

SIGNIFICANT POINTS

- With about 1 in 4 Americans enrolled in educational institutions, educational services is the second largest industry, accounting for about 12.7 million jobs.
- Most teaching positions—which constitute almost half of all educational services jobs—require at least a bachelor’s degree, and some require a master’s or doctoral degree.
- Retirements in a number of education professions will create many job openings.

Nature of the Industry

Education is an important part of life. The amount and type of education that individuals receive are a major influence on both the types of jobs they are able to hold and their earnings. Life-long learning is important in acquiring new knowledge and upgrading one’s skills, particularly in this age of rapid technological and economic changes. The educational services industry includes a variety of institutions that offer academic education, vocational or career and technical instruction, and other education and training to millions of students each year.

Because school attendance is compulsory until at least age 16 in all 50 States and the District of Columbia, elementary, middle, and secondary schools are the most numerous of all educational establishments. Elementary, middle, and secondary schools provide academic instruction to students in kindergarten through grade 12, in public schools, parochial schools, boarding and other private schools, and military academies. Some secondary schools offer a mixture of academic and career and technical instruction.

Postsecondary institutions—universities, colleges, professional schools, community or junior colleges, and career and technical institutes—provide education and training in both academic and technical subjects for mainly adult students and those who have graduated high school. Universities offer bachelor’s, master’s, and doctoral degrees, while colleges generally offer only the bachelor’s degree. Professional schools offer graduate degrees in fields such as law, medicine, business administration, and engineering. The undergraduate bachelor’s degree typically requires 4 years of study, while graduate degrees require additional years of study. Community and junior colleges and technical institutes offer associate degrees, certificates, or other diplomas, typically involving 2 years of study or less. Career and technical schools provide specialized training and services primarily related to a specific job. They include computer and cosmetology training institutions, business and secretarial schools, correspondence schools, and establishments that offer certificates in commercial art and practical nursing.

Also included in this industry are institutions that provide training and services to the education industry, such as curriculum development and student exchanges. Also included are schools or programs that offer nonacademic or self-enrichment classes, such as automobile driving and cooking instruction, among other things.

In recent decades, the Nation has focused attention on the educational system because of the growing importance of pro-

ducing a trained and educated workforce. Many institutions, including government, private industry, and research organizations, are involved in improving the quality of education. The passage of the No Child Left Behind Act of 2001 established Federal guidelines to ensure that all students in public elementary through secondary schools receive a high-quality education. Through this act, individual States are given more flexibility on how to spend the educational funds they are allocated. At the same time, the Act requires standardized testing of all students in core subject areas. In this manner, students, teachers, and all staff involved in education will be held accountable for the results of testing, and teachers and teacher assistants will demonstrate that they are sufficiently qualified in the subjects or areas in which they are licensed to teach. States are responsible for following these guidelines and can lose Federal funding if the standards are not met. Prior to passage of the Act, in an effort to raise academic achievement among students and set standards for graduation, many States had already begun to introduce performance standards. Moreover, a growing number of States were requiring prospective teachers to pass basic skills tests before allowing them to teach.

In an effort to promote innovation in public education, many local and State governments have authorized the creation of public charter schools, in the belief that, by presenting students and their parents with a greater range of instructional options, schools and students will be encouraged to strive for excellence. Charter schools, which usually are run by teachers and parents or, increasingly, by private firms, operate independently of the school system, set their own standards, and practice a variety of innovative teaching methods. Businesses strive to improve education by donating instructional equipment, lending personnel for teaching and mentoring, hosting visits to the workplace, and providing job-shadowing and internship opportunities. Businesses also collaborate with educators to develop curricula that will provide students with the skills they need to cope with new technology in the workplace.

Quality improvements also are being made to career and technical education at secondary and postsecondary schools. Academics are playing a more important role in career and technical curricula, and programs are being made more relevant to the local job market. Often, students must meet rigorous standards, set in consultation with private industry, before receiving a certificate or degree. Career and technical students in secondary school

programs must pass the same standardized tests in core subject areas as students who are enrolled in academic programs of study. A growing number of career and technical programs are emphasizing general workplace skills such as problem solving, teamwork, and customer service. Many high schools now offer technical preparatory (“tech-prep”) programs, which are developed jointly by high schools and community colleges to provide a continuous course of study leading to an associate’s degree or other postsecondary credential.

