

FIRST WORKING PAPER

THE STUDENT EXPERIENCE

Data Related to Change



Kellogg Commission
on the Future of State
and Land-Grant Universities

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FOREWORD

Reports, surveys and compilations of data concerning higher education are published from time to time by many different organizations. The information and data they contain can be exceedingly important to college and university leaders as they make decisions and guide their institutions into the future. For busy people, keeping up with these many reports can be difficult or even impossible.

Many of these reports often are not restricted to compiling information about public institutions or private institutions but contain data and information from both, and the material they provide should be of interest to all who are engaged in higher education.

As the Kellogg Commission focuses on the five following topics—the student experience, access, engaged institutions, a learning society, and campus culture—the results of pertinent studies will be summarized, analyzed, and shared. These summaries are intended to serve in part as the basis for Kellogg Commission studies and as an aid to institution leaders as they take charge of change on their campuses.

This report provides data and information pertaining to “The Student Experience.”

John V. Byrne
Executive Director
Kellogg Commission

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Public universities play a vital role in fulfilling the higher education needs of the American public. Traditionally, the mission of public universities has been to offer accessible higher education; to create new knowledge through research for the nation; and to provide public service to citizens in every state.

Teaching students is the heart of the educational mission of public universities. Knowledge gained from research activities adds to the collective information available to students, and public service extends the value of the knowledge to the surrounding community, state and nation. The goal of all these efforts is to produce educated and productive citizens who can meet the challenges of tomorrow.

Change is a dynamic force which enables an institution to respond in a positive way (1) to external economic and demographic forces over which it has no control, and (2) to internal policy decisions which can shape the focus of institutional resources. After analyzing policy issues and data on trends relating to public universities, four key topics were chosen that relate to changes in the student experience, the first issue to be addressed by the Kellogg Commission. (Information on faculty contributions will be included in each of the five major issues addressed by the Kellogg Commission.) These four topics are:

- enrollment levels and characteristics of students;
- changes in curriculum to meet the needs of students;
- major fields of study, including degree recipients and degree completion; and
- use of financial resources to support the learning environment.

The four topics relating to the student experience are meant to focus attention on ways institutions can encourage positive change. Each topic is briefly described, and recent trends are illustrated with a few charts. Discussion among the members of the Kellogg Commission can encourage the institution presidents and chancellors to propose solutions that originate from experiences on their campuses. What strategies are working now? Are there new approaches to consider? Based on a combination of information on what has recently happened and ideas generated from the campuses, the leadership then can formulate recommendations for change which will be both relevant and practical.

I. Enrollment Levels and Characteristics of Students

- Enrollment at public four-year institutions has remained stable in the past year or two at 5.9 million students. It is projected to increase during the next ten years when the number of recent high school graduates begins to rise once again (see Figure 1). Enrollment increases are expected for students enrolled at the undergraduate, graduate, and first-professional levels (see Figure 2).
- In addition to expecting more students, administrators must adjust to the changing characteristics of students who are enrolled. Currently, the majority of students attending public four-year institutions are:
 - undergraduates (80 percent),
 - white, non-Hispanic (76 percent)
 - attending full-time (70 percent),
 - under 25 years of age (63 percent), and
 - women (53 percent) (see Figure 3).
- However, during the past ten to twenty years, the diversity of students has increased at public four-year institutions. More students are older now; in fall 1993, 15 percent were 35 years old or more. The proportion of students of color increased from 14 percent in 1976 to 20 percent by 1993. In addition, slightly more than 227,000 undergraduate students who reported a disability in 1992–93 were attending public four-year institutions.
- More college students than ever before are working. In 1973, slightly more than one in three high school students and the same proportion of full-time college students who were 16–24 years old were working. Twenty years later, the percentage of high school students who were employed had fallen to 30 percent while the percentage for full-time college students had risen to 46 percent (see Figure 4).
- There may be many reasons why college students seek employment. Some hope to gain work experience in a field which will lead to a more promising career. One assumes that the majority, however, are employed primarily to help offset college expenses. Because college costs have risen dramatically in the last decade, if a student were to finance a college education exclusively from earnings, a full-time student at an average cost public four-year institution would have to work 44 hours per week at the minimum wage. Ten years ago, the comparable figure was 28 hours.

II. Changes in Curriculum To Meet the Needs of Students

- It is interesting that the most frequently cited curriculum changes made in the past ten years at public research universities were designed to improve the skills of all students (see Figure 5). For example, in a recent survey by the American Council on Education (ACE), at least half of the institutions listed the following major changes in curriculum during 1985–1995:
 - greater emphasis on writing (53 percent);
 - new general education requirements (52 percent); and
 - expanded use of computers for classroom instruction (52 percent).
- Administrators at public research universities are working with faculty to improve the student experience. All of the public research universities surveyed by ACE in 1996 had annual awards to recognize outstanding teaching. In addition, 61 percent had formal programs in place to strengthen teaching skills, and 44 percent had changed the criteria for tenure or promotion to give more importance to effective teaching.
- There is renewed interest in the importance of “general education” courses. Results from an ACE study in 1996 show that almost nine in ten public research universities (89 percent) reported that their undergraduates were expected to fulfill a core amount of coursework in general education classes. Similar data available from 1989–90 describe the general areas from which courses are required (see Figure 6). Typically, these “general education” classes comprise about one-third of the total degree credits required for graduation and could be completed in about three semesters. In addition to core courses in specific subject areas, some public four-year institutions require freshmen seminars to acclimate incoming students (17 percent) and senior “capstone” courses (26 percent) to complete degree requirements.
- Use of technology has changed the student experience on campus. The majority of full-time undergraduates at public research universities (61 percent) were using personal computers by 1995. The proportion was slightly less for part-time and adult students (48 percent).
- In addition, public doctoral universities are leading the way in offering credit, technology-based distance education courses (see Figure 7).

