006 more than 16,000 invention disclosures were reported, over 10,000 patent applications filed, and 2,792 patents issued among reporting universities.

Inventions and Patents 2006*

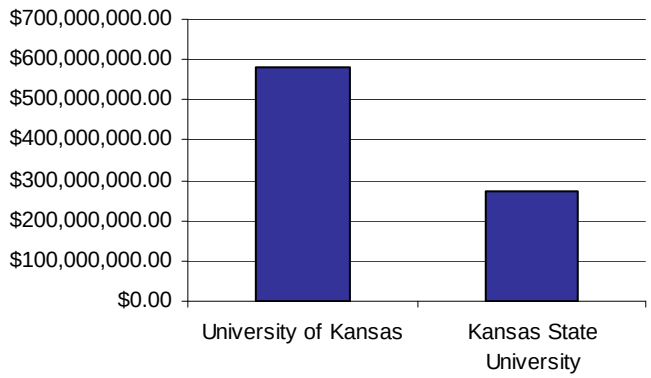
**Kansas State University and the University of Kansas Only*

	Invention Disclosures	Patent Applications	Patents Issued
Kansas State University	43	18	4
University of Kansas	74	24	5
Total	**117**	**42**	**9**

Association of University Technology Managers (AUTM)
AUTM U.S. Licensing Activity Survey: FY 2006

Research expenditures (or incoming research funds) are primarily from governmental agencies and industrial sources. Together these sources account for more than 70% of total research funds annually. In 2006, research expenditures totaled $45.4 billion.

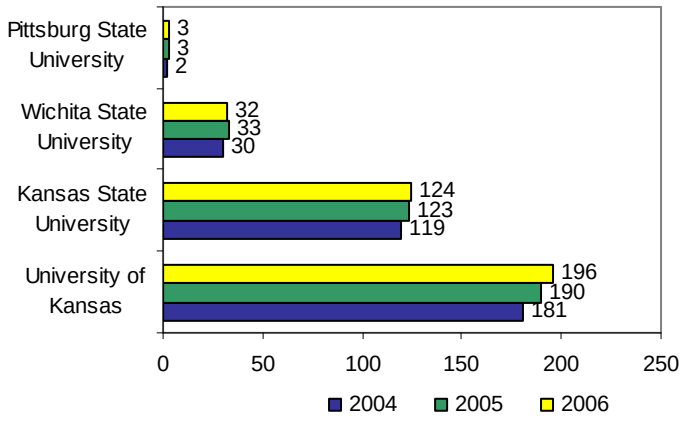
Research Expenditures 2004-2006



Association of University Technology Managers (AUTM)
AUTM U.S. Licensing Activity Survey: FY 2006

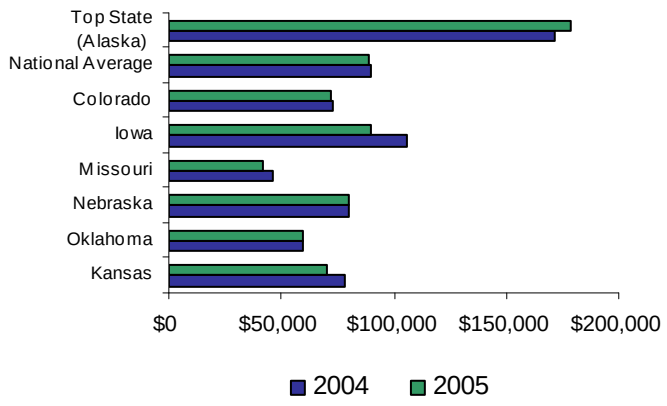
Academic R & D Spending by University

In millions



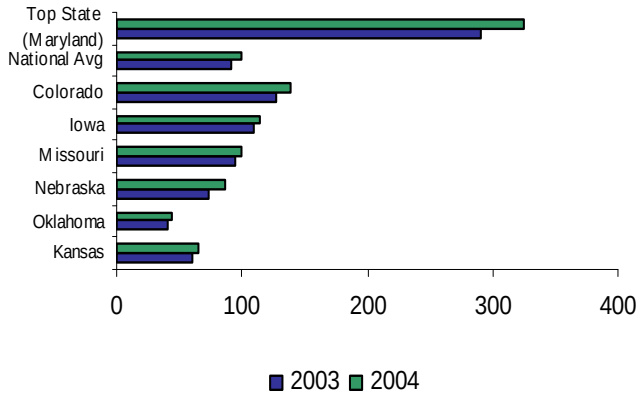
National Science Foundation

Research Expenditures per Full-Time Faculty



Source?

Research Expenditures per Capita



Source?

Degrees Awarded in STEM Areas

2003-2007, % of Total Awards

State	2003	2005	2006	2007
Certificates				
Kansas	0.4	0.4	0.6	0.1
Missouri	1.1	0.5	0.2	0.2
Iowa	0.8	1.4	0.9	1.2
Nebraska	6.0	5.5	1.9	3.6
Colorado	3.8	1.6	1.7	1.6
Oklahoma	2.0	1.5	1.4	1.3
National Average	2.4	2.0	1.8	1.7
Ohio (Top State)	7.6	6.0	5.6	7.0
Associate's Degree & 2-Year Certificates				
Kansas	6.0	3.6	3.1	2.3
Missouri	2.2	1.2	0.9	0.7
Iowa	0.7	1.2	0.9	0.8
Nebraska	8.5	7.8	4.3	3.9
Colorado	5.9	3.9	2.9	2.1
Oklahoma	6.9	7.9	6.9	6.7
National Average	4.6	4.2	4.0	3.9
Illinois (Top State)	19.1	18.9	19.0	19.3
Bachelor's Degree				
Kansas	17.5	15.9	14.8	15.0
Missouri	17.8	16.2	15.9	16.2
Iowa	22.2	20.8	20.9	20.9
Nebraska	18.4	18.1	17.8	17.7
Colorado	21.8	20.5	20.1	19.9
Oklahoma	16.5	17.3	16.9	17.0
National Average	18.6	17.7	17.3	17.1
Wyoming (Top State)	24.7	24.0	24.5	22.9

IPEDS

Degrees Awarded in STEM Areas

2003-2007, % of Total Awards

State	2003	2005	2006	2007
Master's Degree				
Kansas	13.6	14.8	13.7	14.3
Missouri	14.0	16.2	15.0	15.0
Iowa	21.6	21.1	19.5	19.7
Nebraska	11.4	13.6	13.9	17.7
Colorado	24.5	22.7	22.8	23.8
Oklahoma	13.7	17.2	15.5	12.8
National Average	16.3	16.6	16.0	15.4
Montana (Top State)	24.1	27.5	26.0	28.3
Doctoral Degree				
Kansas	30.7	31.2	28.4	24.3
Missouri	32.6	35.3	41.4	37.6
Iowa	39.9	43.0	41.8	47.6
Nebraska	30.3	21.7	29.5	30.0
Colorado	52.2	50.1	50.4	54.7
Oklahoma	30.2	34.8	33.5	41.1
National Average	40.6	41.5	43.2	43.9
Vermont (Top State)	54.3	40.7	57.4	71.9

IPEDS

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