Computer technology continues to affect the education industry. Computers simplify administrative tasks and make it easier to track student performance. Teachers use the Internet in classrooms as well as to communicate with colleagues around the country; students use the Internet for research projects. Distance learning continues to expand as more postsecondary institutions use Internet-based technology to post lessons and coursework electronically, allowing students in distant locations access to virtual classrooms.

Despite these improvements in quality, problems remain. Dropout rates have not declined significantly over the decade, and employers contend that numerous high school students still lack many of the math and communication skills needed in today’s workplace. School budgets often are not sufficient to meet the institution’s various goals, particularly in the inner cities, where aging facilities and chronic teacher shortages make teaching difficult.

Working Conditions

School conditions often vary from town to town. Some schools in poorer neighborhoods may be rundown, have few supplies and equipment, and lack air conditioning. Other schools may be new and well equipped and maintained. Conditions at postsecondary institutions are generally very good. Regardless of the type of conditions facing elementary and secondary schools, seeing students develop and enjoy learning can be rewarding for teachers and other education workers. However, dealing with unmotivated students or those with social or behavioral problems can be stressful and require patience and understanding.

Most educational institutions operate 10 months a year, but summer sessions for remedial or adult students are not uncommon. Education administrators, office and administrative support workers, and janitors and cleaners often work the entire year. Night and weekend work is common for teachers of adult literacy and remedial and self-enrichment education, for postsecondary teachers, and for library workers in postsecondary institutions. Part-time work is common for this same group of teachers, as well as for teacher assistants and school busdrivers. The latter often work a split shift, driving one or two routes in the morning and afternoon; drivers who are assigned to drive students on field trips, to athletic and other extracurricular activities, or to midday kindergarten programs work additional hours during or after school. Many teachers spend significant time outside of school preparing for class, doing administrative tasks, conducting research, writing articles and books, and pursuing advanced degrees.

Despite occurrences of violence in some schools, educational services is a relatively safe industry. There were 2.8 cases of

occupational injury and illness per 100 full-time workers in private educational establishments in 2002, compared with 5.3 in all industries combined.

Employment

The educational services industry was the second largest industry in the economy in 2002, providing jobs for about 12.7 million workers—more than 12.5 million wage and salary workers, and 183,000 self-employed workers. The majority of wage and salary workers are employed in the public sector, because most students attend public educational institutions. According to the latest data from the Department of Education’s National Center for Education Statistics, more than three-fourths of all elementary, middle, and secondary schools were public schools.

Employees in this industry are older than average; 47 percent are over the age of 45, compared with 38 percent of employees in all industries combined (table 1).

Table 1. Percent distribution of employment in educational services by age group, 2002

Age group	Educational services	All industries
Total	100.0%	100.0%
16-24	10.0	14.7
25-34	19.6	21.6
35-44	23.5	26.3
45-54	29.0	22.9
55-64	15.0	11.4
65 and older	2.9	3.2

Occupations in the Industry

Workers in the educational services industry take part in all aspects of education, from teaching and counseling students to driving school buses and serving cafeteria lunches. Although 2 out of 3 workers in educational services are employed in professional and related occupations, the industry employs many administrative support, managerial, service, and other workers (table 2).

Teachers account for almost half of all workers in the industry. Their duties depend on the age group and subject they teach, as well as on the type of institution in which they work. Teachers should have a sincere interest in helping students and should also have the ability to inspire respect, trust, and confidence. Strong speaking and writing skills, inquiring and analytical minds, and a desire to pursue and disseminate knowledge are vital prerequisites for teachers.

Preschool, kindergarten, and elementary school teachers play a critical role in the early development of children. They usually instruct one class in a variety of subjects, introducing the children to mathematics, language, science, and social studies. Often, they use games, artwork, music, computers, and other tools to teach basic skills.

