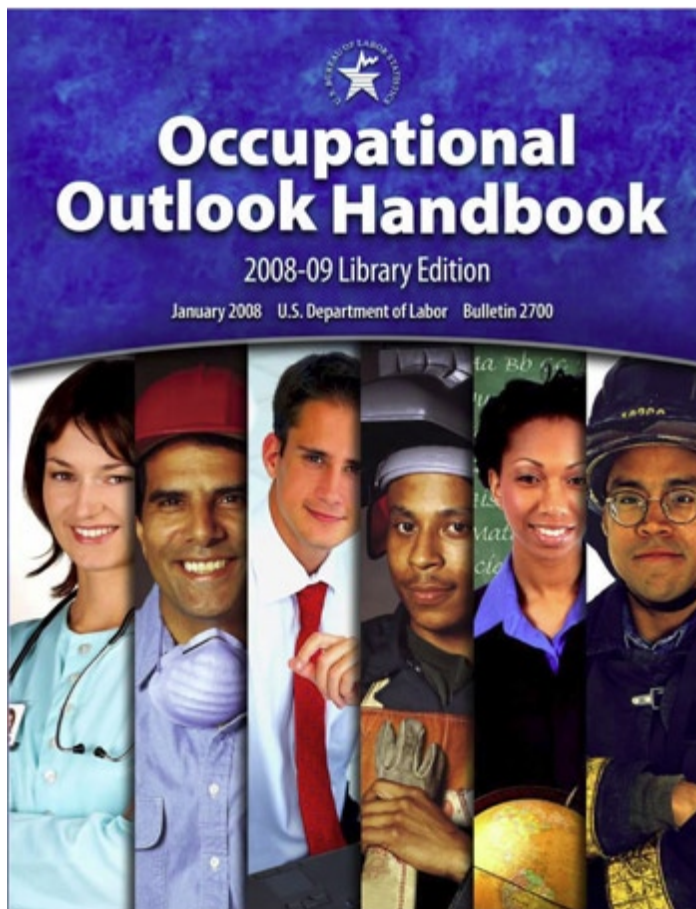


Education and Community and Social Service Occupations



Reprinted from the
Occupational Outlook Handbook, 2008-09 Edition

U.S. Department of Labor
Bureau of Labor Statistics



Occupations Included in this Reprint

Archivists, curators, and museum technicians
Counselors
Education administrators
Health Educators
Instructional coordinators
Librarians
Library technicians
Probation officers and correctional treatment specialists
Social and human service assistants
Social workers
Teacher assistants
Teachers—adult literacy and remedial education
Teachers—postsecondary
Teachers—preschool, kindergarten, elementary, middle, and secondary
Teachers—self-enrichment education
Teachers—special education

Archivists, Curators, and Museum Technicians

(O*NET 25-4011.00, 25-4012.00, 25-4013.00)

Significant Points

- Most worked in museums, historical sites, and similar venues; in educational institutions; or in Federal, State, or local government.
- A graduate degree and related work experience are required for most positions; museum technicians may enter with a bachelor's degree.
- Keen competition is expected for most jobs because qualified applicants generally outnumber job openings.

Nature of the Work

Archivists, curators, and museum technicians work for museums, governments, zoos, colleges and universities, corporations, and other institutions that require experts to preserve important records and artifacts. These workers preserve important objects and documents, including works of art, transcripts of meetings, photographs, coins and stamps, living and preserved plants and animals, and historic objects, including, for example, turn-of-the-century immigration records, buildings, and sites.

Archivists and curators plan and oversee the arrangement, cataloguing, and exhibition of collections and, along with technicians and conservators, maintain collections. They acquire and preserve important documents and other valuable items for permanent storage or display. They also describe, catalogue, and analyze, valuable objects for the benefit of researchers and the public.

Archivists and curators may coordinate educational and public outreach programs, such as tours, workshops, lectures, and classes, and may work with the boards of institutions to administer plans and policies. They also may research topics or items relevant to their collections.

Although some duties of archivists and curators are similar, the types of items they deal with differ: curators usually handle objects with cultural, biological, or historical significance, such as sculptures, textiles, and paintings, while archivists handle mainly records and documents that are retained because of their importance and potential value in the future.

Archivists collect, organize, and maintain control over a wide range of information deemed important enough for permanent safekeeping. This information takes many forms: photographs, films, video and sound recordings, and electronic data files in a wide variety of formats, as well as more traditional paper records, letters, and documents.

Archivists maintain records in accordance with accepted standards and practices that ensure the long-term preservation and easy retrieval of the documents. Records may be saved on any medium, including paper, film, videotape, audiotape, computer disk, or DVD. They also may be copied onto some other format to protect the original and to make the records more accessible

to researchers who use them. As various storage media evolve, archivists must keep abreast of technological advances in electronic information storage.

Archivists often specialize in an area of history so they can more accurately determine which records in that area qualify for retention and should become part of the archives. Archivists also may work with specialized forms of records, such as manuscripts, electronic records, photographs, cartographic records, motion pictures, and sound recordings.

Computers are increasingly being used to generate and maintain archival records. Professional standards for the use of computers in handling archival records are still evolving. Expanding computer capabilities that allow more records to be stored and exhibited electronically have transformed, and are expected to continue to transform, many aspects of archival collections.

Curators administer museums, zoos, aquariums, botanical gardens, nature centers, and historic sites. The head curator of the museum is usually called the *museum director*. Curators direct the acquisition, storage, and exhibition of collections, including negotiating and authorizing the purchase, sale, exchange, or loan of collections. They are also responsible for authenticating, evaluating, and categorizing the specimens in a collection. Curators oversee and help conduct the institution's research projects and related educational programs. Today, an increasing part of a curator's duties involves fundraising and promotion, which may include the writing and reviewing of grant proposals, journal articles, and publicity materials, as well as attendance at meetings, conventions, and civic events.

Most curators specialize in a particular field, such as botany, art, paleontology, or history. Those working in large institutions may be highly specialized. A large natural history museum, for example, would employ separate curators for its collections of birds, fishes, insects, and mammals. Some curators maintain their collections, others do research, and others perform administrative tasks. In small institutions with only one or a few curators, one curator may be responsible for a number of tasks, from maintaining collections to directing the affairs of the museum.

Conservators manage, care for, preserve, treat, and document works of art, artifacts, and specimens—work that may require substantial historical, scientific, and archaeological research. They use x-rays, chemical testing, microscopes, special lights, and other laboratory equipment and techniques to examine objects and determine their condition and the appropriate method for preserving them. Conservators document their findings and treat items to minimize their deterioration or to restore them to their original state. Conservators usually specialize in a particular material or group of objects, such as documents and books, paintings, decorative arts, textiles, metals, or architectural material. In addition to their conservation work, conservators participate in outreach programs, research topics in their area of specialty, and write articles for scholarly journals.

Museum technicians assist curators by performing various preparatory and maintenance tasks on museum items. They also answer public inquiries and assist curators and outside scholars in using collections. Archives technicians help archivists organize, maintain, and provide access to historical documentary materials.

Work environment. The working conditions of archivists and curators vary. Some spend most of their time working with the public, providing reference assistance and educational services. Others perform research or process records, which often means working alone or in offices with only a few people. Those who restore and install exhibits or work with bulky, heavy record containers may lift objects, climb, or stretch. Those in zoos, botanical gardens, and other outdoor museums and historic sites frequently walk great distances. Conservators work in conservation laboratories. The size of the objects in the collection they are working with determines the amount of effort involved in lifting, reaching, and moving objects.

Curators who work in large institutions may travel extensively to evaluate potential additions to the collection, organize exhibitions, and conduct research in their area of expertise. However, travel is rare for curators employed in small institutions.

Training, Other Qualifications, and Advancement

Employment as an archivist, conservator, or curator usually requires graduate education and related work experience. Museum technicians often start work with a bachelor's degree. While completing their formal education, many archivists and curators work in archives or museums to gain "hands-on" experience.

Education and training. Although archivists earn a variety of undergraduate degrees, a graduate degree in history or library science with courses in archival science is preferred by most employers. Many colleges and universities offer courses or practical training in archival techniques as part of their history, library science, or other curriculum. A few institutions now offer master's degrees in archival studies. Some positions may require knowledge of the discipline related to the collection, such as business or medicine.

For employment as a curator, most museums require a master's degree in an appropriate discipline of the museum's specialty—art, history, or archaeology—or in museum studies. Many employers prefer a doctoral degree, particularly for curators in natural history or science museums. Earning two graduate degrees—in museum studies (museology) and a specialized subject—gives a candidate a distinct advantage in this competitive job market. In small museums, curatorial positions may be available to individuals with a bachelor's degree. Because curators, particularly those in small museums, may have administrative and managerial responsibilities, courses in business administration, public relations, marketing, and fundraising also are recommended. For some positions, an internship of full-time museum work supplemented by courses in museum practices is needed.

When hiring conservators, employers look for a master's degree in conservation or in a closely related field, together with substantial experience. There are only a few graduate programs in museum conservation techniques in the United States. Competition for entry to these programs is keen; to qualify, a student must have a background in chemistry, archaeology or studio art, and art history, as well as work experience. For some programs, knowledge of a foreign language also is helpful. Conservation apprenticeships or internships as an undergraduate can enhance one's admission prospects. Graduate programs last 2 to 4 years, the latter years of which include internship training. A few individuals enter conservation through apprenticeships with



Keen competition is expected for most jobs because qualified applicants generally outnumber job openings.

museums, nonprofit organizations, and conservators in private practice. Apprenticeships should be supplemented with courses in chemistry, studio art, and history. Apprenticeship training, although accepted, is a more difficult route into the conservation profession.

Museum technicians usually need a bachelor's degree in an appropriate discipline of the museum's specialty, training in museum studies, or previous experience working in museums, particularly in the design of exhibits. Similarly, archives technicians usually need a bachelor's degree in library science or history, or relevant work experience. Relatively few schools grant a bachelor's degree in museum studies. More common are undergraduate minors or tracks of study that are part of an undergraduate degree in a related field, such as art history, history, or archaeology. Students interested in further study may obtain a master's degree in museum studies, offered in colleges and universities throughout the country. However, many employers feel that, while museum studies are helpful, a thorough knowledge of the museum's specialty and museum work experience are more important.

Certification and other qualifications. The Academy of Certified Archivists offers voluntary certification for archivists. The designation "Certified Archivist" can be obtained by those with at least a master's degree and a year of appropriate archival experience. The certification process requires candidates to pass a written examination, and they must renew their certification periodically.

Archivists need research skills and analytical ability to understand the content of documents and the context in which they were created and to decipher deteriorated or poor-quality printed matter, handwritten manuscripts, photographs, or films. A background in preservation management is often required of archivists because they are responsible for taking proper care of their records. Archivists also must be able to organize large amounts of information and write clear instructions for its retrieval and use. In addition, computer skills and the ability to work with electronic records and databases are very important. Because electronic records are becoming the prevalent form of record-keeping, and archivists must create searchable databases, knowledge of Web technology is increasingly being required.

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Archivists, curators, and museum technicians	25-4010	27,000	33,000	5,000	18
Archivists	25-4011	6,400	7,400	900	14
Curators	25-4012	10,000	13,000	2,400	23
Museum Technicians and Conservators.....	25-4013	11,000	12,000	1,700	16

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Curatorial positions often require knowledge in a number of fields. For historic and artistic conservation, courses in chemistry, physics, and art are desirable. Like archivists, curators need computer skills and the ability to work with electronic databases. Many curators are responsible for posting information on the Internet, so they also need to be familiar with digital imaging, scanning technology, and copyright law.

Curators must be flexible because of their wide variety of duties, among which are the design and presentation of exhibits. In small museums, curators need manual dexterity to build exhibits or restore objects. Leadership ability and business skills are important for museum directors, while marketing skills are valuable in increasing museum attendance and fundraising.

Advancement. Continuing education is available through meetings, conferences, and workshops sponsored by archival, historical, and museum associations. Some larger organizations, such as the National Archives in Washington, D.C., offer such training in-house.

Many archives, including one-person shops, are very small and have limited opportunities for promotion. Archivists typically advance by transferring to a larger unit that has supervisory positions. A doctorate in history, library science, or a related field may be needed for some advanced positions, such as director of a State archive.

In large museums, curators may advance through several levels of responsibility, eventually becoming the museum director. Curators in smaller museums often advance to larger ones. Individual research and publications are important for advancement in larger institutions.

Technician positions often serve as a steppingstone for individuals interested in archival and curatorial work. Except in small museums, a master's degree is needed for advancement.

Employment

Archivists, curators, and museum technicians held about 27,000 jobs in 2006. About 38 percent were employed in museums, historical sites, and similar institutions, and 18 percent worked for State and private educational institutions, mainly college and university libraries. Nearly 31 percent worked in Federal, State, and local government, excluding educational institutions. Most Federal archivists work for the National Archives and Records Administration; others manage military archives in the U.S. Department of Defense. Most Federal Government curators work at the Smithsonian Institution, in the military museums of the Department of Defense, and in archaeological and other museums and historic sites managed by the U.S. Department of the Interior. All State governments have archival or historical record sections employing archivists. State and local governments also

have numerous historical museums, parks, libraries, and zoos employing curators.

Some large corporations that have archives or record centers employ archivists to manage the growing volume of records created or maintained as required by law or necessary to the firms' operations. Religious and fraternal organizations, professional associations, conservation organizations, major private collectors, and research firms also employ archivists and curators.

Conservators may work under contract to treat particular items, rather than as regular employees of a museum or other institution. These conservators may work on their own as private contractors, or they may work as an employee of a conservation laboratory or regional conservation center that contracts their services to museums.

Job Outlook

Faster than average employment growth is expected through 2016. Keen competition is expected for most jobs as archivists, curators, and museum technicians because qualified applicants generally outnumber job openings.

Employment change. Employment of archivists, curators, and museum technicians is expected to increase 18 percent over the 2006-16 decade, faster than the average for all occupations. Jobs for archivists are expected to increase as public and private organizations require organization of and access to increasing volumes of records and information. Public interest in science, art, history, and technology will continue, creating opportunities for curators, conservators, and museum technicians. Museum attendance has held steady in recent years, many museums are financially healthy, and many have pursued building and renovation projects.

There has been an increase in self-employment among conservators, as many museums move toward hiring these workers on contract rather than keeping them permanently on staff. This trend is expected to continue.

Demand for archivists who specialize in electronic records and records management will grow more rapidly than the demand for archivists who specialize in older media formats.

Job prospects. Keen competition is expected for most jobs as archivists, curators, and museum technicians because qualified applicants generally outnumber job openings. Graduates with highly specialized training, such as master's degrees in both library science and history, with a concentration in archives or records management and extensive computer skills, should have the best opportunities for jobs as archivists. Opportunities for those who manage electronic records are expected to be better than for those who specialize in older media formats.

Curator jobs, in particular, are attractive to many people, and many applicants have the necessary training and knowledge of the subject. But because there are relatively few openings, candidates may have to work part time, as an intern, or even as a volunteer assistant curator or research associate after completing their formal education. Substantial work experience in collection management, research, exhibit design, or restoration, as well as database management skills, will be necessary for permanent status.

Conservators also can expect competition for jobs. Competition is stiff for the limited number of openings in conservation graduate programs, and applicants need a technical background. Conservation program graduates with knowledge of a foreign language and a willingness to relocate will have an advantage over less qualified candidates.

Museums and other cultural institutions can be subject to cuts in funding during recessions or periods of budget tightening, reducing demand for these workers. Although the number of archivists and curators who move to other occupations is relatively low, the need to replace workers who retire will create some additional job openings.