Further changes in technology are inevitable; when asked to project the expected use of technology during the next five years, administrators listed the following examples:

- registration almost entirely by telephone/computer (78 percent);
 - more courses using electronic materials (72 percent);
 - more courses through distance learning (65 percent); and
 - class assignments submitted electronically (46 percent).
- To better meet the academic needs of some of their students, many colleges and universities have increased the number of remedial courses offered. By 1992–93, 78 percent of public four-year institutions were offering remedial instruction. About 11 percent of undergraduates at public four-year institutions were enrolled in these classes. The most common courses chosen were:
- math (6 percent),
 - reading (4 percent),
 - writing (4 percent), and
 - study skills (2 percent).
- In addition to providing remedial instruction, many public universities also have initiated or expanded honors programs for their brightest undergraduates. By 1995, 108 NASULGC institutions were members of the National Collegiate Honors Council. Honors programs are designed to attract academically talented students. Most honors programs are structured to provide smaller classes with more select students during the freshmen and sophomore years. These classes often are taught by teams of full professors and many offer interdisciplinary themes.

III. Major Fields of Study: Degree Recipients and Degree Completion

- Two in three bachelor's degrees awarded to students each year in the United States are earned at public four-year institutions. The top five fields of study chosen by students who are awarded bachelor's, master's, and doctor's degrees are shown in Figure 8. Interest in certain majors fluctuates from year to year, but business management

has remained the most popular choice among undergraduates for at least the last 25 years. During the same period, education has remained the most common major among graduate students.

- There are differences in major fields of study chosen by specific types of students. For example, a 1991 study found that older undergraduates (30 years and above) were more likely than their younger colleagues (23 years or less) to choose professional fields (older, 60 percent vs. younger, 46 percent) rather than the arts and sciences (older, 10 percent vs. younger, 42 percent).
- Although women were earning a larger share of degrees awarded in engineering (13 percent) and the physical sciences (31 percent) in 1992–93, men still earned the majority of degrees in these fields. By contrast, women still dominated the degrees awarded in the health professions (83 percent) and education (77 percent). Women earned approximately half of the degrees granted in business management (49 percent) and biological/life sciences (51 percent).
- In a 1996 national survey, administrators at 63 percent of public research universities believed that their students take longer to complete degrees now compared to ten years ago. What are the primary reasons? Insufficient financial resources forces many students who are working either to switch from full-time to part-time enrollment or to drop out of school temporarily to work full-time. Even among full-time college students, the percentage who are working 20 hours a week or more is increasing. Between 1973 and 1993, the proportion increased from 17 to 25 percent.
- Other prominent reasons which delay the completion of degrees cited by administrators at public research universities in 1994 include:
 - a change in major (33 percent),
 - the transfer of courses from other institutions (31 percent), or
 - enrollment with an undecided major (21 percent) (see Figure 9).
- Typically, the longer the time spent fulfilling the requirements for a degree, the longer the time before students can begin the careers for which they have trained. Results are available from a recent Department of Education's survey which followed up students who had started college in the late 1980s and whose initial objective was a bachelor's degree. Among all students, the median time spent between starting college and completing a bachelor's degree was between

4–5 years (see Figure 10). In a study of NCAA-Division 1 institutions at about the same time, 112 NASULGC institutions reported that slightly more than half (55 percent) of the students who had entered as freshmen had earned baccalaureates six years later.

- There are also interesting differences in the median amount of time spent earning degrees based on students' characteristics. Survey results from the 1993 Department of Education study concluded that students who were the most likely to earn a baccalaureate within four years were:
 - women,
 - white-non-Hispanic or Asian/Pacific Islander,
 - students who have not had to take remedial courses,
 - students with at least a 3.0 cumulative grade point average, or
 - students who have majored in humanities or social/behavioral sciences.

- Among graduate students, the median time between earning a bachelor's and doctor's degree has increased from 8 to 11 years during the period 1970–1995. Students studying in certain fields generally took longer to complete their degrees (see Figure 11). For example, in 1995 the median time between baccalaureate and doctorate degrees in the physical sciences was 8.4 years, while for those with doctorates in arts and humanities the median was 12 years, and for doctorates in education it was close to 20 years.

IV. Use of Financial Resources to Support the Learning Environment

- Public four-year institutions have faced financial constraints in recent years and the short-term outlook appears similar. It has been well documented that state support for public institutions has been declining, and, as a result, an increasing share of revenues have been generated from tuition and fees. What has been overlooked is the change in expenditure patterns during this same period. The most recent data from the Department of Education show that the percent of educational and general expenditures targeted for instructional activities has declined while the share used for research purposes has grown (see Figure 12). The proportions spent on other categories such as administration, libraries, public service, scholarships/fellowships, and student services have remained relatively stable.

- When enrollment fluctuations are considered and institutional expenditures are examined on a full-time equivalent (FTE) student basis, there is additional evidence for the relative decline of support for instructional activities in comparison to research. Between 1977 and 1993, for example, educational and general expenditures per FTE student at public universities (in 1995 constant dollars) grew 50 percent for research activities (from \$2,704 to \$4,051) but only 13 percent for instruction (from \$5,744 to \$6,470).
- Results from a 1996 national survey of NASULGC institutions provide some clues to the implications of these budgetary pressures for college classrooms (see Figure 13). In this survey, administrators were asked to list changes that were likely to occur in the near future. The top three expected changes were:
 - increased instructional workload (41 percent);
 - more use of nontraditional instructional delivery systems (39 percent); and
 - increased class size (37 percent).
- There is also concern for the use of resources to support instruction. Less than half the public research universities surveyed by ACE in 1996 rated their institutions as “excellent” or “very good” in the following categories:
 - adequacy of library resources (46 percent);
 - adequacy of electronic infrastructure to support academic programs (42 percent); and
 - adequacy of equipment for teaching (33 percent).
- In 1996, administrators at public research universities were asked to list specific expenditure categories which currently required a larger share of their budgets compared to ten years earlier. Categories listed by at least half of the institutions include:
 - electronic infrastructure (90 percent),
 - computing operations (76 percent),
 - faculty salaries (66 percent), and
 - institutionally funded student aid (62 percent).