Middle and secondary school teachers help students delve more deeply into subjects introduced in elementary school. Middle and secondary school teachers specialize in a specific academic subject, such as English, mathematics, or history, or a career and technical area, such as automobile mechanics, busi-

Table 2. Employment of wage and salary workers in educational services by occupation, 2002 and projected change, 2002-12
(Employment in thousands)

Occupation	Employment, 2002		Percent change, 2002-12
	Number	Percent	
All occupations	12,527	100.0	19.9
Management, business, and financial occupations	825	6.6	23.0
Education administrators, elementary and secondary school	204	1.6	21.4
Education administrators, postsecondary	120	1.0	26.9
Professional and related occupations	8,210	65.5	23.9
Educational, vocational, and school counselors	177	1.4	13.7
Postsecondary teachers	1,512	12.1	38.3
Preschool teachers, except special education	67	0.5	27.0
Kindergarten teachers, except special education	154	1.2	28.3
Elementary school teachers, except special education	1,427	11.4	14.9
Middle school teachers, except special and vocational education	580	4.6	8.8
Secondary school teachers, except special and vocational education	982	7.8	18.1
Vocational education teachers, secondary school	102	0.8	9.3
Special education teachers, preschool, kindergarten, and elementary school	203	1.6	30.4
Special education teachers, middle school	86	0.7	30.5
Special education teachers, secondary school	131	1.0	30.3
Self-enrichment education teachers	80	0.6	53.5
All other teachers, primary, secondary, and adult	425	3.4	43.1
Librarians	94	0.7	6.4
Instructional coordinators	68	0.5	27.9
Teacher assistants	1,047	8.4	21.9
Coaches and scouts	65	0.5	23.5
Registered nurses	80	0.6	32.8
Service occupations	1,440	11.5	13.6
Security guards	62	0.5	7.0
Cooks, institution and cafeteria	181	1.4	2.7
Food preparation workers	88	0.7	8.8
Janitors and cleaners, except maids and housekeeping cleaners	477	3.8	16.6
Child care workers	112	0.9	19.3
Office and administrative support occupations	1,428	11.4	3.8
Bookkeeping, accounting, and auditing clerks	88	0.7	10.1
Executive secretaries and administrative assistants	193	1.5	11.9
Secretaries, except legal, medical, and executive	382	3.1	-2.8
Installation, maintenance, and repair occupations	164	1.3	17.2
Transportation and material moving occupations	321	2.6	11.9
Bus drivers, school	277	2.2	12.6

NOTE: May not add to totals due to omission of occupations with small employment.

ness education, or computer repair. Some supervise afterschool extracurricular activities, and some help students with academic decisions, such as choosing courses, colleges, and careers.

Special education teachers work with students—from toddlers to those in their early twenties—who have a variety of learning and physical disabilities. Most special education teachers teach at the elementary school level. Using the general education curriculum, special education teachers modify the instruction and, when necessary, develop alternative assessment methods to accommodate a student's special needs. They also help special education students develop emotionally, feel comfortable in social situations, and be aware of socially acceptable behavior.

Postsecondary teachers, or faculty, as they are usually called, generally are organized into departments or divisions, based on their subject or field. They teach and advise college students and perform a significant part of our Nation's research. They prepare lectures, exercises, and laboratory experiments; grade exams and papers; and advise and work with students individually. Postsecondary teachers keep abreast of developments in their field by reading current literature, talking with colleagues and businesses, and participating in professional conferences. They also consult with government, business, nonprofit, and community organizations. In addition, they do their own research to expand knowledge in their field, often publishing their findings in scholarly journals, books, and electronic media.

Adult literacy and remedial and self-enrichment education teachers teach English to speakers of other languages (ESOL), prepare sessions for the General Educational Development (GED) exam, and give basic instruction to out-of-school youths and adults. They also may teach classes that students take for personal enrichment, such as cooking or dancing.

Education administrators provide vision, direction, leadership, and day-to-day management of educational activities in schools, colleges and universities, businesses, correctional institutions, museums, and job training and community service organizations. They set educational standards and goals and aid in establishing the policies and procedures to carry them out. They develop academic programs; monitor students' educational progress; hire, train, motivate, and evaluate teachers and other staff; manage counseling and other student services; administer recordkeeping; prepare budgets; and handle relations with staff, parents, current and prospective students, employers, and the community.