Earnings

Median annual earnings of archivists in May 2006 were \$40,730. The middle 50 percent earned between \$30,610 and \$53,990. The lowest 10 percent earned less than \$23,890, and the highest 10 percent earned more than \$73,060. Median annual earnings of curators in May 2006 were \$46,300. The middle 50 percent earned between \$34,410 and \$61,740. The lowest 10 percent earned less than \$26,320, and the highest 10 percent earned more than \$80,030. Median annual earnings of museum technicians and conservators in May 2006 were \$34,340. The middle 50 percent earned between \$26,360 and \$46,120. The lowest 10 percent earned less than \$20,600, and the highest 10 percent earned more than \$61,270.

In 2007, the average annual salary for archivists in the Federal Government was \$79,199; for museum curators, \$80,780; for museum specialists and technicians, \$58,855; and for archives technicians, \$44,547.

Related Occupations

The skills that archivists, curators, and museum technicians use in preserving, organizing, and displaying objects or information of historical interest are shared by artists and related workers; librarians; and anthropologists and archeologists, historians, and other social scientists.

Sources of Additional Information

For information on archivists and on schools offering courses in archival studies, contact:

➤ Society of American Archivists, 527 South Wells St., 5th floor, Chicago, IL 60607-3922. Internet: <http://www.archivists.org>

For general information about careers as a curator and schools offering courses in museum studies, contact:

➤ American Association of Museums, 1575 Eye St.NW., Suite 400, Washington, DC 20005. Internet: <http://www.aam-us.org>

For information about careers and education programs in conservation and preservation, contact:

➤ American Institute for Conservation of Historic and Artistic Works, 1717 K St.NW., Suite 200, Washington, DC 20006.

Internet: <http://aic-faic.org>

For information about archivists and archivist certification, contact:

➤ Academy of Certified Archivists, 90 State St., Suite 1009, Albany, NY 12207. Internet: <http://www.certifiedarchivists.org>

For information about government archivists, contact:

➤ National Association of Government Archivists and Records Administrators, 90 State St., Suite 1009, Albany, NY 12207.

Internet: <http://www.nagara.org>

Information on obtaining positions as archivists, curators, and museum technicians with the Federal Government is available from the Office of Personnel Management through USAJOBS, the Federal Government's official employment information system. This resource for locating and applying for job opportunities can be accessed through the Internet at <http://www.usajobs.opm.gov> or through an interactive voice response telephone system at (703) 724-1850 or TDD (978) 461-8404. These numbers are not toll free, and charges may result.

Counselors

(O*NET 21-1011.00, 21-1012.00, 21-1013.00, 21-1014.00, 21-1015.00, 21-1019.99)

Significant Points

- A master's degree generally is required to become a licensed counselor.
- Job opportunities for counselors should be very good because job openings are expected to exceed the number of graduates from counseling programs.
- The health care and social assistance industry employs about 47 percent of counselors, and state and local government employ about 11 percent.

Nature of the Work

Counselors assist people with personal, family, educational, mental health, and career problems. Their duties vary greatly depending on their occupational specialty, which is determined by the setting in which they work and the population they serve.

Educational, vocational, and school counselors provide individuals and groups with career and educational counseling. School counselors assist students of all levels, from elementary school to postsecondary education. They advocate for students and work with other individuals and organizations to promote the academic, career, personal, and social development of children and youth. School counselors help students evaluate their abilities, interests, talents, and personalities to develop realistic academic and career goals. Counselors use interviews, counseling sessions, interest and aptitude assessment tests, and other methods to evaluate and advise students. They also operate career information centers and career education programs. Often,

counselors work with students who have academic and social development problems or other special needs.

Elementary school counselors observe children during classroom and play activities and confer with their teachers and parents to evaluate the children's strengths, problems, or special needs. In conjunction with teachers and administrators, they make sure that the curriculum addresses both the academic and the developmental needs of students. Elementary school counselors do less vocational and academic counseling than high school counselors.

High school counselors advise students regarding college majors, admission requirements, entrance exams, financial aid, trade or technical schools, and apprenticeship programs. They help students develop job search skills, such as resume writing and interviewing techniques. College career planning and placement counselors assist alumni or students with career development and job-hunting techniques.

School counselors at all levels help students to understand and deal with social, behavioral, and personal problems. These counselors emphasize preventive and developmental counseling to provide students with the life skills needed to deal with problems before they worsen and to enhance students' personal, social, and academic growth. Counselors provide special services, including alcohol and drug prevention programs and conflict resolution classes. They also try to identify cases of domestic abuse and other family problems that can affect a student's development.

Counselors interact with students individually, in small groups, or as an entire class. They consult and collaborate with parents, teachers, school administrators, school psychologists, medical professionals, and social workers to develop and implement strategies to help students succeed.

Vocational counselors, also called *employment* or *career counselors*, provide mainly career counseling outside the school setting. Their chief focus is helping individuals with career decisions. Vocational counselors explore and evaluate the client's education, training, work history, interests, skills, and personality traits. They may arrange for aptitude and achievement tests to help the client make career decisions. They also work with individuals to develop their job-search skills and assist clients in locating and applying for jobs. In addition, career counselors provide support to people experiencing job loss, job stress, or other career transition issues.

Rehabilitation counselors help people deal with the personal, social, and vocational effects of disabilities. They counsel people with disabilities resulting from birth defects, illness or disease, accidents, or other causes. They evaluate the strengths and limitations of individuals, provide personal and vocational counseling, and arrange for medical care, vocational training, and job placement. Rehabilitation counselors interview both individuals with disabilities and their families, evaluate school and medical reports, and confer with physicians, psychologists, occupational therapists, and employers to determine the capabilities and skills of the individual. They develop rehabilitation programs by conferring with clients; these programs often include training to help clients develop job skills. Rehabilitation counselors also work toward increasing the client's capacity to live independently.

Mental health counselors work with individuals, families, and groups to address and treat mental and emotional disorders and to promote mental health. They are trained in a variety of therapeutic techniques used to address issues, including depression, addiction and substance abuse, suicidal impulses, stress, problems with self-esteem, and grief. They also help with job and career concerns, educational decisions, issues related to mental and emotional health, and family, parenting, marital, or other relationship problems. Mental health counselors often work closely with other mental health specialists, such as psychiatrists, psychologists, clinical social workers, psychiatric nurses, and school counselors. (Information on psychologists, registered nurses, social workers and physicians and surgeons, which includes psychiatrists, appears elsewhere in the *Handbook*.)

Substance abuse and behavioral disorder counselors help people who have problems with alcohol, drugs, gambling, and eating disorders. They counsel individuals who are addicted to drugs, helping them to identify behaviors and problems related to their addiction. Counseling can be done on an individual basis, but is frequently done in a group setting. These counselors will often also work with family members who are affected by the addictions of their loved ones. Counselors also conduct programs aimed at preventing addictions.

Marriage and family therapists apply family systems theory, principals and techniques to individuals, families, and couples to resolve emotional conflicts. In doing so, they modify people's perceptions and behaviors, enhance communication and understanding among family members, and help to prevent family and individual crises. Marriage and family therapists also may engage in psychotherapy of a non-medical nature, make appropriate referrals to psychiatric resources, perform research, and teach courses about human development and interpersonal relationships.

Other counseling specialties include gerontological, multicultural, and genetic counseling. A gerontological counselor provides services to elderly people and their families as they face changing lifestyles. Genetic counselors provide information and support to families who have members with birth defects or genetic disorders and to families who may be at risk for a variety of inherited conditions. These counselors identify families at risk, interpret information about the disorder, analyze inheritance patterns and risks of recurrence, and review available options with the family.

Work environment. Work environment can vary greatly depending on occupational specialty. School counselors work predominantly in schools, where they usually have an office but also may work in classrooms. Other counselors may work in a private practice, community health organization, or hospital. Many counselors work in an office where they see clients throughout the day. Because privacy is essential for confidential and frank discussions with clients, counselors usually have private offices.

The work schedules of counselors depend on occupational specialty and work setting. Some school counselors work the traditional 9- to 10-month school year with a 2- to 3-month vacation, but increasing numbers, are employed on 11-month or full-year contracts, particularly those working in middle and high schools. They usually work the same hours as teachers,

but they may travel more frequently to attend conferences and conventions. College career planning and placement counselors work long and irregular hours during student recruiting periods.

Rehabilitation counselors usually work a standard 40-hour week. Self-employed counselors and those working in mental health and community agencies, such as substance abuse and behavioral disorder counselors, frequently work evenings to counsel clients who work during the day. Both mental health counselors and marriage and family therapists also often work flexible hours to accommodate families in crisis or working couples who must have evening or weekend appointments.

Training, Other Qualifications, and Advancement

Education and training requirements for counselors are often very detailed and vary by State and specialty. Prospective counselors should check with State and local governments, employers, and national voluntary certification organizations to determine which requirements apply.

Education and training. Education requirements vary based on occupational specialty and State licensure and certification requirements. A master's degree is usually required to be licensed as a counselor. Some States require counselors in public employment to have a master's degree; others accept a bachelor's degree with appropriate counseling courses. Counselor education programs in colleges and universities are often found in departments of education or psychology. Fields of study include college student affairs, elementary or secondary school counseling, education, gerontological counseling, marriage and family therapy, substance abuse counseling, rehabilitation counseling, agency or community counseling, clinical mental health counseling, career counseling, and related fields. Courses are often grouped into eight core areas: human growth and development, social and cultural diversity, relationships, group work, career development, assessment, research and program evaluation, and professional identity. In an accredited master's degree program, 48 to 60 semester hours of graduate study, including a period of supervised clinical experience in counseling, are required.

Some employers provide training for newly hired counselors. Others may offer time off or tuition assistance to complete a graduate degree. Often counselors must participate in graduate studies, workshops, and personal studies to maintain their certificates and licenses.

Licensure. Licensure requirements differ greatly by State, occupational specialty, and work setting. Many States require school counselors to hold a State school counseling certification and to have completed at least some graduate course work; most require the completion of a master's degree. Some States require school counselors to be licensed, which generally requires continuing education credits. Some States require public school counselors to have both counseling and teaching certificates and to have had some teaching experience.

For counselors based outside of schools, 49 States and the District of Columbia have some form of counselor licensure that governs the practice of counseling. Requirements typically include the completion of a master's degree in counseling, the accumulation of 2 years or 3,000 hours of supervised clinical experience beyond the master's degree level, the pas-



Counselors often work with clients one-on-one to assist with personal, family, educational, and career problems and decisions.

sage of a State-recognized exam, adherence to ethical codes and standards, and the completion of annual continuing education requirements. However, counselors working in certain settings or in a particular specialty may face different licensure requirements. For example, a career counselor working in private practice may need a license, but a counselor working for a college career center may not. In addition, substance abuse and behavior disorder counselors are generally governed by a different State agency or board than other counselors. The criteria for their licensure vary greatly and in some cases, these counselors may only need a high school diploma and certification. Those interested in entering the field must research State and specialty requirements to determine what qualifications they must have.

Other qualifications. People interested in counseling should have a strong desire to help others and should be able to inspire respect, trust, and confidence. They should be able to work independently or as part of a team. Counselors must follow the code of ethics associated with their respective certifications and licenses.

Counselors must possess high physical and emotional energy to handle the array of problems that they address. Dealing daily with these problems can cause stress.

Certification and advancement. Some counselors elect to be certified by the National Board for Certified Counselors, Inc., which grants a general practice credential of National Certified Counselor. To be certified, a counselor must hold a master's degree with a concentration in counseling from a regionally accredited college or university; have at least 2 years of supervised field experience in a counseling setting (graduates from counselor education programs accredited by the Council for Accreditation of Counseling and Related Educational Programs are exempted); provide two professional endorsements, one of which must be from a recent supervisor; and must have a passing score on the board's examination. This national certification is voluntary and is distinct from State licensing. However, in some States, those who pass the national exam are exempted from taking a State certification exam. The board also offers specialty certifications in school, clinical mental health, and addiction counseling. These specialty certifications require pas-

sage of a supplemental exam. To maintain their certifications, counselors retake and pass the exam or complete 100 credit hours of acceptable continuing education every 5 years.

The Commission on Rehabilitation Counselor Certification offers voluntary national certification for rehabilitation counselors. Many State and local governments and other employers require rehabilitation counselors to have this certification. To become certified, rehabilitation counselors usually must graduate from an accredited educational program, complete an internship, and pass a written examination. Certification requirements vary, however, according to an applicant's educational history. Employment experience, for example, is required for those with a counseling degree in a specialty other than rehabilitation. To maintain their certification, counselors must successfully retake the certification exam or complete 100 credit hours of acceptable continuing education every 5 years.

Other counseling organizations also offer certification in particular counseling specialties. Usually, becoming certified is voluntary, but having certification may enhance job prospects.

Prospects for advancement vary by counseling field. School counselors can become directors or supervisors of counseling, guidance, or pupil personnel services; or, usually with further graduate education, become counselor educators, counseling psychologists, or school administrators. (Psychologists and education administrators are covered elsewhere in the *Handbook*.) Some counselors choose to work for a State's department of education.

Some marriage and family therapists, especially those with doctorates in family therapy, become supervisors, teachers, researchers, or advanced clinicians in the discipline. Counselors may also become supervisors or administrators in their agencies. Some counselors move into research, consulting, or college teaching or go into private or group practice. Some may choose to pursue a doctoral degree to improve their chances for advancement.

Employment

Counselors held about 635,000 jobs in 2006. Employment was distributed among the counseling specialties as follows:

Educational, vocational, and school counselors.....	260,000
Rehabilitation counselors.....	141,000
Mental health counselors	100,000
Substance abuse and behavioral disorder counselors	83,000
Marriage and family therapists	25,000
Counselors, all other	27,000

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Counselors.....	21-1010	635,000	771,000	136,000	21
Substance abuse and behavioral disorder counselors.....	21-1011	83,000	112,000	29,000	34
Educational, vocational, and school counselors.....	21-1012	260,000	292,000	33,000	13
Marriage and family therapists	21-1013	25,000	32,000	7,400	30
Mental health counselors	21-1014	100,000	130,000	30,000	30
Rehabilitation counselors.....	21-1015	141,000	173,000	32,000	23
Counselors, all other	21-1019	27,000	32,000	4,500	17

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Educational, vocational, and school counselors work primarily in elementary and secondary schools and colleges and universities. Other types of counselors work in a wide variety of public and private establishments, including healthcare facilities; job training, career development, and vocational rehabilitation centers; social agencies; correctional institutions; and residential care facilities, such as halfway houses for criminal offenders and group homes for children, the elderly, and the disabled. Some substance abuse and behavioral disorder counselors work in therapeutic communities where people with addictions live while undergoing treatment. Counselors also work in organizations engaged in community improvement and social change, drug and alcohol rehabilitation programs, and State and local government agencies.

A growing number of counselors are self-employed and work in group practices or private practice, due in part to new laws allowing counselors to be paid for their services by insurance companies and to the growing recognition that counselors are well-trained, effective professionals.

Job Outlook

Employment for counselors is expected to grow much faster than the average for all occupations through 2016. However, job growth will vary by location and occupational specialty. Job prospects should be good due to growth and the need to replace people leaving the field.

Employment change. Overall employment of counselors is expected to increase by 21 percent between 2006 and 2016, which is much faster than the average for all occupations. However, growth is expected to vary by specialty.

Employment of substance abuse and behavioral disorder counselors is expected to grow 34 percent, which is much faster than the average for all occupations. As society becomes more knowledgeable about addiction, it is increasingly common for people to seek treatment. Furthermore, drug offenders are increasingly being sent to treatment programs rather than jail.