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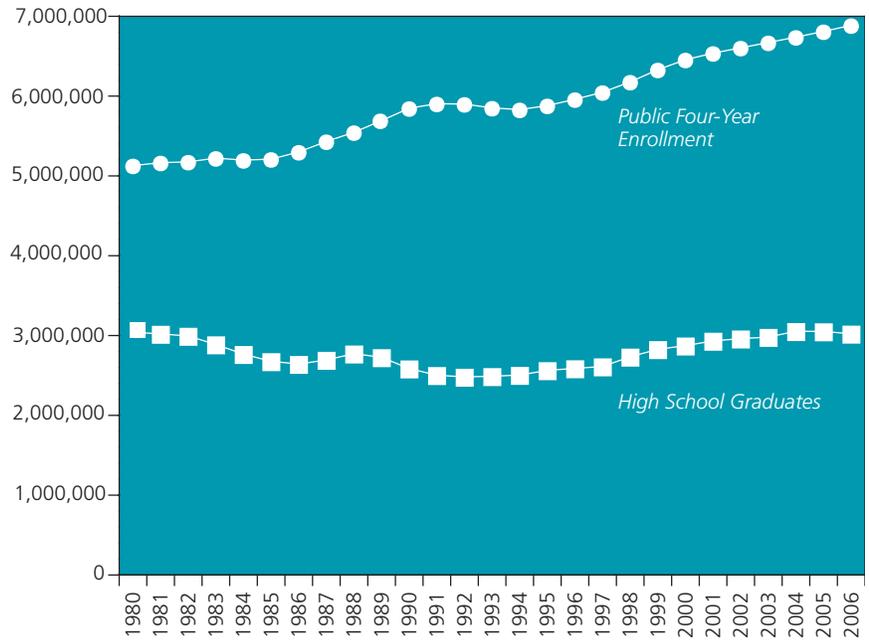
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FIGURE 1

Comparison of Annual High School Graduates and Public Four-Year Total Enrollment Data: 1980–2006

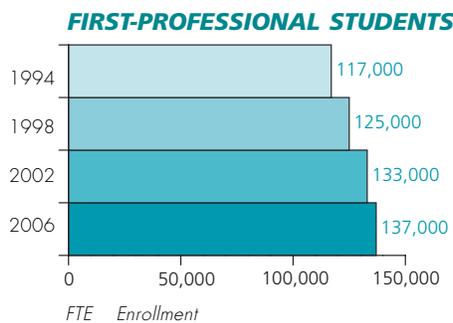
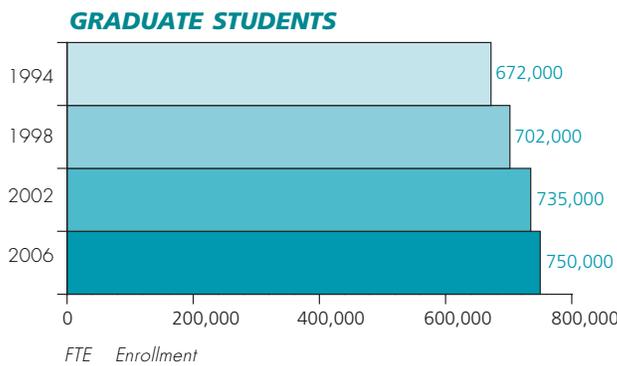
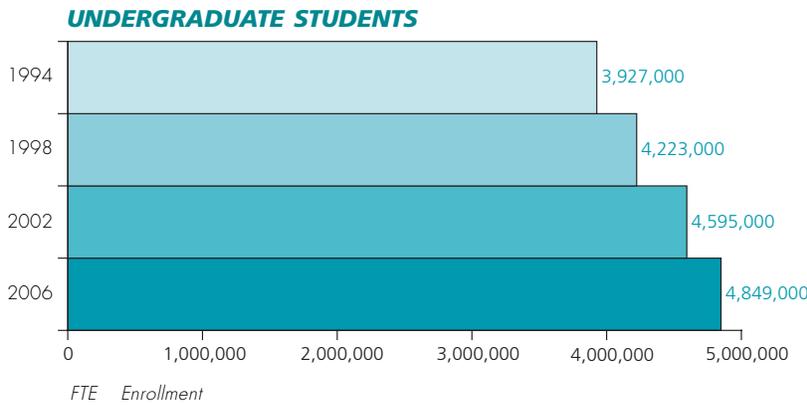


Note: Middle alternative projections by NCES were used for the years 1994–2006.

Source: U.S. Department of Education, National Center for Education Statistics. *Projections of Education Statistics to 2006*. Washington, D.C.: U.S. Government Printing Office, 1996, pp. 33, 52.

FIGURE 2

Projected Enrollment of Undergraduate, Graduate, and First-Professional Students at Public Four-Year Institutions: 1994–2006