Instructional coordinators evaluate school curricula and recommend changes to them. They research the latest teaching methods, textbooks, and other instructional materials and coordinate and provide training to teachers. They also coordinate equipment purchases and assist in the use of new technology in schools.

Educational, vocational, and school counselors work at the elementary, middle, secondary, and postsecondary school levels and help students evaluate their abilities, talents, and interests so that the students can develop realistic academic and career options. Using interviews, counseling sessions, tests, and other methods, secondary school counselors also help students understand and deal with their social, behavioral, and personal prob-

lems. They advise on college majors, admission requirements, and entrance exams and on trade, technical school, and apprenticeship programs. Elementary school counselors do more social and personal counseling and less career and academic counseling than do secondary school counselors. School counselors may work with students individually or in small groups, or they may work with entire classes.

Librarians help people find information and learn how to use it effectively in their scholastic, personal, and professional pursuits. Librarians manage library staff and develop and direct information programs and systems for the public, as well as oversee the selection and organization of library materials. *Library technicians* help librarians acquire, prepare, and organize material; direct library users to standard references; and retrieve information from computer databases. *Clerical library assistants* check out and receive library materials, collect overdue fines, and shelve materials.

Teacher assistants, also called *teacher aides* or *instructional aides*, provide instructional and clerical support for classroom teachers, allowing the teachers more time to plan lessons and to teach. Using the teacher's lesson plans in such manner as to provide students with individualized attention, teacher assistants tutor and assist children—particularly special education students—in learning class material. Assistants also aid and supervise students in the cafeteria, in the schoolyard, in hallways, or on field trips. They record grades, set up equipment, and prepare materials for instruction.

School busdrivers transport students to and from schools and related activities.

The educational services industry employs many other workers who are found in a wide range of industries. For example, office and administrative support workers such as *secretaries*, *administrative assistants*, and *general office clerks* account for about 1 out of 10 jobs in educational services.

Training and Advancement

The educational services industry employs some of the most highly educated workers in the labor force. Postsecondary teachers—particularly college and university faculty—generally need a doctoral degree for full-time, tenure-track employment, but sometimes can teach with a master's degree, especially at 2-year colleges. Most faculty members are hired as instructors or assistant professors and may advance to associate professor and full professor. Some faculty advance to administrative and managerial positions, such as department chairperson, dean, or president.

Kindergarten, elementary, middle, and secondary school teachers must have a bachelor's degree and complete an approved teacher training program, with a prescribed number of subject and education credits, as well as supervised practice teaching. All States require public school teachers to be licensed; however, licensure requirements vary by State. Many States offer alternative licensure programs for people who have bachelor's degrees in the subject they will teach, but lack the education courses required for a regular license. With additional education or certification, teachers may become school librarians, reading specialists, curriculum specialists, or guidance counselors. Some

teachers advance to administrative or supervisory positions—such as department chairperson, assistant principal, or principal—but the number of these jobs is limited. In some school systems, highly qualified, experienced elementary and secondary school teachers can become senior or mentor teachers, with higher pay and additional responsibilities.

Special education teachers have many of the same requirements as kindergarten, elementary, middle, and secondary school teachers. In addition, most States require specialized training in special education. A master's degree in special education, involving at least 1 year of additional course work, including a specialization, is also required by many States.

Vocational, or career and technical, education teachers sometimes need work or other experience in their field—and a license or certificate when required by the field—for full professional status. Most States require career and technical education teachers and adult literacy and remedial education teachers to have a bachelor's degree, and some States also require teacher certification. Self-enrichment teachers need only practical experience in the field in order to teach.

School counselors generally need a master's degree in a counseling specialty or a related field. All States require school counselors to hold State school counseling certification; however, certification procedures vary from State to State. Some States require public school counselors to have both counseling and teaching certificates. Depending on the State, a master's degree in counseling and 2 to 5 years of teaching experience may be required for a counseling certificate. Experienced school counselors may advance to a larger school; become directors or supervisors of counseling, guidance, or student personnel services; or, with further graduate education, become counseling psychologists or school administrators.