Employment for educational, vocational and school counselors is expected to grow 13 percent, which is about as fast as the average for all occupations. Demand for vocational or career counselors should grow as multiple job and career changes become common and as workers become increasingly aware of counseling services. In addition, State and local governments will employ growing numbers of counselors to assist beneficiaries of welfare programs who exhaust their eligibility and must find jobs. Other opportunities for employment of counselors

will arise in private job-training centers that provide training and other services to laid-off workers and others seeking to acquire new skills or careers. Demand for school counselors may increase due in large part to increases in student enrollments at postsecondary schools and colleges and as more States require elementary schools to employ counselors. Expansion of the responsibilities of school counselors should also lead to increases in their employment. For example, counselors are becoming more involved in crisis and preventive counseling, helping students deal with issues ranging from drug and alcohol abuse to death and suicide. Although schools and governments realize the value of counselors in helping their students to achieve academic success, budget constraints at every school level will dampen job growth of school counselors. Federal grants and subsidies may help to offset tight budgets and allow the reduction in student-to-counselor ratios to continue.

Employment of mental health counselors is expected to grow by 30 percent, which is much faster than the average for all occupations. Mental health counselors will be needed to staff statewide networks that are being established to improve services for children and adolescents with serious emotional disturbances and for their families. Under managed care systems, insurance companies are increasingly providing for reimbursement of counselors as a less costly alternative to psychiatrists and psychologists.

Jobs for rehabilitation counselors are expected to grow by 23 percent, which is much faster than the average for all occupations. The number of people who will need rehabilitation counseling is expected to grow as advances in medical technology allow more people to survive injury or illness and live independently again. In addition, legislation requiring equal employment rights for people with disabilities will spur demand for counselors, who not only help these people make a transition to the workforce but also help companies to comply with the law.

Marriage and family therapists will experience growth of 30 percent, which is much faster than the average for all occupations. This is due in part to an increased recognition of the field. It is more common for people to seek help for their marital and family problems than it was in the past.

Job prospects. Job prospects vary greatly based on the occupational specialty. Prospects for rehabilitation counselors are excellent because many people are leaving the field or retiring. Furthermore, opportunities are very good in substance abuse and behavioral disorder counseling because relatively low wages and long hours make recruiting new entrants difficult. For school counselors, job prospects should be good because many people are leaving the occupation to retire; however, opportunities may be more favorable in rural and urban areas, rather than the suburbs, because it is often difficult to recruit people to these areas.

Earnings

Median annual earnings of wage and salary educational, vocational, and school counselors in May 2006 were \$47,530. The middle 50 percent earned between \$36,120 and \$60,990. The lowest 10 percent earned less than \$27,240, and the highest 10 percent earned more than \$75,920. School counselors can earn additional income working summers in the school system or in other jobs. Median annual earnings in the industries employ-

ing the largest numbers of educational, vocational, and school counselors were as follows:

Elementary and secondary schools	\$53,750
Junior colleges	48,240
Colleges, universities, and professional schools	41,780
Individual and family services	32,370
Vocational rehabilitation services	31,340

Median annual earnings of wage and salary substance abuse and behavioral disorder counselors in May 2006 were \$34,040. The middle 50 percent earned between \$27,330 and \$42,650. The lowest 10 percent earned less than \$22,600, and the highest 10 percent earned more than \$52,340.

Median annual earnings of wage and salary mental health counselors in May 2006 were \$34,380. The middle 50 percent earned between \$26,780 and \$45,610. The lowest 10 percent earned less than \$21,890, and the highest 10 percent earned more than \$59,700.

Median annual earnings of wage and salary rehabilitation counselors in May 2006 were \$29,200. The middle 50 percent earned between \$22,980 and \$39,000. The lowest 10 percent earned less than \$19,260, and the highest 10 percent earned more than \$53,170.

For substance abuse, mental health, and rehabilitation counselors, government employers generally pay the highest wages, followed by hospitals and social service agencies. Residential care facilities often pay the lowest wages.

Median annual earnings of wage and salary marriage and family therapists in May 2006 were \$43,210. The middle 50 percent earned between \$32,950 and \$54,150. The lowest 10 percent earned less than \$25,280, and the highest 10 percent earned more than \$69,050. Median annual earnings were \$36,020 in individual and family social services, the industry employing the largest number of marriage and family therapists.

Self-employed counselors who have well-established practices, as well as counselors employed in group practices, usually have the highest earnings.

Related Occupations

Counselors help people evaluate their interests, abilities, and disabilities and deal with personal, social, academic, and career problems. Others who help people in similar ways include teachers, social and human service assistants, social workers, psychologists, physicians and surgeons, registered nurses, occupational therapists, and human resources, training, and labor relations managers and specialists.

Sources of Additional Information

For general information about counseling, as well as information on specialties such as college, mental health, rehabilitation, multicultural, career, marriage and family, and gerontological counseling, contact:

➤ American Counseling Association, 5999 Stevenson Ave., Alexandria, VA 22304. Internet: <http://www.counseling.org>

For information on school counselors, contact:

➤ American School Counselors Association, 1101 King St., Suite 625, Alexandria, VA 22314.

Internet: <http://www.schoolcounselor.org>

For information on mental health counselors, contact:

➤ American Mental Health Counselors Association, 801 N. Fairfax Street, Suite 304, Alexandria, VA 22314.

Internet: <http://www.amhca.org>

For information on marriage and family therapists, contact:

➤ American Association for Marriage and Family Therapy, 112 South Alfred Street, Alexandria, VA 22314

Internet: <http://www.aamft.org>

For information on accredited counseling and related training programs, contact:

➤ Council for Accreditation of Counseling and Related Educational Programs, American Counseling Association, 5999 Stevenson Ave., 4th floor, Alexandria, VA 22304.

Internet: <http://www.cacrep.org>

For information on national certification requirements for counselors, contact:

➤ National Board for Certified Counselors, Inc, 3 Terrace Way, Suite D, Greensboro, NC 27403.

Internet: <http://www.nbcc.org>

State departments of education can supply information on colleges and universities offering guidance and counseling training that meets State certification and licensure requirements.

State employment service offices have information about job opportunities and entrance requirements for counselors.

Education Administrators

(O*NET 11-9031.00, 11-9032.00, 11-9033.00, 11-9039.99)

Significant Points

- Many jobs require a master's or doctoral degree and experience in a related occupation, such as teaching or admissions counseling.
- Strong interpersonal and communication skills are essential because much of an administrator's job involves working and collaborating with others.
- Excellent opportunities are expected since a large proportion of education administrators is expected to retire over the next 10 years.

Nature of the Work

Successful operation of an educational institution requires competent administrators. Education administrators provide instructional leadership and manage the day-to-day activities in schools, preschools, day care centers, and colleges and universities. They also direct the educational programs of businesses, correctional institutions, museums, and job training and community service organizations. (College presidents and school superintendents are covered in the *Handbook* statement on general managers and top executives.)

Education administrators set educational standards and goals and establish the policies and procedures to achieve them. They also supervise managers, support staff, teachers, counselors, librarians, coaches, and other employees. They develop academi-

ic programs, monitor students' educational progress, train and motivate teachers and other staff, manage career counseling and other student services, administer recordkeeping, prepare budgets, and perform many other duties. They also handle relations with parents, prospective and current students, employers, and the community. In an organization such as a small day care center, one administrator may handle all these functions. In universities or large school systems, responsibilities are divided among many administrators, each with a specific function.

Educational administrators who manage elementary, middle, and secondary schools are called *principals*. They set the academic tone and actively work with teachers to develop and maintain high curriculum standards, develop mission statements, and set performance goals and objectives. Principals confer with staff to advise, explain, or answer procedural questions. They hire, evaluate, and help improve the skills of teachers and other staff. They visit classrooms, observe teaching methods, review instructional objectives, and examine learning materials. Principals must use clear, objective guidelines for teacher appraisals, because pay often is based on performance ratings.

Principals also meet and interact with other administrators, students, parents, and representatives of community organizations. Decision-making authority has increasingly shifted from school district central offices to individual schools. School principals have greater flexibility in setting school policies and goals, but when making administrative decisions they must pay attention to the concerns of parents, teachers, and other members of the community.

Preparing budgets and reports on various subjects, including finances and attendance, and overseeing the requisition and allocation of supplies also is an important responsibility of principals. As school budgets become tighter, many principals have become more involved in public relations and fundraising to secure financial support for their schools from local businesses and the community.

Principals must take an active role to ensure that students meet national, State, and local academic standards. Many principals develop partnerships with local businesses and school-to-work transition programs for students. Increasingly, principals must be sensitive to the needs of the rising number of non-English speaking and culturally diverse student body. In some areas, growing enrollments also are a cause for concern because they lead to overcrowding at many schools. When addressing problems of inadequate resources, administrators serve as advocates for the building of new schools or the repair of existing ones. During summer months, principals are responsible for planning for the upcoming year, overseeing summer school, participating in workshops for teachers and administrators, supervising building repairs and improvements, and working to make sure the school has adequate staff for the school year.

Schools continue to be involved with students' emotional welfare as well as their academic achievement. As a result, principals face responsibilities outside the academic realm. For example, many schools have growing numbers of students from dual-income and single-parent families or students who are themselves teenage parents. To support these students and their families, some schools have established before- and after-

school childcare programs or family resource centers, which also may offer parenting classes and social service referrals. With the help of community organizations, some principals have established programs to combat increases in crime, drug and alcohol abuse, and sexually transmitted diseases among students.

Assistant principals aid the principal in the overall administration of the school. Some assistant principals hold this position for several years, during which time they prepare for advancement to principal; others are assistant principals throughout their careers. They are primarily responsible for scheduling student classes, ordering textbooks and supplies, and coordinating transportation, custodial, cafeteria, and other support services. They usually handle student discipline and attendance problems, social and recreational programs, and health and safety matters. They also may counsel students on personal, educational, or vocational matters. With the advent of site-based management, assistant principals are playing a greater role in ensuring the academic success of students by helping to develop new curriculums, evaluating teachers, and dealing with school-community relations—responsibilities previously assumed solely by the principal. The number of assistant principals that a school employs may vary, depending on the number of students.

Administrators in school district central offices oversee public schools under their jurisdiction. This group includes those who direct subject-area programs such as English, music, vocational education, special education, and mathematics. They supervise instructional coordinators and curriculum specialists, and work with them to evaluate curriculums and teaching techniques and improve them. (Instructional coordinators are covered elsewhere in the *Handbook*.) Administrators also may oversee career counseling programs and testing that measures students' abilities and helps to place them in appropriate classes. Others may also direct programs such as school psychology, athletics, curriculum and instruction, and professional development. With site-based management, administrators have transferred primary responsibility for many of these programs to the principals, assistant principals, teachers, instructional coordinators, and other staff in the schools.

In preschools and childcare centers, which are usually much smaller than other educational institutions, the director or supervisor of the school or center often serves as the sole administrator. Their job is similar to that of other school administrators in that they oversee daily activities and operation of the schools, hire and develop staff, and make sure that the school meets required regulations and educational standards.

In colleges and universities, *provosts*, also known as *chief academic officers*, assist presidents, make faculty appointments and tenure decisions, develop budgets, and establish academic policies and programs. With the assistance of *academic deans* and *deans of faculty*, they also direct and coordinate the activities of deans of individual colleges and chairpersons of academic departments. Fundraising is the chief responsibility of the *director of development* and also is becoming an essential part of the job for all administrators.

College or university department heads or *chairpersons* are in charge of departments that specialize in particular fields of

study, such as English, biological science, or mathematics. In addition to teaching, they coordinate schedules of classes and teaching assignments; propose budgets; recruit, interview, and hire applicants for teaching positions; evaluate faculty members; encourage faculty development; serve on committees; and perform other administrative duties. In overseeing their departments, chairpersons must consider and balance the concerns of faculty, administrators, and students.

Higher education administrators also direct and coordinate the provision of student services. *Vice presidents of student affairs or student life*, *deans of students*, and *directors of student services* may direct and coordinate admissions, foreign student services, health and counseling services, career services, financial aid, and housing and residential life, as well as social, recreational, and related programs. In small colleges, they may counsel students. In larger colleges and universities, separate administrators may handle each of these services. *Registrars* are custodians of students' records. They register students, record grades, prepare student transcripts, evaluate academic records, assess and collect tuition and fees, plan and implement commencement, oversee the preparation of college catalogs and schedules of classes, and analyze enrollment and demographic statistics. *Directors of admissions* manage the process of recruiting, evaluating, and admitting students, and work closely with *financial aid directors*, who oversee scholarship, fellowship, and loan programs. Registrars and admissions officers at most institutions need computer skills because they use electronic student information systems. For example, for those whose institutions present college catalogs, schedules, and other information on the Internet, knowledge of online resources, imaging, and other computer skills is important. *Athletic directors* plan and direct intramural and intercollegiate athletic activities, seeing to publicity for athletic events, preparation of budgets, and supervision of coaches. Other increasingly im-



Most education administrators begin their careers as teachers.

portant administrators direct public relations, distance learning, and technology.

Work environment. Education administrators hold leadership positions with significant responsibility. Most find working with students extremely rewarding, but as the responsibilities of administrators have increased in recent years, so has the stress. Coordinating and interacting with faculty, parents, students, community members, business leaders, and State and local policymakers can be fast-paced and stimulating, but also stressful and demanding. Principals and assistant principals, whose varied duties include discipline, may find working with difficult students to be challenging. They are also increasingly being held accountable for ensuring that their schools meet recently imposed State and Federal guidelines for student performance and teacher qualifications.

About 1 in 3 education administrators work more than 40 hours a week and often supervise school activities at night and on weekends. Most administrators work year round, although some work only during the academic year.

Training, Other Qualifications, and Advancement

Most education administrators begin their careers as teachers and prepare for advancement into education administration by completing a master's or doctoral degree. Because of the diversity of duties and levels of responsibility, educational backgrounds and experience vary considerably among these workers.

Education and training. Principals, assistant principals, central office administrators, academic deans, and preschool directors usually have held teaching positions before moving into administration. Some teachers move directly into principal positions; others first become assistant principals, or gain experience in other administrative jobs at either the school or district level in positions such as department head, curriculum specialist, or subject matter advisor. In some cases, administrators move up from related staff jobs such as recruiter, school counselor, librarian, residence hall director, or financial aid or admissions counselor.

In most public schools, principals, assistant principals, and school district administrators need a master's degree in education administration or educational leadership. Some principals and central office administrators have a doctorate or specialized degree in education administration. In private schools, some principals and assistant principals hold only a bachelor's degree, but the majority have a master's or doctoral degree.

Educational requirements for administrators of preschools and childcare centers vary depending on the setting of the program and the State of employment. Administrators who oversee preschool programs in public schools are often required to have at least a bachelor's degree. Child care directors who supervise private programs are usually not required to have a degree; however, most States require a preschool education credential, which often includes some postsecondary coursework.

College and university academic deans and chairpersons usually advance from professorships in their departments, for which they need a master's or doctoral degree; further education is not typically necessary. Admissions, student affairs, and financial aid directors and registrars sometimes start in related

staff jobs with bachelor's degrees—any field usually is acceptable—and obtain advanced degrees in college student affairs, counseling, or higher education administration. A Ph.D. or Ed.D. usually is necessary for top student affairs positions. Computer literacy and a background in accounting or statistics may be assets in admissions, records, and financial work.

Advanced degrees in higher education administration, educational leadership, and college student affairs are offered in many colleges and universities. Education administration degree programs include courses in school leadership, school law, school finance and budgeting, curriculum development and evaluation, research design and data analysis, community relations, politics in education, and counseling. The National Council for Accreditation of Teacher Education (NCATE) and the Educational Leadership Constituent Council (ELCC) accredit programs designed for elementary and secondary school administrators. Although completion of an accredited program is not required, it may assist in fulfilling licensure requirements.

Licensure and certification. Most States require principals to be licensed as school administrators. License requirements vary by State, but nearly all States require either a master's degree or some other graduate-level training. Some States also require candidates for licensure to pass a test. On-the-job training, often with a mentor, is increasingly required or recommended for new school leaders. Some States require administrators to take continuing education courses to keep their license, thus ensuring that administrators have the most up-to-date skills. The number and types of courses required to maintain licensure vary by State. Principals in private schools are not subject to State licensure requirements.