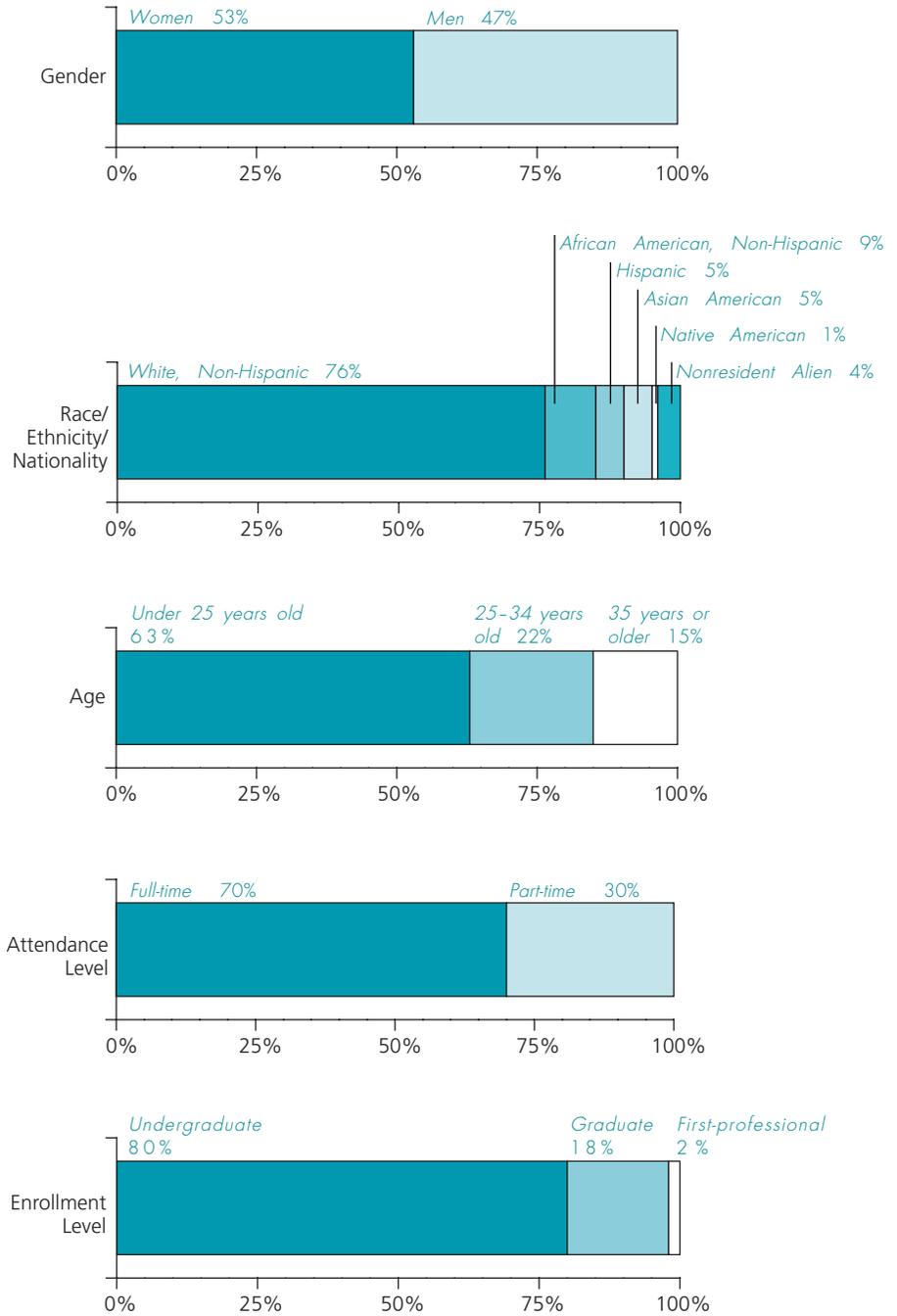


Note: Middle alternative projections by NCES were used. Enrollment is shown for full-time equivalent students (FTE).

Source: U.S. Department of Education, National Center for Education Statistics. *Projections of Education Statistics to 2006*. Washington, D.C.: U.S. Government Printing Office, 1996, p. 47.

FIGURE 3

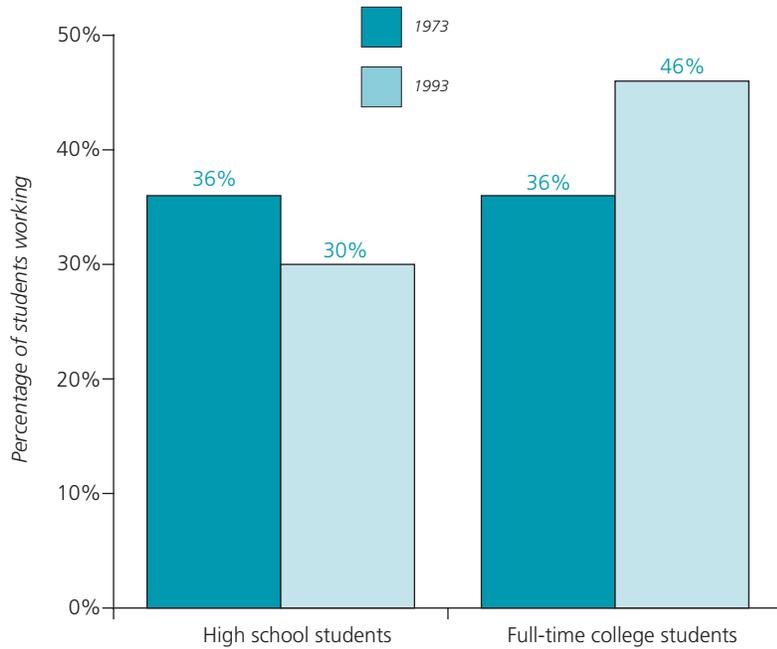
Characteristics of Students Enrolled at Public Four-Year Institutions in Fall 1993



Source: U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics 1995*. Washington, D.C.: U.S. Government Printing Office, 1995, pp. 174, 180, 181 and 207.

FIGURE 4

Employment Status of High School Students and Full-Time College Students: 1973 and 1993