Training requirements for education administrators depend on where they work. Principals, assistant principals, and school administrators usually have held a teaching or related job before entering administration, and they generally need a master's or doctoral degree in education administration or educational supervision, as well as State teacher certification. Academic deans usually have a doctorate in their specialty. Education administrators may advance up an administrative ladder or transfer to larger schools or school systems. They also may become superintendent of a school system or president of an educational institution.

Training requirements for teacher assistants range from a high school diploma to some college training. The No Child Left Behind Act mandates that all new teacher assistants working in schools that receive Title I funds have a minimum of an associate's degree or the equivalent, and that current workers meet these requirements by 2006. Districts that assign teaching responsibilities to teacher assistants usually have higher training requirements than those which do not. Teacher assistants who obtain a bachelor's degree, usually in education, may become certified teachers.

Librarians normally need a master's degree in library science. Many States require school librarians to be licensed as teachers and have courses in library science. Experienced librarians may advance to administrative positions, such as department head,

library director, or chief information officer. Training requirements for library technicians range from a high school diploma to specialized postsecondary training; a high school diploma is sufficient for library assistants. Library workers can advance—from assistant, to technician, to librarian—with experience and the required formal education. School busdrivers, need a commercial driver's license and have limited opportunities for advancement; some become supervisors or dispatchers.

Earnings

Earnings of occupations concentrated in the educational services industry—education administrators, teachers, counselors, and librarians—are significantly higher than the average for all occupations, because the workers tend to be older and have higher levels of educational attainment. Among teachers, earnings increase with higher educational attainment and more years of service. Full-time postsecondary teachers earn the most, followed by elementary, middle, and secondary school teachers. Most teachers are paid a salary, but part-time instructors in postsecondary institutions usually are paid a fixed amount per course. Educational services employees who work the traditional school year can earn additional money during the summer in jobs related to, or outside of, education. Benefits generally are good, but, as in other industries, part-time workers often do not receive the same benefits that full-time workers do. Earnings for selected occupations within private education institutions only appear in table 3.

Almost 40 percent of workers in the educational services industry—the largest number being in elementary, middle, and secondary schools—are union members or are covered by union contracts, compared with only 15 percent of workers in all industries combined. The American Federation of Teachers and the National Education Association are the largest unions representing teachers and other school personnel.

Outlook

Wage and salary employment growth of 20 percent is expected in the educational services industry over the 2002–12 period, higher than the 16 percent increase projected for all industries combined. In addition, a greater-than-average number of workers are over the age of 45 in nearly all the major occupations that make up the industry—from janitors to education administrators—so it is likely that a surge in retirements will create large numbers of job openings in addition to those due to employment growth (chart).

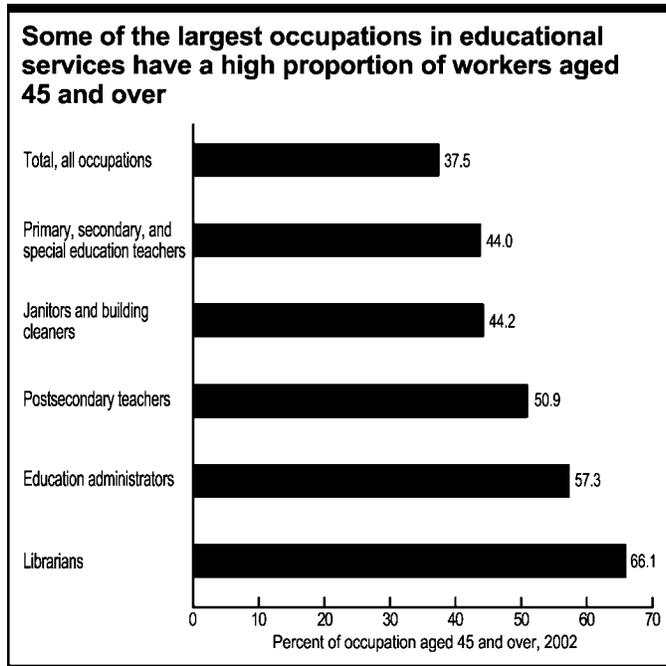
School districts, particularly those in urban and rural areas, continue to report difficulties in recruiting qualified teachers, administrators, and support personnel. Also, many schools in fast-growing areas of the country—including several States and cities in the South and West—report difficulty recruiting education workers, especially teachers. As retirements increase over the projection decade, the number of students graduating with education degrees may not be sufficient to meet this industry's growing needs, making job opportunities for graduates in many education fields good to excellent. Currently, alternative licensing programs are helping to attract noneducation majors into teaching. In addition, the current economic downturn has led to an increase in the number of job applicants for teacher positions,