Nearly all States require child care and preschool center directors to be licensed. Licensing usually requires a number of years of experience or hours of coursework or both. Sometimes, it requires a college degree. Often, directors are also required to earn a general preschool education credential, such as the Child Development Associate credential (CDA) sponsored by the Council for Professional Recognition, or some other credential designed specifically for directors.

One credential specifically for directors is the National Administration Credential, offered by the National Child Care Association. The credential requires experience and training in child care center management.

There are usually no licensing requirements for administrators at postsecondary institutions.

Other qualifications. To be considered for education administrator positions, workers must first prove themselves in their current jobs. In evaluating candidates, supervisors look for leadership, determination, confidence, innovativeness, and motivation. The ability to make sound decisions and to organize and coordinate work efficiently is essential. Because much of an administrator's job involves interacting with others—such as students, parents, teachers, and the community—a person in such a position must have strong interpersonal skills and be an effective communicator and motivator. Knowledge of leadership principles and practices, gained through work experience and formal education, is important. A familiarity with computer technology is a necessity for principals, who are required to

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-16	
				Number	Percent
Education administrators	11-9030	443,000	496,000	53,000	12
Education administrators, preschool and child care center/ program	11-9031	56,000	69,000	13,000	24
Education administrators, elementary and secondary school	11-9032	226,000	243,000	17,000	8
Education administrators, postsecondary.....	11-9033	131,000	150,000	19,000	14
Education administrators, all other	11-9039	30,000	33,000	3,700	13

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

gather information and coordinate technical resources for their students, teachers, and classrooms.

Advancement. Education administrators advance through promotion to higher level administrative positions or by transferring to comparable positions at larger schools or systems. They also may become superintendents of school systems or presidents of educational institutions.

Employment

Education administrators held about 443,000 jobs in 2006. Of these, 56,000 were preschool or child care administrators, 226,000 were elementary or secondary school administrators, and 131,000 were postsecondary administrators. The great majority—over 80 percent—worked in public or private educational institutions. Most of the remainder worked in child daycare centers, religious organizations, job training centers, and businesses and other organizations that provided training for their employees.

Job Outlook

Employment of education administrators is projected to grow about as fast as average, as education and training take on greater importance in everyone's lives. Job opportunities for many of these positions should be excellent because a large proportion of education administrators are expected to retire over the next 10 years.

Employment change. Employment of education administrators is expected to grow by 12 percent between 2006 and 2016, about as fast as the average for all occupations, primarily due to growth in enrollments of school-age children. Enrollment of students in elementary and secondary schools is expected to grow slowly over the next decade, which will limit the growth of principals and other administrators in these schools. However, the number of administrative positions will continue to increase as more administrative responsibilities are placed on individual schools, particularly related to monitoring student achievement. Preschool and childcare center administrators are expected to experience substantial growth due to increasing enrollments in formal child care programs as fewer young children are cared for in private homes. Additionally, as more States implement or expand public preschool programs, more preschool directors will be needed.

The number of students at the postsecondary level is projected to grow more rapidly than other student populations, creating significant demand for administrators at that level. A significant portion of the growth will occur in the private and

for-profit segments of higher education. Many of these schools cater to working adults who might not ordinarily participate in postsecondary education. These schools allow students to earn a degree, receive job-specific training, or update their skills in a convenient manner, such as through part-time programs or distance learning. As the number of these schools continues to grow, more administrators will be needed to oversee them.

Job prospects. Principals and assistant principals should have very favorable job prospects. A sharp increase in responsibilities in recent years has made the job more stressful and has discouraged some teachers from taking positions in administration. Principals are now being held more accountable for the performance of students and teachers, while at the same time they are required to adhere to a growing number of government regulations. In addition, overcrowded classrooms, safety issues, budgetary concerns, and teacher shortages in some areas all are creating additional stress for administrators. Many teachers feel that the increase in pay for becoming an administrator is not high enough to compensate for the greater responsibilities.

Opportunities may vary by region of the country. Enrollments are expected to increase the fastest in the West and South, where the population is growing faster, and to decline or remain stable in the Northeast and the Midwest. School administrators also are in greater demand in rural and urban areas, where pay is generally lower than in the suburbs.

Although competition among faculty for prestigious positions as academic deans and department heads is likely to remain keen, fewer applicants are expected for nonacademic administrative jobs, such as director of admissions or student affairs. Furthermore, many people are discouraged from seeking administrator jobs by the requirement that they have a master's or doctoral degree in education administration—as well as by the opportunity to earn higher salaries in other occupations.

Earnings

In May 2006, elementary and secondary school administrators had median annual earnings of \$77,740; postsecondary school administrators had median annual earnings of \$73,990, while administrators in preschool and childcare centers earned a median of \$37,740 per year. Salaries of education administrators depend on several factors, including the location and enrollment level in the school or school district.

According to a survey of public schools, conducted by the Educational Research Service, average salaries for principals and assistant principals in the 2006-07 school year were as follows:

Principals:

Senior high school.....	\$92,965
Jr. high/middle school	87,866
Elementary school.....	82,414

Assistant principals:

Senior high school.....	\$75,121
Jr. high/middle school	73,020
Elementary school.....	67,735

According to the College and University Professional Association for Human Resources, median annual salaries for selected administrators in higher education in 2006-07 were as follows:

Chief academic officer	\$140,595
Academic deans:	
Business	\$135,080
Arts and sciences.....	121,942
Graduate programs.....	120,120
Education	117,450
Nursing.....	112,497
Health-related professions.....	110,346
Continuing education	99,595
Occupational studies/vocational education	83,108

Other administrators:

Chief development officer.....	\$125,000
Dean of students.....	80,012
Director, student financial aid	68,000
Registrar	66,008
Director, student activities.....	50,000

Benefits for education administrators are generally very good. Many get 4 or 5 weeks of vacation every year and have generous health and pension packages. Many colleges and universities offer free tuition to employees and their families.

Related Occupations

Education administrators apply organizational and leadership skills to provide services to individuals. Workers in related occupations include administrative services managers; office and administrative support worker supervisors and managers; and human resource, training, and labor relations managers and specialists. Education administrators also work with students and have backgrounds similar to those of counselors; librarians; instructional coordinators; teachers—preschool, kindergarten, elementary, middle, and secondary; and teachers—postsecondary.

Sources of Additional Information

For information on principals, contact:

➤ The National Association of Elementary School Principals, 1615 Duke St., Alexandria, VA 22314-3483.

Internet: <http://www.naesp.org>

➤ The National Association of Secondary School Principals, 1904 Association Drive, Reston, VA 20191-1537.

Internet: <http://www.nassp.org>

For a list of nationally recognized programs in elementary and secondary educational administration, contact:

➤ The Educational Leadership Constituent Council, 1904 Association Drive, Reston, VA 20191.

Internet: <http://www.npbea.org/ELCC/index.html>

For information on collegiate registrars and admissions officers, contact:

➤ American Association of Collegiate Registrars and Admissions Officers, One Dupont Circle NW., Suite 520, Washington, DC 20036-1171. Internet: <http://www.aacrao.org>

For information on professional development and graduate programs for college student affairs administrators, contact:

➤ NASPA, Student Affairs Administrators in Higher Education, 1875 Connecticut Ave. NW., Suite 418, Washington, DC 20009. Internet: <http://www.naspa.org>

For information on the National Administrator Credential for child care directors, contact:

➤ National Child Care Association, 2025 M St NW., Suite 800, Washington, DC 20036. Internet: <http://www.nccanet.org>

For information on the Child Development Associate Credential, contact:

➤ Council for Professional Recognition, 2460 16th St., NW., Washington, DC 20009. Internet: <http://www.cdacouncil.org>

Health Educators

(O*NET 21-1091.00)

Significant Points

- 5 out of 10 health educators work in health care and social assistance and an additional 2 out of 10 work in State and local government.
- A bachelor's degree is the minimum requirement for entry level jobs, but many employers prefer to hire workers with a master's degree.
- Rapid job growth is expected, but the relatively small number of jobs in this occupation will limit the number of job openings.

Nature of the Work

Health educators work to encourage healthy lifestyles and wellness through educating individuals and communities about behaviors that promote healthy living and prevent diseases and other health problems.

They attempt to prevent illnesses by informing and educating individuals and communities about health-related topics, such as proper nutrition, the importance of exercise, how to avoid sexually transmitted diseases, and the habits and behaviors necessary to avoid illness. They begin by assessing the needs of their audience, which includes determining which topics to cover and how to best present the information. For example, they may hold programs on self-examinations for breast cancer to women who are at higher risk or may teach classes on the effects of binge drinking to college students. Health educators must take the cultural norms of their audience into account. For example, programs targeted at the elderly need to be drastically different from those aimed at a college-aged population.

After assessing their audiences' needs, health educators must decide how to meet those needs. Health educators have a lot of options in putting together programs to that end. They may organize a lecture, class, demonstration or health screening, or create a video, pamphlet or brochure. Often, planning a program requires working with other people in a team or on a committee within the organization that employs them. Also, health educators must plan programs that are consistent with the goals and objectives of their employers. For example, many non-profit organizations educate the public about just one disease or health issue and, therefore, limit their programs to cover topics related to that disease or issue.

Next, health educators need to implement their proposed plan. This may require finding funding by applying for grants, writing curriculums for classes, or creating written materials that would be made available to the public. Also, programs may require dealing with basic logistics problems, such as finding speakers or locations for the event.

Generally, after a program is presented, health educators evaluate its success. This could include tracking the absentee rate of employees from work and students from school, surveying participants on their opinions about the program, or other methods of collecting evidence that suggests whether the programs were effective. Through evaluation, they can improve plans for the future by learning from mistakes and capitalizing on strengths.

Although programming is a large part of their job, health educators also serve as a resource on health topics. This may include locating services, reference material and other resources that may be useful to the community they serve and referring individuals or groups to organizations or medical professionals.

The basic goals and duties of health educators are the same but their jobs vary greatly depending on the type of organization in which they work. Most health educators work in medical care settings, colleges and universities, schools, public health departments, nonprofit organizations, and private business.

Within medical care facilities, health educators tend to work one-on-one with patients and their families. Their goal in this setting is to educate individual patients on their diagnosis and how that may change or affect their lifestyle. Often, this includes explaining the necessary procedures or surgeries as well as how patients will need to change their lifestyles in order to manage their illness or return to full health. This may include directing patients to outside resources that may be useful in their transition, such as support groups, home health agencies or social services. Often, health educators work closely with physicians, nurses, and other staff to create educational programs or materials, such as brochures, Web sites, and classes, for other departments. In some cases, health educators train hospital staff about how to better interact with patients.

Health educators in colleges and universities work primarily with the student population. Generally, they create programs on topics that affect young adults, like sexual activity, smoking, and nutrition. They may need to alter their teaching methods to attract audiences to their events. For example, they might show a popular movie followed by a discussion or hold programs in dormitories or cafeterias. They may teach courses for credit or give lectures on health-related topics. Often they train students as peer educators, who then lead their own programs.

Health educators in schools are typically found in secondary schools, where they generally teach health class. They develop lesson plans that are relevant and age appropriate to their students. They may need to cover sensitive topics, like sexually transmitted diseases, alcohol and drugs. They may be required to be able to also teach another subject such as science or physical education. Sometimes they may develop the health education curriculum for the school or the entire school district. (For more information see the statement on secondary school teachers elsewhere in the *Handbook*.)

Health educators in public health are employed primarily by State and local departments of public health and, therefore, administer State-mandated programs. They often serve as members of statewide councils or national committees on topics like aging. As part of this work, they inform other professionals in changes to health policy. They work closely with nonprofit organizations to help them get the resources they need, such as grants, to continue serving the community.

Health educators in nonprofits strive to get information out to the public on various health problems and make people aware of the resources their programs have to help people to the community. While some organizations target a particular audience, others educate the community regarding one disease or health issue. Therefore, in this setting, health educators may be limited in the topics they cover or the population they serve. Work in this setting may include creating print-based material for distribution to the community, often in conjunction with organizing lectures, health screenings, and activities related to increasing awareness.

In private industry, health educators create programs to inform the employees of an entire firm or organization. They organize programs that fit into workers' schedules by arranging lunchtime speakers or daylong health screenings so that workers may come when it is most convenient. Educators in this setting must align their work with the overall goals of their employers. For example, a health educator working for a medical supply company may hold a program related to the company's newest product.

Work environment. Health educators work in various environments based on the industry in which they work. In public health, nonprofit organizations, business work sites, colleges and universities, and medical care settings they work primarily



Health educators teach individuals and groups about topics related to a healthy lifestyle.

in offices. However, they may spend a lot of time away from the office implementing and attending programs, meeting with community organizers, speaking with patients, or teaching classes. Health educators in schools spend the majority of their day in classrooms.

Health educators generally work 40 hour weeks. However, when programs, events, or meetings are scheduled they may need to work evening or weekends.

Training, Other Qualifications, and Advancement

A bachelor’s degree is generally required for entry level health educator positions, but some employers prefer a bachelor’s degree and some related experience gained through an internship or volunteer work. A master’s degree may be required for some positions and is usually required for advancement. In addition, some employers may require candidates to be Certified Health Education Specialists.

Education and training. Entry level health educator positions generally require a bachelor’s degree in health education. Over 250 colleges and universities offer bachelor’s programs in health education or a similarly titled major. These programs teach students the theories of health education and develop the skills necessary to implement health education programs. Courses in psychology, human development, and a foreign language are helpful, and experience gained through an internship or other volunteer opportunities can make graduates more appealing to employers.

Graduate health education programs are often offered under titles such as community health education, school health education, or health promotion and lead to a Master of Arts, Master of Science, Master of Education, or a Master of Public Health degree. Many students pursue their master’s in health education after majoring or working in another related field, such as nursing or psychology. A master’s degree is required for most health educator positions in public health.

Once hired, on-the-job training for health educators varies greatly depending on the type and size of employer. State and local public health departments and other larger offices may have a formal training program, while smaller health education offices and departments may train new employees through less formal means, such as mentoring or working with more experienced staff. Some employers may require and pay for educators to take continuing education courses to keep their skills up-to-date.

Other qualifications. Health educators spend much of their time working with people and must be comfortable working with both individuals and large groups. They need to be good communicators and comfortable speaking in public as they may need to teach classes or give presentations. Health educators often work with a very diverse population so they must be sensitive to cultural differences and open to working with people of varied

backgrounds. Health educators often create new programs or materials so they should be creative and skilled writers.

Certification and advancement. Health educators may choose to become a Certified Health Education Specialist, a credential offered by the National Commission of Health Education Credentialing, Inc. The certification is awarded after passing an examination on the basic areas of responsibility for a health educator. The exam is aimed at entry level educators who have already completed a degree in health education or are within 3 months of completion. In addition, to maintain certification, health educators must complete 75 hours of approved continuing education courses or seminars over a 5-year period. Some employers prefer to hire applicants who are certified and some States require health educators certification to work in a public health department.

A graduate degree is usually required to advance past an entry level position to jobs such as executive director, supervisor, or senior health educator. These positions may spend more time on planning and evaluating programs than on their implementation, but may require supervising other health educators who implement the programs. Health educators at this level may also work with other administrators of related programs. Some health educators pursue a doctoral degree in health education and may transfer to research positions or become professors of health education (see the statement on postsecondary teachers elsewhere in the *Handbook*)

Employment

Health educators held about 62,000 jobs in 2006. They work primarily in two industries with 20 percent working in State and local government and 53 percent working in health care and social assistance. In addition, a small percent of health educators work in grant-making services and social advocacy organizations.

Job Outlook

Employment of health educators is expected to grow much faster than the average for all occupations and job prospects are expected to be favorable.

Employment change. Employment of health educators is expected to grow by 26 percent, which is much faster than the average for all occupations. Growth will result from the rising cost of health care and the increased recognition of the need for qualified health educators.