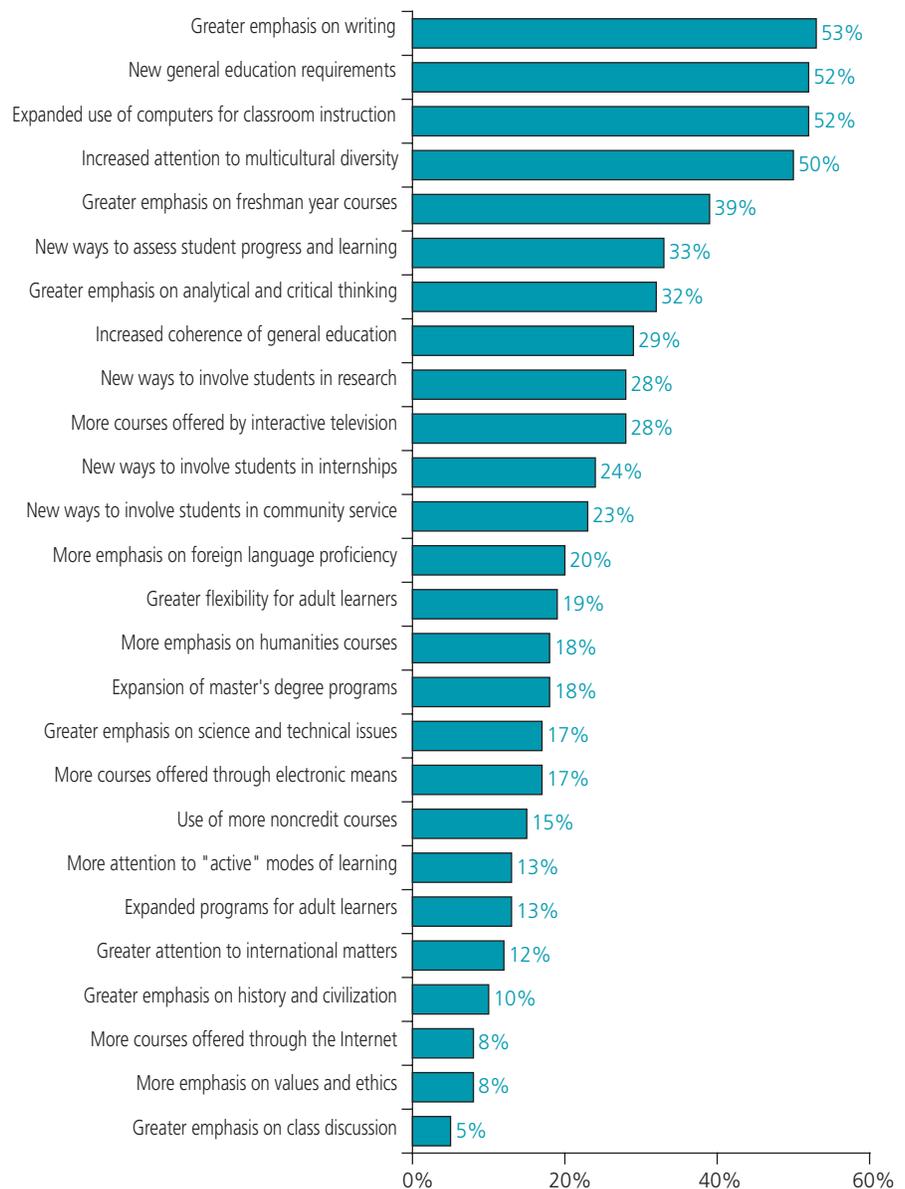


Notes: Calculations are limited to students 16–24 years of age. Figure for high school students in 1993 was estimated based on 1992 data.

Sources: U.S. Department of Education, National Center for Education Statistics. *The Condition of Education 1996*. Washington, D.C.: U.S. Government Printing Office, 1996, pp. 14–15; and NCES, *The Condition of Education 1994*, Indicator 49.

FIGURE 5

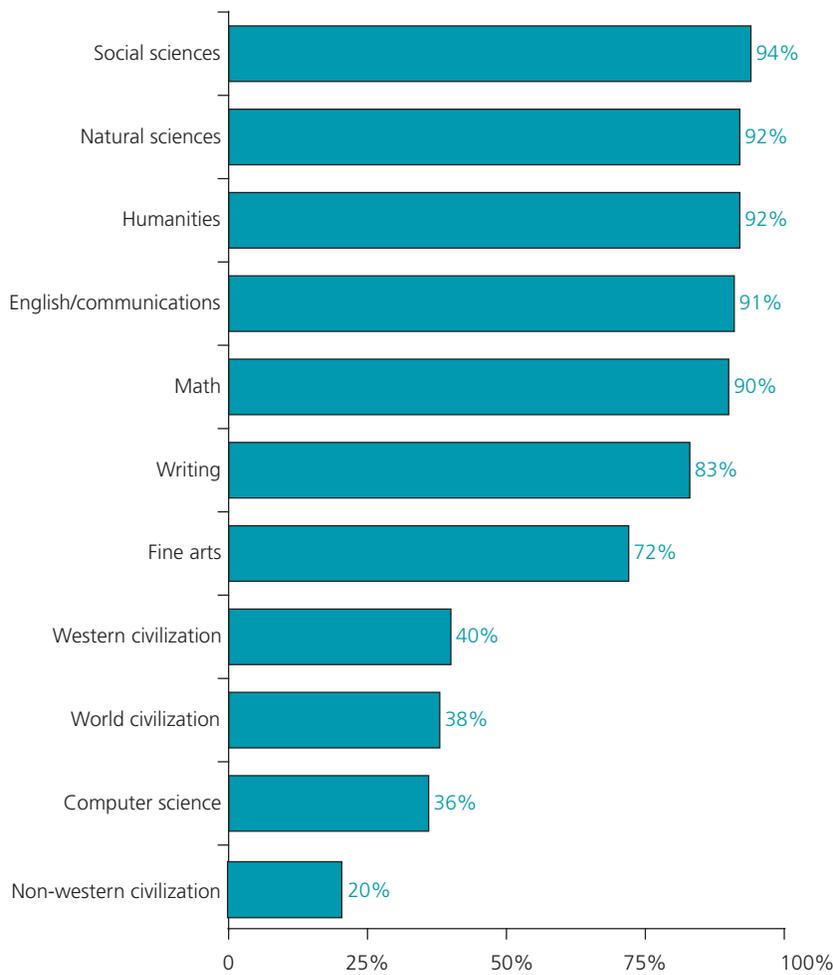
Percentage of Public Research Universities Citing Major Curriculum Changes During 1985–1995



Source: El-Khawas, Elaine and Linda Knopp. *Campus Trends 1996*. Washington, D.C.: American Council on Education, 1996, pp. 48–50.

FIGURE 6

Courses Necessary to Fulfill General Education Requirements at Public Four-Year Institutions: 1989