Table 3. Median hourly earnings of the largest occupations in private educational services, 2002

Occupation	Educational services, private	All industries
Education administrators, postsecondary ...	\$31.06	\$31.08
Educational, vocational, and school counselors	22.47	21.20
Librarians	21.97	20.72
Vocational education teachers, postsecondary	18.88	-
Executive secretaries and administrative assistants	15.58	16.06
Secretaries, except legal, medical, and executive	12.34	12.16
Janitors and cleaners, except maids and housekeeping cleaners	10.82	8.77
Office clerks, general	10.80	10.71
Child care workers	8.99	7.86
Cooks, institution and cafeteria	7.97	8.72

a factor that has helped to alleviate some of the personnel shortages experienced in previous years. Still, opportunities should continue to be very good for highly qualified teachers, especially those in subject areas such as math, science, and bilingual education.

At the postsecondary level, increases in student enrollments and projected retirements of current faculty should contribute to a favorable job market for postsecondary teachers. As children of the baby boom continue to reach college age, and as more adults pursue continuing education to enhance or update their skills, postsecondary student enrollments are expected to increase, spurring much faster-than-average employment growth for postsecondary teachers. However, candidates applying for tenured positions will continue to face keen competition as many colleges and universities reduce the number of these positions in favor of adjunct or part-time faculty.



Over the long-term, a growing emphasis on improving education and making it available to more children and young adults will increase overall demand for workers in education services. Reforms, such as universal preschool, all-day kindergarten, and reduced class sizes, if enacted, would require more preschool and elementary school teachers. However, flat enrollment projections at the preschool, elementary, and secondary school level are likely to slow growth somewhat, resulting in average growth for these teachers.

The number of special education teachers is projected to grow faster than the average through 2012, with growth stemming from an increasing enrollment of special education students, continued emphasis on the inclusion of disabled students in general education classrooms, and an effort to reach students with problems at younger ages. Employment of teacher assistants also will grow faster than the average; school reforms call for more individual attention to students, and additional teacher assistants will be needed in general education, special education, and English-as-a-second-language classrooms.

Despite expected increases in education expenditures over the next decade, budget constraints at all levels of government may place restrictions on educational services, particularly in light of the rapidly escalating costs of college tuition, special education, construction for new schools, and other services. Cuts in funding could affect student services (such as school busing, library and educational materials, and extracurricular activities), as well as employment of administrative, instructional, and support staff. Budget considerations also may affect attempts to expand school programs, such as increasing the number of counselors and teacher assistants in elementary

schools. In States with severe budget problems, schools may be forced to increase their class size, cut back on hiring and training teachers, or even possibly lay off teachers.

Sources of Additional Information

Information on unions and education-related issues can be obtained from the following organizations:

- American Federation of Teachers, 555 New Jersey Ave. NW, Washington, DC 20001.
- National Education Association, 1201 16th St. NW, Washington, DC 20036.

Information on most occupations in the educational services industry, including the following, appears in the 2004–05 edition of the *Occupational Outlook Handbook*:

- Busdrivers
- Counselors
- Education administrators
- Instructional coordinators
- Librarians
- Library assistants, clerical
- Library technicians
- Teacher assistants
- Teachers—adult literacy and remedial and self-enrichment education
- Teachers—postsecondary
- Teachers—preschool, kindergarten, elementary, middle, and secondary
- Teachers—special education