The rising cost of healthcare has increased the need for health educators. As health care costs continue to rise, insurance companies, employers and governments are attempting to find ways to curb the cost. One of the more cost effective ways is to employ health educators to teach people how to live healthy lives and avoid costly treatments for illnesses. Awareness of the number of illnesses, such as lung cancer, HIV, heart disease

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Health educators.....	21-1091	62,000	78,000	16,000	26

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

and skin cancer, that may be avoided with lifestyle changes has increased. These diseases may be avoidable if the public better understands the effects of their behavior on their health. In addition, many illnesses, such as breast and testicular cancer are best treated with early detection so it is important for people to understand how to detect possible problems on their own. The need to provide the public with this information will result in State and local governments, hospitals, and businesses employing a growing number of health educators.

The emphasis on health education has been coupled with a growing demand for qualified health educators. In the past, it was thought that anyone could do the job of a health educator and the duties were often given to nurses or other healthcare professionals. However, in recent years, employers have recognized that those trained specifically in health education are better qualified to perform those duties. Therefore, demand for health professionals with a background specifically in health education has increased.

Demand for health educators will increase in most industries, but their employment may decrease in secondary schools. Many schools, facing budget cuts, ask teachers trained in other fields, like science or physical education, to teach the subject of health education.

Job prospects. Job prospects for health educators with bachelor's degrees will be favorable, but better for those who have acquired experience through internships or volunteer jobs. A graduate degree is preferred by many employers.

Earnings

Median annual earnings of health educators was \$41,330 in May 2006; the middle 50 percent earned between \$31,300 and \$56,580. The lowest 10 percent earned less than \$24,750, and the highest 10 percent earned more than \$72,500.

Median annual earnings in the industries employing the largest numbers of health educators in May 2006 were as follows:

General medical and surgical hospitals.....	\$40,890
State government.....	33,100
Local government	32,420
Outpatient care centers.....	27,530
Individual and family services	25,760

Related Occupations

Health educators work closely with people to alter their behavior. Other professions with similar skills include counselors, social workers, psychologists, teachers, social and human service assistances, and nurses.

Sources of Additional Information

For further information about health educators, contact:

➤ American Association for Health Education, 1900 Association Drive, Reston, VA 20191

Internet: <http://www.aahperd.org/aahe/>

For information on voluntary credentialing and job opportunities, contact:

➤ The National Commission for Health Education Credentialing, Inc. 1541 Alta Drive, Suite 303, Whitehall, PA 18052-5642 Internet: <http://www.nchec.org>

Instructional Coordinators

(O*NET 25-9031.00)

Significant Points

- Many instructional coordinators have experience as teachers or education administrators.
- A master's degree is required for positions in public schools and preferred for jobs in other settings.
- Employment is projected to grow much faster than average, reflecting the need to meet new educational standards, train teachers, and develop new materials.
- Favorable job prospects are expected.

Nature of the Work

Instructional coordinators—also known as curriculum specialists, personnel development specialists, instructional coaches, or directors of instructional material—play a large role in improving the quality of education in the classroom. They develop curricula, select textbooks and other materials, train teachers, and assess educational programs for quality and adherence to regulations and standards. They also assist in implementing new technology in the classroom.

At the primary and secondary school level, instructional coordinators often specialize in specific subjects, such as reading, language arts, mathematics, or science. At the postsecondary level, coordinators may work with employers to develop training programs that produce qualified workers.

Instructional coordinators evaluate how well a school or training program's curriculum, or plan of study, meets students' needs. Based on their research and observations of instructional practice, they recommend improvements. They research teaching methods and techniques and develop procedures to ensure that instructors are implementing the curriculum successfully and meeting program goals. To aid in their evaluation, they may meet with members of educational committees and advisory groups to learn about subjects—for example, English, history,



Instructional coordinators train teachers on new curriculum standards.

or mathematics—and explore how curriculum materials meet students’ needs and relate to occupations. Coordinators also may develop questionnaires and interview school staff about the curriculum.

Some instructional coordinators also review textbooks, software, and other educational materials and make recommendations on purchases. They monitor the ways in which teachers use materials in the classroom, and they supervise workers who catalogue, distribute, and maintain a school’s educational materials and equipment.

Some instructional coordinators find ways to use technology to enhance student learning. They monitor the introduction of new technology, including the Internet, into a school’s curriculum. In addition, instructional coordinators might recommend installing educational software, such as interactive books and exercises designed to enhance student literacy and develop math skills. Instructional coordinators may invite experts—such as computer hardware, software, and library or media specialists—to help integrate technological materials into the curriculum.

In addition to developing curriculum and instructional materials, many instructional coordinators also plan and provide onsite education for teachers and administrators. Instructional coordinators mentor new teachers and train experienced ones in the latest instructional methods. This role becomes especially important when a school district introduces new content, program innovations, or a different organizational structure. For example, when a State or school district introduces standards or tests that students must pass, instructional coordinators often advise teachers on the content of these standards and provide instruction on how to implement them in the classroom.

Work environment. Many instructional coordinators work long hours. They often work year round. Some spend much of their time traveling between schools meeting with teachers and administrators. The opportunity to shape and improve instructional curricula and work in an academic environment can be satisfying. However, some instructional coordinators find the work stressful because they are continually accountable to school administrators.

Training, Other Qualifications, and Advancement

The minimum educational requirement for most instructional coordinator positions in public schools is a master’s or higher degree—usually in education—plus a State teacher or administrator license. A master’s degree also is preferred for positions in other settings.

Education and training. Instructional coordinators should have training in curriculum development and instruction or in the specific field for which they are responsible, such as mathematics or history. Courses in research design teach how to create and implement research studies to determine the effective-

ness of a given method of instruction or curriculum and how to measure and improve student performance.

Instructional coordinators usually are also required to take continuing education courses to keep their skills current. Topics may include teacher evaluation techniques, curriculum training, new teacher induction, consulting and teacher support, and observation and analysis of teaching.

Licensure. Instructional coordinators must be licensed to work in public schools. Some States require a teaching license, whereas others require an education administrator license.

Other qualifications. Instructional coordinators must have a good understanding of how to teach specific groups of students and expertise in developing educational materials. As a result, many people become instructional coordinators after working for several years as teachers. Also beneficial is work experience in an education administrator position, such as a principal or assistant principal, or in another advisory role, such as a master teacher.

Instructional coordinators must be able to make sound decisions about curriculum options and to organize and coordinate work efficiently. They should have strong interpersonal and communication skills. Familiarity with computer technology also is important for instructional coordinators, who are increasingly involved in gathering technical information for students and teachers.

Advancement. Depending on experience and educational attainment, instructional coordinators may advance to higher administrative positions in a school system or to management or executive positions in private industry.

Employment

Instructional coordinators held about 129,000 jobs in 2006. Almost 40 percent worked in public or private elementary and secondary schools, while more than 20 percent worked in public or private junior colleges, colleges and universities, and professional schools. Other employing industries included State and local government; individual and family services; child day care services; scientific research and development services; and management, scientific, and technical consulting services.

Job Outlook

Much faster-than-average job growth is projected. Job opportunities generally should be favorable, particularly for those with experience in math and reading curriculum development.

Employment change. The number of instructional coordinators is expected to grow by 22 percent over the 2006-16 decade, much faster than the average for all occupations, as they will be instrumental in developing new curricula to meet the demands of a changing society and in training teachers. Although budget constraints may limit employment growth to some extent, a continuing emphasis on improving the quality of education should

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Instructional coordinators	25-9031	129,000	159,000	29,000	22

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

result in an increasing demand for these workers. The emphasis on accountability also should increase at all levels of government and cause more schools to focus on improving standards of educational quality and student performance. Growing numbers of coordinators will be needed to incorporate the new standards into existing curricula and make sure teachers and administrators are informed of changes.

Additional job growth for instructional coordinators will stem from the increasing emphasis on lifelong learning and on programs for students with special needs, including those for whom English is a second language. These students often require more educational resources and consolidated planning and management within the educational system.

Job prospects. Favorable job prospects are expected. Opportunities should be best for those who specialize in subjects targeted for improvement by the No Child Left Behind Act—namely, reading, math, and science. There also will be a need for more instructional coordinators to show teachers how to use technology in the classroom.

Earnings

Median annual earnings of instructional coordinators in May 2006 were \$52,790. The middle 50 percent earned between \$38,800 and \$70,320. The lowest 10 percent earned less than \$29,040, and the highest 10 percent earned more than \$87,510.

Related Occupations

Instructional coordinators are professionals involved in education, training, and development. Occupations with similar characteristics include preschool, kindergarten, elementary, middle, and secondary school teachers; postsecondary teachers; education administrators; counselors; and human resources, training, and labor relations managers and specialists.

Sources of Additional Information

Information on requirements and job opportunities for instructional coordinators is available from local school systems and

Librarians

(O*NET 25-4021.00)

Significant Points

- Librarians use the latest information technology to perform research, classify materials, and help students and library patrons seek information.
- A master's degree in library science is the main qualification for most librarian positions, although school librarians often need experience as teachers to meet State licensing requirements.
- Despite slower-than-average projected employment growth, job opportunities are still expected to be favorable because a large number of librarians are expected to retire in the coming decade.

Nature of the Work

The traditional concept of a library is being redefined from a place to access paper records or books to one that also houses the most advanced electronic resources, including the Internet, digital libraries, and remote access to a wide range of information sources. Consequently, librarians, often called information professionals, increasingly combine traditional duties with tasks involving quickly changing technology. Librarians help people find information and use it effectively for personal and professional purposes. They must have knowledge of a wide variety of scholarly and public information sources and must follow trends related to publishing, computers, and the media in order to oversee the selection and organization of library materials. Librarians manage staff and develop and direct information programs and systems for the public and ensure that information is organized in a manner that meets users' needs.

Most librarian positions focus on one of three aspects of library work: user services, technical services, and administrative services. Still, even librarians specializing in one of these areas have other responsibilities, too. Librarians in user services, such as reference and children's librarians, work with patrons to help them find the information they need. The job involves analyzing users' needs to determine what information is appropriate and searching for, acquiring, and providing the information. The job also includes an instructional role, such as showing users how to find information. For example, librarians commonly help users navigate the Internet so they can search for and evaluate information efficiently. Librarians in technical services, such as acquisitions and cataloguing, acquire, prepare, and classify materials so that patrons can find it easily. Some write abstracts and summaries. Often, these librarians do not deal directly with the public. Librarians in administrative services oversee the management and planning of libraries: they negotiate contracts for services, materials, and equipment; supervise library employees; perform public-relations and fundraising duties; prepare budgets; and direct activities to ensure that everything functions properly.

In small libraries or information centers, librarians usually handle all aspects of library operations. They read book reviews, publishers' announcements, and catalogues to keep up



Librarians assist patrons with their research and resource needs.

with current literature and other available resources, and they select and purchase materials from publishers, wholesalers, and distributors. Librarians prepare new materials, classifying them by subject matter and describing books and other library materials to make them easy to find. Librarians supervise assistants, who enter classification information and descriptions of materials into electronic catalogs. In large libraries, librarians often specialize in a single area, such as acquisitions, cataloging, bibliography, reference, special collections, or administration. Teamwork is increasingly important.

Librarians also recommend materials. Many compile lists of books, periodicals, articles, audiovisual materials, and electronic resources on particular subjects and analyze collections. They collect and organize books, pamphlets, manuscripts, and other materials in a specific field, such as rare books, genealogy, or music. In addition, they coordinate programs such as storytelling for children and literacy skills and book talks for adults. Some conduct classes, publicize services, write grants, and oversee other administrative matters.

Many libraries have access to remote databases and maintain their own computerized databases. The widespread use of electronic resources makes database-searching skills important for librarians. Librarians develop and index databases and help train users to develop searching skills. Some libraries are forming consortiums with other libraries to allow patrons to access a wider range of databases and to submit information requests to several libraries simultaneously. The Internet also has greatly expanded the amount of available reference information. Librarians must know how to use these resources and inform the public about the wealth of information available in them.

Librarians are classified according to the type of library in which they work: a public library; school library media center; college, university, or other academic library; or special library. Librarians in special libraries work in information centers or libraries maintained by government agencies or corporations, law firms, advertising agencies, museums, professional associations, unions, medical centers, hospitals, religious organizations, and research laboratories. They acquire and arrange an organization's information resources, which usually are limited to subjects of special interest to the organization. They can provide vital information services by preparing abstracts and indexes of current periodicals, organizing bibliographies, or analyzing background information and preparing reports on areas of particular interest. For example, a special librarian working for a corporation could provide the sales department with information on competitors or new developments affecting the field. A medical librarian may provide information about new medical treatments, clinical trials, and standard procedures to health professionals, patients, consumers, and corporations. Government document librarians, who work for government agencies and depository libraries in each of the States, preserve government publications, records, and other documents that make up a historical record of government actions.

Some librarians work with specific groups, such as children, young adults, adults, or the disadvantaged. In school library media centers, librarians—often called school media special-

ists—help teachers develop curricula and acquire materials for classroom instruction. They also conduct classes for students on how to use library resources for research projects.

Librarians with computer and information systems skills can work as automated-systems librarians, planning and operating computer systems, and as information architects, designing information storage and retrieval systems and developing procedures for collecting, organizing, interpreting, and classifying information. These librarians analyze and plan for future information needs. (See the section on computer scientists and database administrators elsewhere in the *Handbook*.) Automated information systems enable librarians to focus on administrative and budgeting responsibilities, grant writing, and specialized research requests, while delegating more routine services responsibilities to technicians. (See the section on library technicians elsewhere in the *Handbook*.)

More and more, librarians apply their information management and research skills to arenas outside of libraries—for example, database development, reference tool development, information systems, publishing, Internet coordination, marketing, Web content management and design, and training of database users. Entrepreneurial librarians sometimes start their own consulting practices, acting as freelance librarians or information brokers and providing services to other libraries, businesses, or government agencies.

Work environment. Librarians spend a significant portion of time at their desks or in front of computer terminals; extended work at video display terminals can cause eyestrain and headaches. Assisting users in obtaining information or books for their jobs, homework, or recreational reading can be challenging and satisfying, but working with users under deadlines can be demanding and stressful. Some librarians lift and carry books, and some climb ladders to reach high stacks, although most modern libraries have readily accessible stacks. Librarians in small settings without support staff sometimes shelve books themselves.

More than 20 percent of librarians work part time. Public and college librarians often work weekends, evenings, and some holidays. School librarians usually have the same workday and vacation schedules as classroom teachers. Special librarians usually work normal business hours, but in fast-paced industries—such as advertising or legal services—they can work longer hours when needed.

Training, Other Qualifications, and Advancement

A master's degree in library science (MLS) is necessary for librarian positions in most public, academic, and special libraries. Librarians in the Federal Government need an MLS or the equivalent in education and experience. School librarians do not typically need an MLS but must meet State licensing requirements.

Education and training. Entry into a library science graduate program requires a bachelor's degree, but any undergraduate major is acceptable. Many colleges and universities offer library science programs, but employers often prefer graduates of the 56 schools accredited by the American Library Association. Most programs take 1 year to complete; some take 2. A typical graduate program includes courses in the foundations

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Librarians	25-4021	158,000	164,000	5,800	4

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

of library and information science, such as the history of books and printing, intellectual freedom and censorship, and the role of libraries and information in society. Other basic courses cover the selection and processing of materials, the organization of information, research methods and strategies, and user services. Prospective librarians also study online reference systems, Internet search methods, and automated circulation systems. Elective course options include resources for children or young adults; classification, cataloguing, indexing, and abstracting; and library administration. Computer-related course work is an increasingly important part of an MLS degree. Some programs offer interdisciplinary degrees combining technical courses in information science with traditional training in library science.