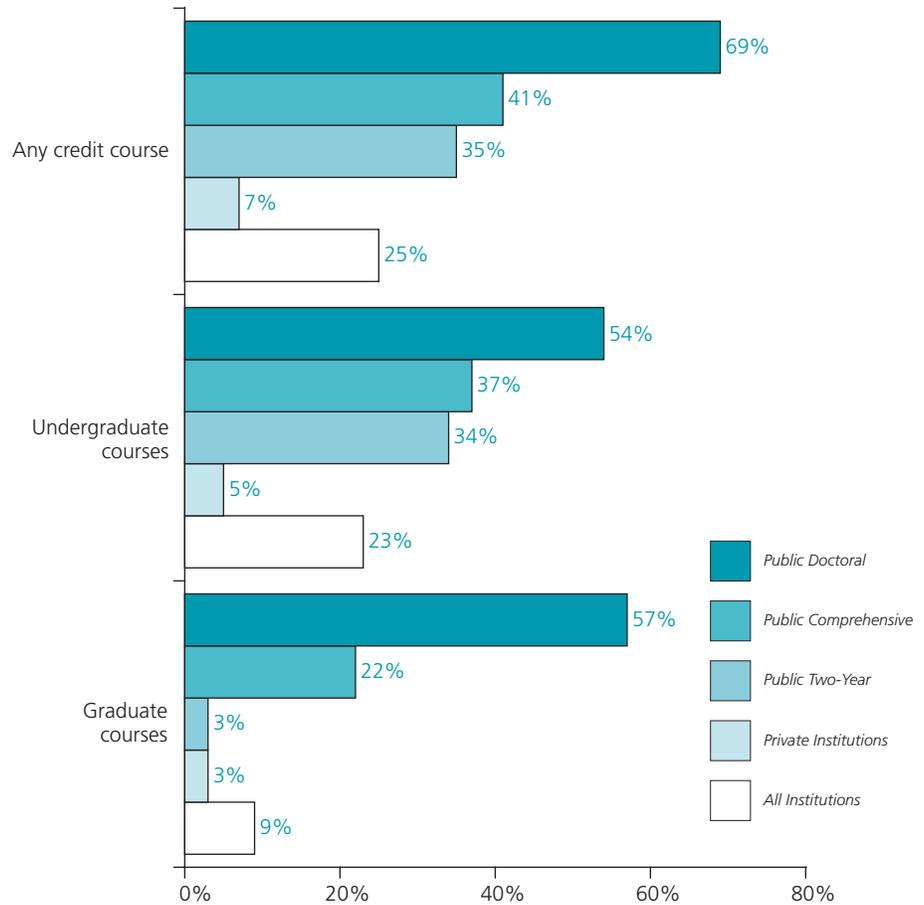


Note: For example, at 94 percent of public four-year institutions requiring general education courses, students would have to take at least one course in the social sciences.

Source: El-Khawas, Elaine. *Campus Trends 1989*. Washington, D.C.: American Council on Education, 1989, p. 35.

FIGURE 7

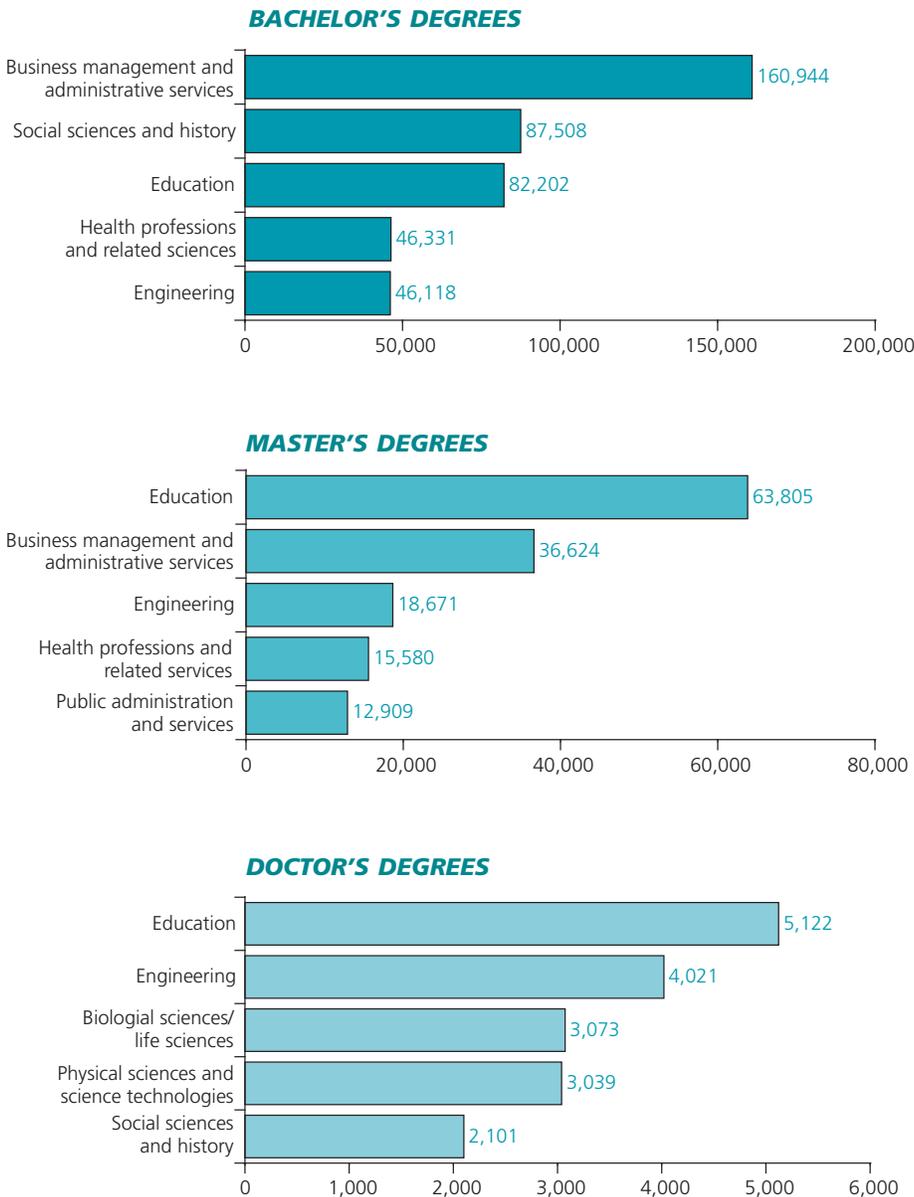
Percentage of Institutions Offering Credit, Technology-Based Distance Education Courses, by Type of Institution: 1993



Sources: National University Continuing Education Association, *Lifelong Learning Trends, 4th Edition*, p. 70, 1996, based on data from SRI International, *1994 Study of Communications Technology in Higher Education*, 1995.