The MLS degree provides general preparation for library work, but some individuals specialize in a particular area, such as reference, technical services, or children's services. A Ph.D. in library and information science is advantageous for a college teaching position or a top administrative job in a college or university library or large public library system.

Licensure. States generally have certification requirements for librarians in public schools and local libraries, though there are wide variations among States. School librarians in 14 States need a master's degree, either an MLS or a master's in education with a specialization in library media. In addition, about half of all States require that school librarians hold teacher certifications, although not all require teaching experience. Some States may also require librarians to pass a comprehensive assessment. Most States also have developed certification standards for local public libraries, although in some States these guidelines are only voluntary.

Other qualifications. In addition to an MLS degree, librarians in a special library, such as a law or corporate library, usually supplement their education with knowledge of the field in which they are specializing, sometimes earning a master's, doctoral, or professional degree in the subject. Areas of specialization include medicine, law, business, engineering, and the natural and social sciences. For example, a librarian working for a law firm may hold both library science and law degrees, while medical librarians should have a strong background in the sciences. In some jobs, knowledge of a foreign language is needed.

Librarians participate in continuing education and training to stay up to date with new information systems and technology.

Advancement. Experienced librarians can advance to administrative positions, such as department head, library director, or chief information officer.

Employment

Librarians held about 158,000 jobs in 2006. Most worked in school and academic libraries, but more than one-fourth

worked in public libraries. The remainder worked in special libraries or as information professionals for companies and other organizations.

Job Outlook

Despite slower-than-average projected employment growth, job opportunities are still expected to be favorable because a large number of librarians are expected to retire in the coming decade.

Employment change. Employment of librarians is expected to grow by 4 percent between 2006 and 2016, slower than the average for all occupations. Growth in the number of librarians will be limited by government budget constraints and the increasing use of electronic resources. Both will result in the hiring of fewer librarians and the replacement of librarians with less costly library technicians and assistants. As electronic resources become more common and patrons and support staff become more familiar with their use, fewer librarians are needed to maintain and assist users with these resources. In addition, many libraries are equipped for users to access library resources directly from their homes or offices through library Web sites. Some users bypass librarians altogether and conduct research on their own. However, librarians will still be needed to manage staff, help users develop database-searching techniques, address complicated reference requests, choose materials, and help users to define their needs.

Jobs for librarians outside traditional settings will grow the fastest over the decade. Nontraditional librarian jobs include working as information brokers and working for private corporations, nonprofit organizations, and consulting firms. Many companies are turning to librarians because of their research and organizational skills and their knowledge of computer databases and library automation systems. Librarians can review vast amounts of information and analyze, evaluate, and organize it according to a company's specific needs. Librarians also are hired by organizations to set up information on the Internet. Librarians working in these settings may be classified as systems analysts, database specialists and trainers, webmasters or web developers, or local area network (LAN) coordinators.

Job prospects. More than 2 out of 3 librarians are aged 45 or older, which will result in many job openings over the next decade as many librarians retire. However, recent increases in enrollments in MLS programs will prepare a sufficient number of new librarians to fill these positions. Opportunities for public school librarians, who are usually drawn from the ranks of teachers, should be particularly favorable.

Earnings

Salaries of librarians vary according to the individual's qualifications and the type, size, and location of the library. Librarians with primarily administrative duties often have greater

earnings. Median annual earnings of librarians in May 2006 were \$49,060. The middle 50 percent earned between \$39,250 and \$60,800. The lowest 10 percent earned less than \$30,930, and the highest 10 percent earned more than \$74,670. Median annual earnings in the industries employing the largest numbers of librarians in 2006 were as follows:

Junior colleges.....	\$52,030
Colleges, universities, and professional schools	51,160
Elementary and secondary schools	50,710
Local government.....	44,960
Other information services	44,170

The average annual salary for all librarians in the Federal Government in nonsupervisory, supervisory, and managerial positions was \$80,873 in 2007.

About 1 in 4 librarians are a member of a union or are covered under a union contract.

Related Occupations

Librarians play an important role in the transfer of knowledge and ideas by providing people with information. Jobs requiring similar analytical, organizational, and communication skills include archivists, curators, and museum technicians and computer and information scientists, research. School librarians have many duties similar to those of school teachers. Librarians increasingly store, catalogue, and access information with computers. Other jobs that use computer skills include computer systems analysts, and computer scientists and database administrators.

Sources of Additional Information

For information on a career as a librarian and information on accredited library education programs and scholarships, contact:

➤ American Library Association, Office for Human Resource Development and Recruitment, 50 East Huron St., Chicago, IL 60611. Internet:

<http://www.ala.org/ala/education/educationcareers.htm>

For information on a career as a special librarian, contact:

➤ Special Libraries Association, 331 South Patrick St., Alexandria, VA 22314. Internet: **<http://www.sla.org>**

For information on a career as a law librarian, scholarship information, and a list of ALA-accredited schools offering programs in law librarianship, contact:

➤ American Association of Law Libraries, 53 West Jackson Blvd., Suite 940, Chicago, IL 60604.

Internet: **<http://www.aallnet.org>**

For information on employment opportunities for health sciences librarians and for scholarship information, credentialing information, and a list of MLA-accredited schools offering programs in health sciences librarianship, contact:

➤ Medical Library Association, 65 East Wacker Place, Suite 1900, Chicago, IL 60601. Internet: **<http://www.mlanet.org>**

Information concerning requirements and application procedures for positions in the Library of Congress can be obtained directly from:

➤ Human Resources Office, Library of Congress, 101 Independence Ave. SE., Washington, DC 20540-2231.

Internet: **<http://www.loc.gov/hr>**

State library agencies can furnish information on scholarships available through their offices, requirements for certification, and general information about career prospects in the particular State of interest. Several of these agencies maintain job hot lines reporting openings for librarians.

State departments of education can furnish information on certification requirements and job opportunities for school librarians.

Library Technicians

(O*NET 25-4031.00)

Significant Points

- Increasing use of electronic resources enables library technicians to perform tasks once done by librarians.
- Training requirements range from a high school diploma to an associate degree, but computer skills are necessary for all workers.
- Employment should grow more rapidly in special libraries because increasing numbers of professionals and other workers use those libraries.
- Opportunities will be best for those with specialized postsecondary library training.

Nature of the Work

Library technicians help librarians acquire, prepare, and organize materials and help users to find those materials. Library technicians usually work under the supervision of a librarian, although they sometimes work independently. Technicians in small libraries handle a range of duties; those in large libraries usually specialize. The duties of technicians are expanding and evolving as libraries increasingly use the Internet and other technologies to share information. Depending on where they work, library technicians can have other titles, such as *library technical assistant* or *media aide*.

Library technicians direct library users to standard references, organize and maintain periodicals, prepare volumes for binding, handle interlibrary loan requests, prepare invoices, perform routine cataloguing and coding of library materials, retrieve information from computer databases, and supervise support staff.

Technicians also market library services. They participate in and help plan reader advisory programs, used-book sales, and outreach programs. They may also design posters, bulletin boards, or displays to inform patrons of library events and services.

As libraries increasingly use the Internet, virtual libraries, and other electronic resources, the duties of library technicians are changing. In fact, new technologies allow some technicians to assume responsibilities which were previously performed only by librarians. Technicians now catalog new acquisitions and oversee the circulation of all library materials. They of-



Library technicians may process materials for circulation.

ten maintain, update, and help customize electronic databases. Technicians also may help to maintain the library's Web site and instruct patrons in how to use the library's computers.

The automation of recordkeeping has reduced the amount of clerical work performed by library technicians. Many libraries now offer self-service registration and circulation areas, where patrons can register for library cards and check out materials themselves. These technologies decrease the time library technicians spend recording and inputting records.

Some library technicians operate and maintain audiovisual equipment, such as projectors, tape and CD players, and DVD and videocassette players. They also assist users with microfilm or microfiche readers.

Library technicians in school libraries encourage and teach students to use the library and media center. They also help teachers obtain instructional materials, and they assist students with assignments.

Some technicians work in special libraries maintained by government agencies, corporations, law firms, advertising agencies, museums, professional societies, medical centers, or research laboratories. These technicians conduct literature searches, compile bibliographies, and prepare abstracts, usually on subjects of particular interest to the organization.

To extend library services to more patrons, many libraries operate bookmobiles, which are often run by library technicians. The technicians take bookmobiles—trucks stocked with books—to shopping centers, apartment complexes, schools, nursing homes, and other places. Technicians may operate a bookmobile alone or with other library employees.

Library technicians who drive bookmobiles are responsible for answering patrons' questions, receiving and checking out books, collecting fines, maintaining the book collection, shelving materials, and occasionally operating audiovisual equipment to show slides or movies. Technicians who drive the bookmobile keep track of mileage and sometimes are responsible for maintenance of the vehicle and any equipment, such as photocopiers, in it. Many bookmobiles are equipped with personal computers linked to the main library Internet system, allowing patrons access to electronic resources as well as books.

Work environment. Library technicians who prepare library materials sit at desks or computer terminals for long periods and can develop headaches or eyestrain. They may lift and

carry books, climb ladders to reach high stacks, and bend low to shelve books on bottom shelves. Technicians who work in bookmobiles may assist handicapped or elderly patrons to the bookmobile or shovel snow to ensure their safety. They may enter hospitals or nursing homes to deliver books.

Library technicians in school libraries work regular school hours. Those in public libraries and college and university libraries may work weekends, evenings, and some holidays. Library technicians in corporate libraries usually work normal business hours, although they often work overtime as well. The schedules of technicians who drive bookmobiles often depend on the size of the area being served.

Training, Other Qualifications, and Advancement

Training requirements for library technicians vary widely, ranging from a high school diploma to specialized postsecondary training. Some employers only hire individuals who have library work experience or college training related to libraries; others train inexperienced workers on the job.

Education and training. Most libraries prefer to hire technicians who have earned a certificate or associate degree, but some smaller libraries may hire individuals with only a high school diploma.

Many library technicians in public schools must meet the same requirements as teacher assistants. Those in Title I schools—schools that receive special funding because of the high percentage of poor students enrolled—must hold an associate or higher degree, have a minimum of 2 years of college, or pass a rigorous State or local exam.

Associate degree and certificate programs for library technicians include courses in liberal arts and subjects related to libraries. Students learn about library organization and operation and how to order, process, catalogue, locate, and circulate library materials and media. They often learn to use library automation systems. Libraries and associations offer continuing education courses to inform technicians of new developments in the field.

Other qualifications. Given the rapid spread of automation in libraries, computer skills are a necessity. Knowledge of databases, library automation systems, online library systems, online public access systems, and circulation systems is particularly valuable. Many bookmobile drivers must have a commercial driver's license.

Advancement. Library technicians usually advance by assuming added responsibilities. For example, technicians often start at the circulation desk, checking books in and out. After gaining experience, they may become responsible for storing and verifying information. As they advance, they may become involved in budget and personnel matters. Some library technicians advance to supervisory positions and are in charge of the day-to-day operation of their departments or, sometimes, a small library. Those who earn a graduate degree in library sciences can become librarians.

Employment

Library technicians held about 121,000 jobs in 2006; about half worked in local public libraries. Most of the rest worked in school or academic libraries, but some worked in special libraries in health care and legal settings. The Federal Government

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Library technicians.....	25-4031	121,000	132,000	10,000	8

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

employs library technicians primarily at the U.S. Department of Defense and the U.S. Library of Congress.

Job Outlook

Employment of library technicians is expected to grow about as fast as average. Opportunities will be best for those with specialized postsecondary library training.

Employment change. The number of library technicians is expected to grow by 8 percent between 2006 and 2016, about as fast as the average for all occupations, as the increasing use of library automation creates more opportunities for these workers. Electronic information systems have simplified some tasks, enabling them to be performed by technicians rather than librarians, and spurring demand for technicians. However, job growth in educational institutions will be limited by slowing enrollment growth. In addition, public libraries often face budget pressures, which hold down overall growth in library services. However, this may result in the hiring of more library technicians because they are paid less than librarians and, thus, represent a lower-cost way to offer some library services. Employment should grow more rapidly in special libraries because increasing numbers of professionals and other workers use those libraries.

Job prospects. In addition to job openings from employment growth, some openings will result from the need to replace library technicians who transfer to other occupations or leave the labor force. Opportunities will be best for library technicians with specialized postsecondary library training. Increased use of special libraries in businesses, hospitals, and other places should result in good job opportunities for library technicians in those settings.

Earnings

Median annual earnings of library technicians in May 2006 were \$26,560. The middle 50 percent earned between \$20,220 and \$34,280. The lowest 10 percent earned less than \$15,820, and the highest 10 percent earned more than \$42,850. Median annual earnings in the industries employing the largest numbers of library technicians in 2006 were as follows:

Colleges, universities, and professional schools.....	\$29,950
Junior colleges	29,470
Local government	25,610
Elementary and secondary schools.....	24,760
Other information services.....	23,420

Salaries of library technicians in the Federal Government averaged \$43,238 in 2007.

Related Occupations

Library technicians perform organizational and administrative duties. Workers in other occupations with similar duties in-

clude library assistants, clerical; information and record clerks; and medical records and health information technicians. Technicians also support and assist librarians in much the same way as teacher assistants support teachers.

Sources of Additional Information

For general career information on library technicians, including information on training programs, contact:

► American Library Association, Office for Human Resource Development and Recruitment, 50 East Huron St., Chicago, IL 60611. Internet:

<http://www.ala.org/ala/education/educationcareers.htm>

► Council on Library/Media Technology, P.O. Box 42048, Mesa, AZ 85274-2048. Internet: <http://colt.ucr.edu>

Information concerning requirements and application procedures for positions in the Library of Congress can be obtained directly from:

► Human Resources Office, Library of Congress, 101 Independence Ave. SE., Washington, DC 20540-2231.

Internet: <http://www.loc.gov/hr>

State library agencies can furnish information on requirements for technicians and general information about career prospects in the State. Several of these agencies maintain job hot lines that report openings for library technicians.

State departments of education can furnish information on requirements and job opportunities for school library technicians.

Probation Officers and Correctional Treatment Specialists

(O*NET 21-1092.00)

Significant Points

- State and local governments employ most of these workers.
- A bachelor's degree in social work, criminal justice, or a related field usually is required.
- Employment growth, which is projected to be as fast as the average, depends on government funding.
- Job opportunities are expected to be excellent.

Nature of the Work

Many people who are convicted of crimes are placed on probation instead of being sent to prison. People who have served time in prison are often released on parole. During probation and parole, offenders must stay out of trouble and meet various

other requirements. Probation officers, parole officers, and correctional treatment specialists work with and monitor offenders to prevent them from committing new crimes.

Probation officers, who are called community supervision officers in some States, supervise people who have been placed on probation. *Correctional treatment specialists*, who may also be known as case managers, counsel offenders and create rehabilitation plans for them to follow when they are no longer in prison or on parole. *Parole officers* perform many of the same duties that probation officers perform. The difference is that parole officers supervise offenders who have been released from prison, whereas probation officers work with those who are sentenced to probation instead of prison. *Pretrial services officers* conduct pretrial investigations, the findings of which help determine whether suspects should be released before their trial.

Probation and parole officers supervise offenders on probation or parole through personal contact with the offenders and their families. Instead of requiring offenders to meet officers in their offices, many officers meet offenders in their homes and at their places of employment or therapy. Probation and parole agencies also seek the assistance of community organizations, such as religious institutions, neighborhood groups, and local residents, to monitor the behavior of many offenders. Some offenders are required to wear an electronic device so that probation officers can monitor their location and movements. Probation and parole officers may arrange for offenders to get substance abuse rehabilitation or job training. Probation officers usually work with either adults or juveniles exclusively. Only in small, usually rural, jurisdictions do probation officers counsel both adults and juveniles. In some States, the jobs of parole and probation officers are combined.

Probation officers also spend much of their time working for the courts. They investigate the backgrounds of the accused, write presentence reports, and recommend sentences. They review sentencing recommendations with offenders and their families before submitting them to the court. Probation officers may be required to testify in court as to their findings and recommendations. They also attend hearings to update the court on offenders' efforts at rehabilitation and compliance with the terms of their sentences.

Correctional treatment specialists work in jails, prisons, or parole or probation agencies. In jails and prisons, they evaluate the progress of inmates. They may evaluate inmates using questionnaires and psychological tests. They also work with inmates, probation officers, and other agencies to develop parole and release plans. Their case reports, which discuss the inmate's history and likelihood of committing another crime, are provided to the appropriate parole board when their clients are eligible for release. In addition, they plan education and training programs to improve offenders' job skills and provide them with coping, anger management, and drug and sexual abuse counseling either individually or in groups. They usually write treatment plans and summaries for each client. Correctional treatment specialists working in parole and probation agencies perform many of the same duties as their counterparts who work in correctional institutions.

The number of cases a probation officer or correctional treatment specialist handles at one time depends on the needs of offenders and the risks they pose. Higher risk offenders and those who need more counseling usually command more of the officer's time and resources. Caseload size also varies by agency jurisdiction. Consequently, officers may handle from 20 to more than 100 active cases at a time.

Computers, telephones, and fax machines enable the officers to handle the caseload. Probation officers may telecommute from their homes. Other technological advancements, such as electronic monitoring devices and drug screening, also have assisted probation officers and correctional treatment specialists in supervising and counseling offenders.

Pretrial services officers conduct pretrial investigations, the findings of which help determine whether suspects should be released before their trial. When suspects are released before their trial, pretrial services officers supervise them to make sure they adhere to the terms of their release and that they show up for trial. In the Federal courts system, probation officers perform the functions of pretrial services officers.

Work environment. Probation officers and correctional treatment specialists work with criminal offenders, some of whom may be dangerous. In the course of supervising offenders, they usually interact with many other individuals, such as family members and friends of their clients, who may be angry, upset, or difficult to work with. Workers may be assigned to fieldwork in high-crime areas or in institutions where there is a risk of violence or communicable disease.

Probation officers and correctional treatment specialists are required to meet many court-imposed deadlines, which contribute to heavy workloads. In addition, extensive travel and fieldwork may be required to meet with offenders who are on probation or parole. Workers may be required to carry a firearm or other weapon for protection. They also may be required to collect and transport urine samples of offenders for drug testing. All of these factors make for a stressful work environment. Although the high stress levels can make these jobs very difficult at times, this work also can be very rewarding. Many workers obtain personal satisfaction from counseling members of their community and helping them become productive citizens.



Most probation officers and correctional treatment specialists work in State or local government.

Probation officers and correctional treatment specialists generally work a 40-hour week, but some may work longer. They may be on call 24 hours a day to supervise and assist offenders at any time.

Training, Other Qualifications, and Advancement

Qualifications vary by agency, but a bachelor's degree is usually required. Most employers require candidates to pass oral, written, and psychological examinations.

Education and training. A bachelor's degree in social work, criminal justice, psychology, or a related field is usually required. Some employers require a master's degree in criminal justice, social work, psychology, or a related field for candidates who do not have previous related experience. Different employers have different requirements for what counts as related experience. It may include work in probation, pretrial services, parole, corrections, criminal investigations, substance abuse treatment, social work, or counseling.

Most probation officers and some correctional treatment specialists are required to complete a training program sponsored by their State government or the Federal Government, after which a certification test may be required. Most probation officers and correctional treatment specialists work as trainees or on a probationary period for up to a year before being offered a permanent position.

Other qualifications. Applicants usually take written, oral, psychological, and physical examinations. Prospective probation officers or correctional treatment specialists should be in good physical and emotional condition. Most agencies require applicants to be at least 21 years old and, for Federal employment, not older than 37. Those convicted of felonies may not be eligible for employment in this occupation.

Familiarity with the use of computers often is required due to the increasing use of computer technology in probation and parole work. Candidates also should be knowledgeable about laws and regulations pertaining to corrections. Probation officers and correctional treatment specialists should have strong writing skills because they are required to prepare many reports. They should also have excellent listening and interpersonal skills to work effectively with offenders.

Advancement. A typical agency has several levels of probation and parole officers and correctional treatment specialists, as well as supervisors. Advancement is primarily based on length of experience and performance. A graduate degree, such as a master's degree in criminal justice, social work, or psychology, may be helpful for advancement.

Employment

Probation officers and correctional treatment specialists held about 94,000 jobs in 2006. Most jobs are in State or local governments. In some States, the State government employs

all probation officers and correctional treatment specialists; in other States, local governments are the only employers. In still other States, both levels of government employ these workers. Jobs are more plentiful in urban areas. In the Federal Government, probation officers are employed by the U.S. courts, and correctional treatment specialists are employed by the U.S. Department of Justice's Bureau of Prisons.

Job Outlook

Employment of probation officers and correctional treatment specialists is projected to grow as fast as the average for all occupations through 2016. Job opportunities are expected to be excellent.

Employment change. Employment of probation officers and correctional treatment specialists is projected to grow 11 percent between 2006 and 2016, as fast as the average for all occupations. Mandatory sentencing guidelines calling for longer sentences and reduced parole for inmates have resulted in a large increase in the prison population. However, mandatory sentencing guidelines are being reconsidered in many States because of budgetary constraints, court decisions, and doubts about the guidelines' effectiveness. Instead, there may be more emphasis in many States on rehabilitation and alternate forms of punishment, such as probation, spurring demand for probation and parole officers and correctional treatment specialists. Additionally, there will be a need for parole officers to supervise the large numbers of people who are currently incarcerated and will be released from prison.

However, the job outlook depends primarily on the amount of government funding that is allocated to corrections, and especially to probation systems. Although community supervision is far less expensive than keeping offenders in prison, a change in political trends toward more imprisonment and away from community supervision could result in reduced employment opportunities.

Job prospects. In addition to openings due to growth, many openings will be created by replacement needs, especially openings due to the large number of these workers who are expected to retire. This occupation is not attractive to some potential entrants due to relatively low earnings, heavy workloads, and high stress. For these reasons, job opportunities are expected to be excellent.

Earnings

Median annual earnings of probation officers and correctional treatment specialists in May 2006 were \$42,500. The middle 50 percent earned between \$33,880 and \$56,280. The lowest 10 percent earned less than \$28,000, and the highest 10 percent earned more than \$71,160. In May 2006, median annual earnings for probation officers and correctional treatment specialists employed in State government were \$42,970; those

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Probation officers and correctional treatment specialists.....	21-1092	94,000	105,000	10,000	11

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

employed in local government earned \$43,100. Higher wages tend to be found in urban areas.

Related Occupations

Probation officers and correctional treatment specialists counsel criminal offenders while they are in prison or on parole. Other occupations that involve similar responsibilities include social workers, social and human service assistants, and counselors.

Probation officers and correctional treatment specialists also play a major role in maintaining public safety. Other occupations related to corrections and law enforcement include police and detectives, correctional officers, and firefighting occupations.

Sources of Additional Information

For information about criminal justice job opportunities in your area, contact your State's department of corrections, criminal justice, or probation.

Further information about probation officers and correctional treatment specialists is available from:

➤ American Probation and Parole Association, P.O. Box 11910, Lexington, KY 40578. Internet: <http://www.appa-net.org>

Social and Human Service Assistants

(O*NET 21-1093.00)

Significant Points

- A bachelor's degree usually is not required for these jobs, but employers increasingly seek individuals with relevant work experience or education beyond high school.
- Employment is projected to grow much faster than average for all occupations.
- Job opportunities should be excellent, particularly for applicants with appropriate postsecondary education, but wages remain low.

Nature of the Work

Social and human service assistants help social workers, health care workers, and other professionals to provide services to people. Social and human service assistant is a generic term for workers with a wide array of job titles, including human service worker, case management aide, social work assistant, community support worker, mental health aide, community outreach worker, life skills counselor, or gerontology aide. They usually work under the direction of workers from a variety of fields, such as nursing, psychiatry, psychology, rehabilitative or physical therapy, or social work. The amount of responsibility and supervision they are given varies a great deal. Some have little direct supervision—they may run a group home, for example. Others work under close direction.

Social and human service assistants provide services to clients to help them improve their quality of life. They assess

clients' needs, investigate their eligibility for benefits and services such as food stamps, Medicaid, or welfare, and help to obtain them. They also arrange for transportation and escorts, if necessary, and provide emotional support. Social and human service assistants monitor and keep case records on clients and report progress to supervisors and case managers.

Social and human service assistants play a variety of roles in a community. They may organize and lead group activities, assist clients in need of counseling or crisis intervention, or administer food banks or emergency fuel programs, for example. In halfway houses, group homes, and government-supported housing programs, they assist adults who need supervision with personal hygiene and daily living skills. They review clients' records, ensure that they take their medication, talk with family members, and confer with medical personnel and other caregivers to provide insight into clients' needs. Social and human service assistants also give emotional support and help clients become involved in community recreation programs and other activities.

In psychiatric hospitals, rehabilitation programs, and outpatient clinics, social and human service assistants work with psychiatrists, psychologists, social workers, and others to help clients master everyday living skills, communicate more effectively, and live well with others. They support the client's participation in a treatment plan, such as individual or group counseling or occupational therapy.

The work, while satisfying, can be emotionally draining. Understaffing and relatively low pay may add to the pressure.

Work environment. Working conditions of social and human service assistants vary. Some work in offices, clinics, and hospitals, while others work in group homes, shelters, sheltered workshops, and day programs. Traveling to see clients is also required for some jobs. Sometimes working with clients can be dangerous even though most agencies do everything they can to ensure their workers' safety. Most assistants work 40 hours a week; some work in the evening and on weekends.



Social and human service assistants help clients apply for benefits and services, like food stamps or welfare.

Training, Other Qualifications, and Advancement

A bachelor's degree is not required for most jobs in this occupation, but employers increasingly seek individuals with relevant work experience or education beyond high school.

Education and training. Many employers prefer to hire people with some education beyond high school. Certificates or associate degrees in subjects such as human services, gerontology or one of the social or behavioral sciences meet many employers' requirements. Some jobs may require a bachelor's or master's degree in human services or a related field, such as counseling, rehabilitation, or social work.

Human services degree programs have a core curriculum that trains students to observe patients and record information, conduct patient interviews, implement treatment plans, employ problem-solving techniques, handle crisis intervention matters, and use proper case management and referral procedures. Many programs utilize field work to give students hands-on experience. General education courses in liberal arts, sciences, and the humanities also are part of most curriculums. Most programs also offer specialized courses related to addictions, gerontology, child protection, and other areas. Many degree programs require completion of a supervised internship.

The level of education workers have often influenced the kind of work they are assigned and the degree of responsibility that is given to them. For example, workers with no more than a high school education are likely to receive extensive on-the-job training to work in direct-care services, helping clients to fill out paperwork, for example. Workers with a college degree, however, might do supportive counseling, coordinate program activities, or manage a group home. Social and human service assistants with proven leadership ability, especially from paid or volunteer experience in social services, often have greater autonomy in their work. Regardless of the academic or work background of employees, most employers provide some form of in-service training to their employees such as seminars and workshops.

Other qualifications. These workers should have a strong desire to help others, effective communication skills, a sense of responsibility, and the ability to manage time effectively. Many human services jobs involve direct contact with people who are vulnerable to exploitation or mistreatment; so patience and understanding are also highly valued characteristics.

It is becoming more common for employers to require a criminal background check, and in some settings, workers may be required to have a valid driver's license.

Advancement. Formal education is almost always necessary for advancement. In general, advancement to case

management, rehabilitation, or social work jobs requires a bachelor's or master's degree in human services, counseling, rehabilitation, social work, or a related field.

Employment

Social and human service assistants held about 339,000 jobs in 2006. Over 60 percent were employed in the health care and social assistance industries. Nearly 3 in 10 were employed by State and local governments, primarily in public welfare agencies and facilities for mentally disabled and developmentally challenged individuals.

Job Outlook

Employment of social and human service assistants is expected to grow by nearly 34 percent through 2016. Job prospects are expected to be excellent, particularly for applicants with appropriate postsecondary education.

Employment change. The number of social and human service assistants is projected to grow by nearly 34 percent between 2006 and 2016, which is much faster than the average for all occupations. This occupation will have a very large number of new jobs arise, about 114,000 over the projections decade. Faced with rapid growth in the demand for social and human services, many employers increasingly rely on social and human service assistants.

Demand for social services will expand with the growing elderly population, who are more likely to need adult day care, meal delivery programs, support during medical crises, and other services. In addition, more social and human service assistants will be needed to provide services to pregnant teenagers, people who are homeless, people who are mentally disabled or developmentally challenged, and people who are substance abusers.

Job training programs are also expected to require additional social and human service assistants. As social welfare policies shift focus from benefit-based programs to work-based initiatives, there will be more demand for people to teach job skills to the people who are new to, or returning to, the workforce.

Residential care establishments should face increased pressures to respond to the needs of the mentally and physically disabled. The number of people who are disabled is increasing, and many need help to care for themselves. More community-based programs and supportive independent-living sites are expected to be established to house and assist the homeless and the mentally and physically disabled. Furthermore, as substance abusers are increasingly being sent to treatment programs instead of prison, employment of social and human service assistants in substance abuse treatment programs also will grow.

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Social and human service assistants	21-1093	339,000	453,000	114,000	34

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Opportunities are expected to be good in private social service agencies. Employment in private agencies will grow as State and local governments continue to contract out services to the private sector in an effort to cut costs. Also, some private agencies have been employing more social and human service assistants in place of social workers, who are more educated and more highly paid.

The number of jobs for social and human service assistants in local governments will grow but not as fast as employment for social and human service assistants in other industries. Employment in the public sector may fluctuate with the level of funding provided by State and local governments and with the number of services contracted out to private organizations.

Job prospects. Job prospects for social and human service assistants are expected to be excellent, particularly for individuals with appropriate education after high school. Job openings will come from job growth, but also from the need to replace workers who advance into new positions, retire, or leave the workforce for other reasons. There will be more competition for jobs in urban areas than in rural ones, but qualified applicants should have little difficulty finding employment.

Earnings

Median annual earnings of social and human service assistants were \$25,580 in May 2006. The middle 50 percent earned between \$20,350 and \$32,440. The top 10 percent earned more than \$40,780, while the lowest 10 percent earned less than \$16,180.

Median annual earnings in the industries employing the largest numbers of social and human service assistants in May 2006 were:

Local government	\$30,510
State government.....	29,810
Individual and family services	24,490
Vocational rehabilitation services	22,530
Residential mental retardation, mental health and substance abuse facilities.....	22,380

Related Occupations

Workers in other occupations that require skills similar to those of social and human service assistants include social workers, clergy, counselors, child care workers; occupational therapist assistants and aides, physical therapist assistants and aides, and nursing, psychiatric, and home health aides.

Sources of Additional Information

For information on programs and careers in human services, contact:

➤ Council for Standards in Human Services Education, PMB 703, 1050 Larrabee Avenue, Suite 104, Bellingham, WA 98225-7367. Internet: <http://www.cshse.org>

➤ National Organization for Human Services, 90 Madison Street, Suite 206, Denver, CO 80206.

Internet: <http://www.nationalhumanservices.org>

Information on job openings may be available from State employment service offices or directly from city, county, or State

departments of health, mental health and mental retardation, and human resources.

Social Workers

(O*NET 21-1021.00, 21-1022.00, 21-1023.00, 21-1029.99)

Significant Points

- Employment is projected to grow much faster than average.
- About 5 out of 10 jobs were in health care and social assistance industries and 3 in 10 work for State and local government agencies.
- While a bachelor's degree is the minimum requirement, a master's degree in social work or a related field has become the standard for many positions.
- Competition for jobs is expected in cities, but opportunities should be good in rural areas.