FIGURE 8

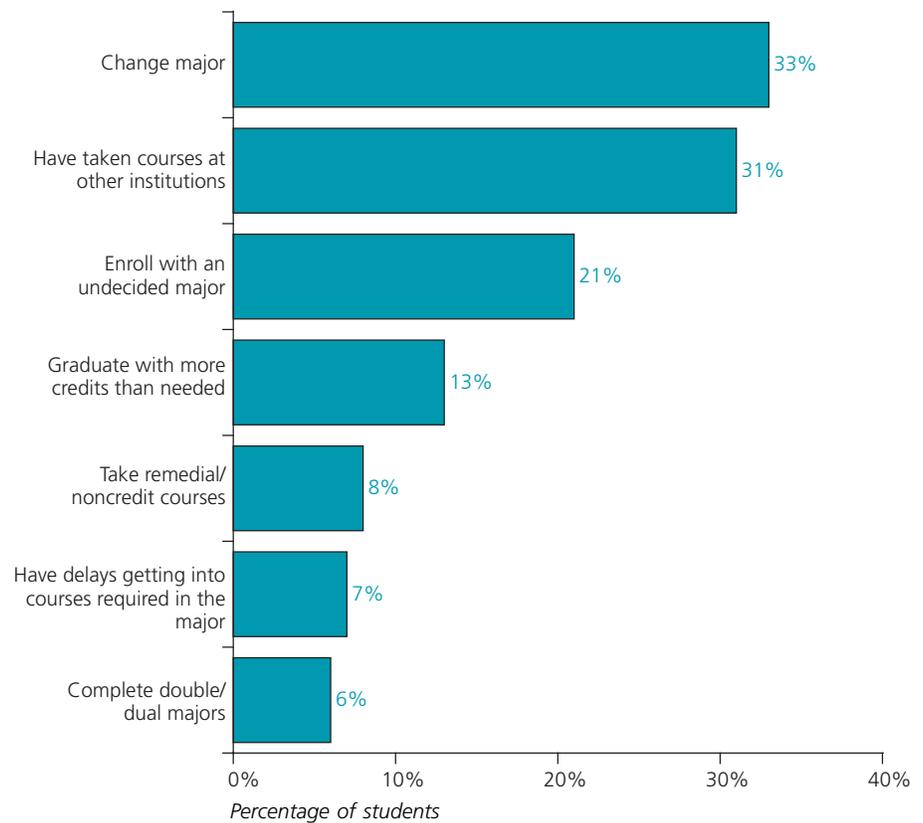
Top Five Fields of Study Among Bachelor's, Master's, and Doctor's Degree Recipients at Public Four-Year Institutions: 1992–93



Source: U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics 1995*. Washington, D.C.: U.S. Government Printing Office, 1995, p. 274.

FIGURE 9

Factors Affecting Completion of Degree at Public Research Universities: 1994

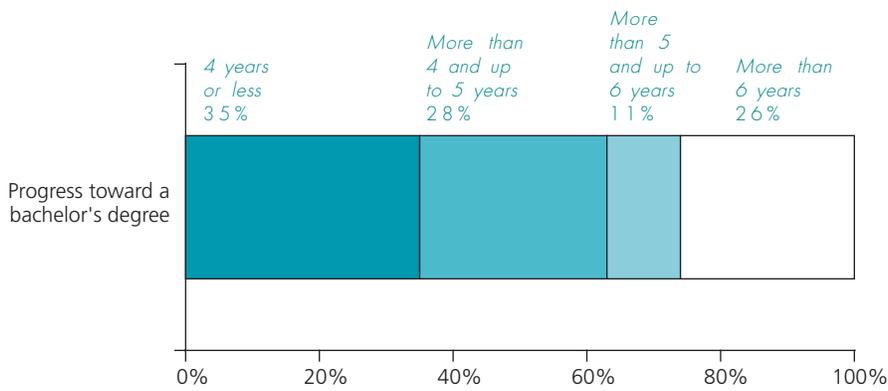


Note: These figures are estimated medians; calculations were made by the Office of Public Affairs of the National Association of State Universities and Land-Grant Colleges, September, 1996.

Source: El-Khawas, Elaine. *Campus Trends 1994*. Washington, D.C.: American Council on Education, 1994, p. 42.

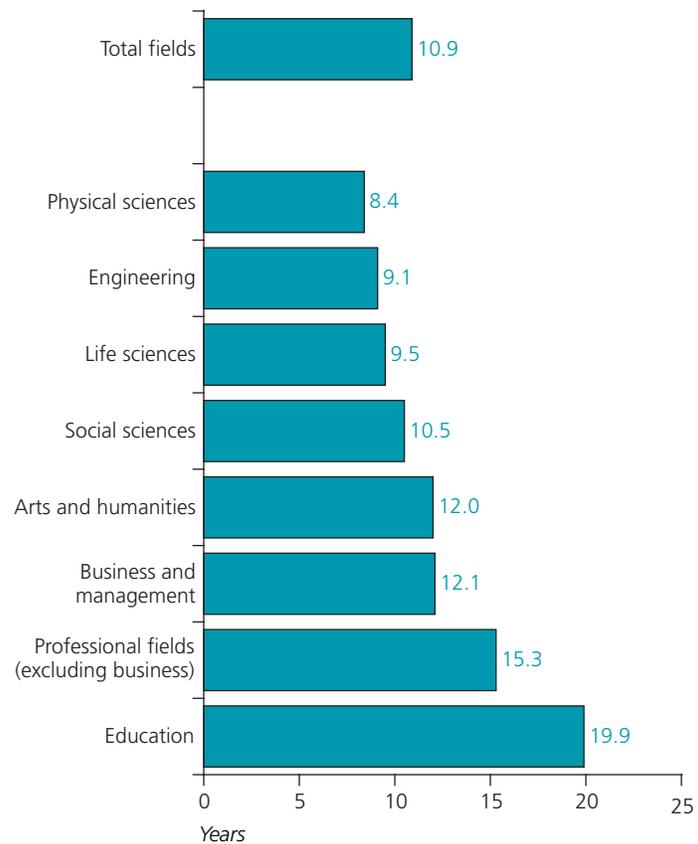
FIGURE 10

Percentage of College Graduates Completing a Bachelor's Degree Within Selected Years of Starting College: 1993



Source: U.S. Department of Education, National Center for Education Statistics. *The Condition of Education 1996*. Washington, D.C.: U.S. Government Printing Office, 1996, p. 215.

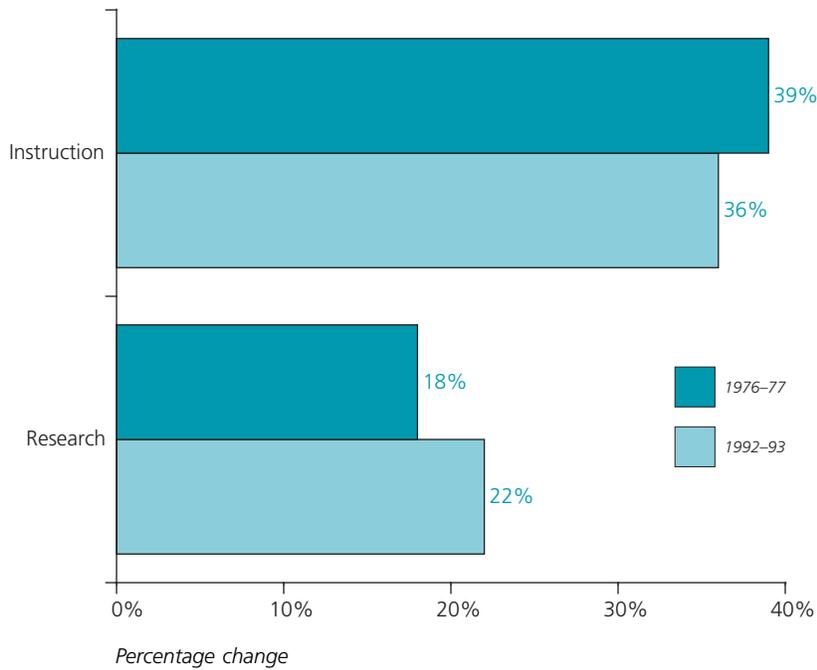
FIGURE 11

Median Years Between Completion of Baccalaureate and Doctoral Degree, by Field of Study: 1995

Source: "Almanac Issue." *The Chronicle of Higher Education*, Sept. 2, 1996, p. 20.

FIGURE 12

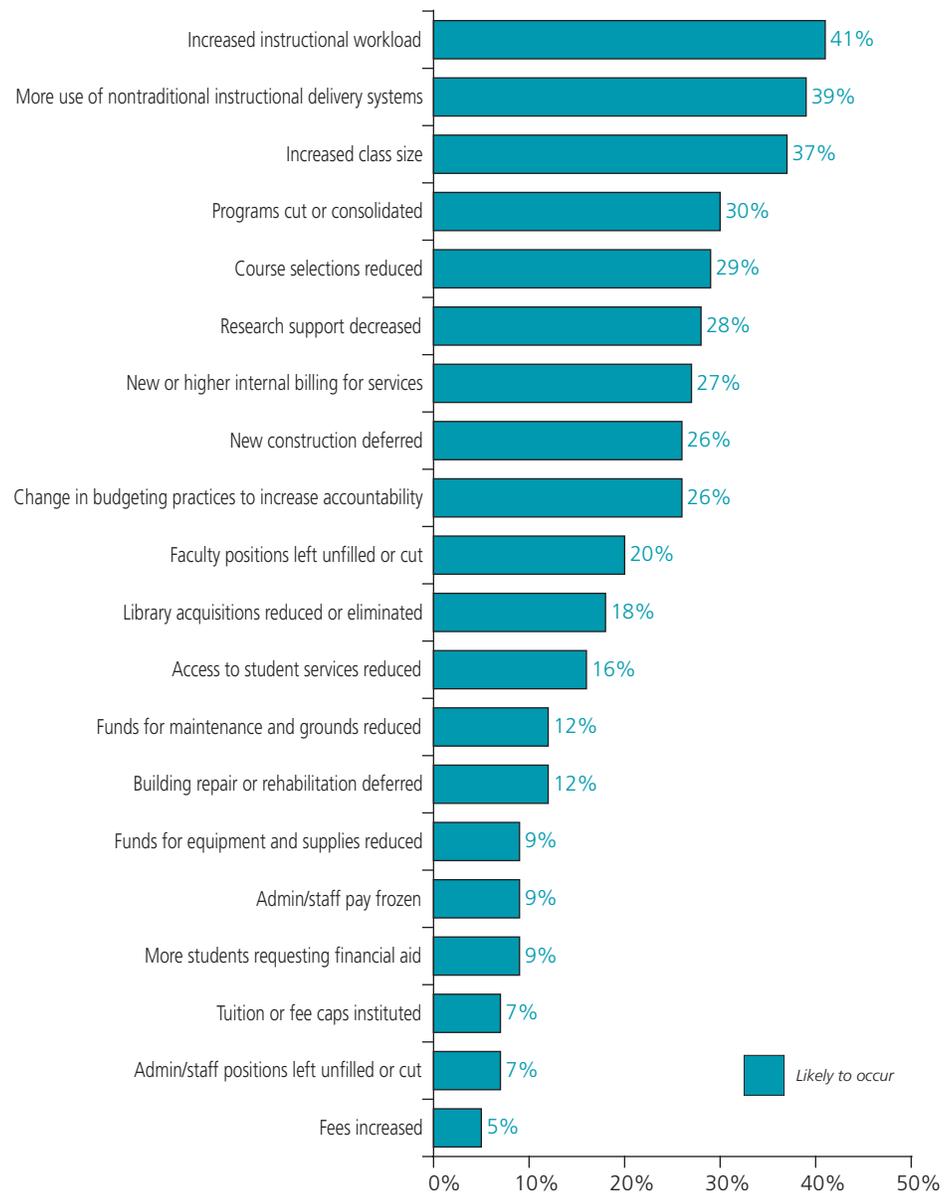
Change in the Share of Educational and General Expenditures of Public Universities for Instructional and Research Activities: 1976-77 and 1992-93



Source: U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics 1995*. Washington, D.C.: U.S. Government Printing Office, 1995, p. 350.

FIGURE 13

Percentage of NASULGC Institutions That are Likely to Make the Following Changes Due to Budgetary Pressures: 1996



Source: National Association of State Universities and Land-Grant Colleges. *Student Charges: The Impact on Students, Families, and Public Institutions, 1995–96*. Washington, D.C.: National Association of State Universities and Land-Grant Colleges, 1996, unpublished tabulations.



NASULGC

**National Association of State Universities
and Land-Grant Colleges**

Office of Public Affairs

One Dupont Circle, NW, Suite 710

Washington, DC 20036-1191

202-778-0818

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