Nature of the Work

Social work is a profession for those with a strong desire to help improve people's lives. Social workers assist people by helping them cope with issues in their everyday lives, deal with their relationships, and solve personal and family problems. Some social workers help clients who face a disability or a life-threatening disease or a social problem, such as inadequate housing, unemployment, or substance abuse. Social workers also assist families that have serious domestic conflicts, sometimes involving child or spousal abuse. Some social workers conduct research, advocate for improved services, engage in systems design or are involved in planning or policy development. Many social workers specialize in serving a particular population or working in a specific setting.

Child, family, and school social workers provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the well-being of families and the academic functioning of children. They may assist single parents, arrange adoptions, or help find foster homes for neglected, abandoned, or abused children. Some specialize in services for senior citizens. These social workers may run support groups for the children of aging parents; advise elderly people or family members about housing, transportation, long-term care, and other services; and coordinate and monitor these services. Through employee assistance programs, social workers may help people cope with job-related pressures or with personal problems that affect the quality of their work.

In schools, social workers often serve as the link between students' families and the school, working with parents, guardians, teachers, and other school officials to ensure students reach their academic and personal potential. In addition, they address problems such as misbehavior, truancy, and teenage pregnancy and advise teachers on how to cope with difficult students. Increasingly, school social workers teach workshops to entire classes.

Child, family, and school social workers may also be known as child welfare social workers, family services social workers, child protective services social workers, occupational social workers, or gerontology social workers. They often work for individual and family services agencies, schools, or State or local governments.

Medical and public health social workers provide psychosocial support to people, families, or vulnerable populations so they can cope with chronic, acute, or terminal illnesses, such as Alzheimer's disease, cancer, or AIDS. They also advise family caregivers, counsel patients, and help plan for patients' needs after discharge from hospitals. They may arrange for at-home services, such as meals-on-wheels or home care. Some work on interdisciplinary teams that evaluate certain kinds of patients—geriatric or organ transplant patients, for example. Medical and public health social workers may work for hospitals, nursing and personal care facilities, individual and family services agencies, or local governments.

Mental health and substance abuse social workers assess and treat individuals with mental illness or substance abuse problems, including abuse of alcohol, tobacco, or other drugs. Such services include individual and group therapy, outreach, crisis intervention, social rehabilitation, and teaching skills needed for everyday living. They also may help plan for supportive services to ease clients' return to the community. Mental health and substance abuse social workers are likely to work in hospitals, substance abuse treatment centers, individual and family services agencies, or local governments. These social workers may be known as clinical social workers. (Counselors and psychologists, who may provide similar services, are discussed elsewhere in the *Handbook*.)

Other types of social workers include social work administrators, planners and policymakers, who develop and implement programs to address issues such as child abuse, homelessness, substance abuse, poverty, and violence. These workers research and analyze policies, programs, and regulations. They identify social problems and suggest legislative and other solutions. They may help raise funds or write grants to support these programs.



Social workers help clients with problems such as unemployment, life-threatening illnesses, or substance abuse.

Work environment. Social workers usually spend most of their time in an office or residential facility, but they also may travel locally to visit clients, meet with service providers, or attend meetings. Some may meet with clients in one of several offices within a local area. Social work, while satisfying, can be challenging. Understaffing and large caseloads add to the pressure in some agencies. To tend to patient care or client needs, many hospitals and long-term care facilities employ social workers on teams with a broad mix of occupations, including clinical specialists, registered nurses, and health aides. Full-time social workers usually work a standard 40-hour week, but some occasionally work evenings and weekends to meet with clients, attend community meetings, and handle emergencies. Some work part time, particularly in voluntary nonprofit agencies.

Training, Other Qualifications, and Advancement

A bachelor's degree is the minimum requirement for entry into the occupation, but many positions require an advanced degree. All States and the District of Columbia have some licensure, certification, or registration requirement, but the regulations vary.

Education and training. A bachelor's degree in social work (BSW) is the most common minimum requirement to qualify for a job as a social worker; however, majors in psychology, sociology, and related fields may qualify for some entry-level jobs, especially in small community agencies. Although a bachelor's degree is sufficient for entry into the field, an advanced degree has become the standard for many positions. A master's degree in social work (MSW) is typically required for positions in health settings and is required for clinical work as well. Some jobs in public and private agencies also may require an advanced degree, such as a master's degree in social services policy or administration. Supervisory, administrative, and staff training positions usually require an advanced degree. College and university teaching positions and most research appointments normally require a doctorate in social work (DSW or Ph.D.).

As of 2006, the Council on Social Work Education accredited 458 bachelor's programs and 181 master's programs. The Group for the Advancement of Doctoral Education listed 74 doctoral programs in social work (DSW or Ph.D.) in the United States. Bachelor's degree programs prepare graduates for direct service positions, such as caseworker, and include courses in social work values and ethics, dealing with a culturally diverse clientele and at-risk populations, promotion of social and economic justice, human behavior and the social environment, social welfare policy and services, social work practice, social research methods, and field education. Accredited programs require a minimum of 400 hours of supervised field experience.

Master's degree programs prepare graduates for work in their chosen field of concentration and continue to develop the skills required to perform clinical assessments, manage large caseloads, take on supervisory roles, and explore new ways of drawing upon social services to meet the needs of clients. Master's programs last 2 years and include a minimum of 900 hours of supervised field instruction or internship. A part-time program may take 4 years. Entry into a master's program does not re-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Social workers.....	21-1020	595,000	727,000	132,000	22
Child, family, and school social workers	21-1021	282,000	336,000	54,000	19
Medical and public health social workers.....	21-1022	124,000	154,000	30,000	24
Mental health and substance abuse social workers.....	21-1023	122,000	159,000	37,000	30
Social workers, all other.....	21-1029	66,000	78,000	12,000	18

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

quire a bachelor's degree in social work, but courses in psychology, biology, sociology, economics, political science, and social work are recommended. In addition, a second language can be very helpful. Most master's programs offer advanced standing for those with a bachelor's degree from an accredited social work program.

Licensure. All States and the District of Columbia have licensing, certification, or registration requirements regarding social work practice and the use of professional titles. Although standards for licensing vary by State, a growing number of States are placing greater emphasis on communications skills, professional ethics, and sensitivity to cultural diversity issues. Most States require 2 years (3,000 hours) of supervised clinical experience for licensure of clinical social workers.

Other qualifications. Social workers should be emotionally mature, objective, and sensitive to people and their problems. They must be able to handle responsibility, work independently, and maintain good working relationships with clients and co-workers. Volunteer or paid jobs as a social work aide can help people test their interest in this field.

Certification and advancement. The National Association of Social Workers offers voluntary credentials. Social workers with a master's degree in social work may be eligible for the Academy of Certified Social Workers (ACSW), the Qualified Clinical Social Worker (QCSW), or the Diplomate in Clinical Social Work (DCSW) credential, based on their professional experience. Credentials are particularly important for those in private practice; some health insurance providers require social workers to have them in order to be reimbursed for services.

Advancement to supervisor, program manager, assistant director, or executive director of a social service agency or department usually requires an advanced degree and related work experience. Other career options for social workers include teaching, research, and consulting. Some of these workers also help formulate government policies by analyzing and advocating policy positions in government agencies, in research institutions, and on legislators' staffs.

Some social workers go into private practice. Most private practitioners are clinical social workers who provide psychotherapy, usually paid for through health insurance or by the client themselves. Private practitioners must have at least a master's degree and a period of supervised work experience. A network of contacts for referrals also is essential. Many private practitioners split their time between working for an agency or hospital and working in their private practice. They may continue to hold a position at a hospital or agency in order to receive health and life insurance.

Employment

Social workers held about 595,000 jobs in 2006. About 5 out of 10 jobs were in health care and social assistance industries and 3 out of 10 are employed by State and local government agencies. Although most social workers are employed in cities or suburbs, some work in rural areas. Employment by type of social worker in 2006, follows:

Child, family, and school social workers	282,000
Medical and public health social workers.....	124,000
Mental health and substance abuse social workers.....	122,000
Social workers, all other.....	66,000

Job Outlook

Employment for social workers is expected grow much faster than the average for all occupations through 2016. Job prospects are expected to be favorable, particularly for social workers who specialize in the aging population or work in rural areas.

Employment change. Employment of social workers is expected to increase by 22 percent during the 2006-16 decade, which is much faster than the average for all occupations. The growing elderly population and the aging baby boom generation will create greater demand for health and social services, resulting in rapid job growth among gerontology social workers. Employment of social workers in private social service agencies also will increase. However, agencies increasingly will restructure services and hire more social and human service assistants, who are paid less, instead of social workers. Employment in State and local government agencies may grow somewhat in response to growing needs for public welfare, family services, and child protective services, but many of these services will be contracted out to private agencies. Employment levels in public and private social services agencies may fluctuate, depending on need and government funding levels.

Opportunities for social workers in private practice will expand, but growth may be somewhat hindered by restrictions that managed care organizations put on mental health services. The growing popularity of employee assistance programs is expected to spur demand for private practitioners, some of whom provide social work services to corporations on a contractual basis. However, the popularity of employee assistance programs will fluctuate with the business cycle because businesses are not likely to offer these services during recessions.

Employment of child, family and school social workers is expected to grow by 19 percent, which is faster than the average

for all occupations. One of the major contributing factors is the rise in the elderly population. Social workers, particularly family social workers, will be needed to assist in finding the best care for the aging and to support their families. Furthermore, demand for school social workers will increase and lead to more jobs as efforts are expanded to respond to rising student enrollments as well as the continued emphasis on integrating disabled children into the general school population. There could be competition for school social work jobs in some areas because of the limited number of openings. The availability of Federal, State, and local funding will be a major factor in determining the actual job growth in schools. The demand for child and family social workers may also be tied to the availability of government funding.

Mental health and substance abuse social workers will grow by 30 percent, which is much faster than the average, over the 2006-16 decade. In particular, social workers specializing in substance abuse will experience strong demand. Substance abusers are increasingly being placed into treatment programs instead of being sentenced to prison. Also, growing numbers of the substance abusers sentenced to prison or probation are, increasingly being required by correctional systems to have substance abuse treatment added as a condition to their sentence or probation. As this trend grows, demand will strengthen for treatment programs and social workers to assist abusers on the road to recovery.

Growth of medical and public health social workers is expected to be 24 percent, which is much faster than the average for all occupations. Hospitals continue to limit the length of patient stays, so the demand for social workers in hospitals will grow more slowly than in other areas. But hospitals are releasing patients earlier than in the past, so social worker employment in home health care services is growing. However, the expanding senior population is an even larger factor. Employment opportunities for social workers with backgrounds in gerontology should be good in the growing numbers of assisted-living and senior-living communities. The expanding senior population also will spur demand for social workers in nursing homes, long-term care facilities, and hospices. However, in these settings other types of workers are often being given tasks that were previously done by social workers.

Job prospects. Job prospects are generally expected to be favorable. Many job openings will stem from growth and the need to replace social workers who leave the occupation. However, competition for social worker jobs is expected in cities, where training programs for social workers are prevalent. Opportunities should be good in rural areas, which often find it difficult to attract and retain qualified staff. By specialty, job prospects may be best for those social workers with a background in gerontology and substance abuse treatment.

Earnings

Median annual earnings of child, family, and school social workers were \$37,480 in May 2006. The middle 50 percent earned between \$29,590 and \$49,060. The lowest 10 percent earned less than \$24,480, and the top 10 percent earned more than \$62,530. Median annual earnings in the industries em-

ploying the largest numbers of child, family, and school social workers in May 2006 were:

Elementary and secondary schools	\$48,360
Local government	43,500
State government.....	39,000
Individual and family services	32,680
Other residential care facilities	32,590

Median annual earnings of medical and public health social workers were \$43,040 in May 2006. The middle 50 percent earned between \$34,110 and \$53,740. The lowest 10 percent earned less than \$27,280, and the top 10 percent earned more than \$64,070. Median annual earnings in the industries employing the largest numbers of medical and public health social workers in May 2006 were:

General medical and surgical hospitals.....	\$48,420
Home health care services	44,470
Local government	41,590
Nursing care facilities	38,550
Individual and family services	35,510

Median annual earnings of mental health and substance abuse social workers were \$35,410 in May 2006. The middle 50 percent earned between \$27,940 and \$45,720. The lowest 10 percent earned less than \$22,490, and the top 10 percent earned more than \$57,630. Median annual earnings in the industries employing the largest numbers of mental health and substance abuse social workers in May 2006 were:

Local government	\$39,550
Psychiatric and substance abuse hospitals	39,240
Individual and family services	34,920
Residential mental retardation, mental health and substance abuse facilities.....	30,590
Outpatient mental health and substance abuse centers	34,290

Median annual earnings of social workers, all other were \$43,580 in May 2006. The middle 50 percent earned between \$32,530 and \$56,420. The lowest 10 percent earned less than \$25,540, and the top 10 percent earned more than \$68,500. Median annual earnings in the industries employing the largest numbers of social workers, all other in May 2006 were:

Local government	\$46,330
State government.....	45,070
Individual and family services	35,150

About 20 percent of social workers are members of a union. Many belong to the union that represents workers in other occupations at their place of employment.

Related Occupations

Through direct counseling or referral to other services, social workers help people solve a range of personal problems. Workers in occupations with similar duties include the clergy, coun-

selors, probation officers and correctional treatment specialists, psychologists, and social and human services assistants.

Sources of Additional Information

For information about career opportunities in social work and voluntary credentials for social workers, contact:

► National Association of Social Workers, 750 First St.N.E., Suite 700, Washington, DC 20002-4241.

Internet: <http://www.socialworkers.org>

For a listing of accredited social work programs, contact:

► Council on Social Work Education, 1725 Duke St., Suite 500, Alexandria, VA 22314-3457. Internet: <http://www.cswe.org>

Information on licensing requirements and testing procedures for each State may be obtained from State licensing authorities, or from:

► Association of Social Work Boards, 400 South Ridge Pkwy., Suite B, Culpeper, VA 22701. Internet: <http://www.aswb.org>

Teacher Assistants

(O*NET 25-9041.00)

Significant Points

- Almost 4 in 10 teacher assistants work part time.
- Educational requirements range from a high school diploma to some college training.
- Favorable job prospects are expected.
- Opportunities should be best for those with at least 2 years of formal postsecondary education, those with experience in helping special education students, or those who can speak a foreign language.

Nature of the Work

Teacher assistants provide instructional and clerical support for classroom teachers, allowing teachers more time for lesson planning and teaching. They support and assist children in learning class material using the teacher's lesson plans, providing students with individualized attention. Teacher assistants also supervise students in the cafeteria, schoolyard, and hallways, or on field trips; they record grades, set up equipment, and help prepare materials for instruction. Teacher assistants also are called teacher aides or instructional aides. Some assistants refer to themselves as paraeducators or paraprofessionals.

Some teacher assistants perform exclusively noninstructional or clerical tasks, such as monitoring nonacademic settings. Playground and lunchroom attendants are examples of such assistants. Most teacher assistants, however, perform a combination of instructional and clerical duties. They generally provide instructional reinforcement to children, under the direction and guidance of teachers. They work with students individually or in small groups—listening while students read, reviewing or reinforcing class lessons, or helping them find information for reports. At the secondary school level, teacher assistants often specialize in a certain subject, such as math or science. Teacher assistants often take charge of special projects and pre-

pare equipment or exhibits, such as for a science demonstration. Some assistants work in computer laboratories, helping students to use computers and educational software programs.

In addition to instructing, assisting, and supervising students, teacher assistants may grade tests and papers, check homework, keep health and attendance records, do typing and filing, and duplicate materials. They also stock supplies, operate audiovisual equipment, and keep classroom equipment in order.

Many teacher assistants work extensively with special education students. As schools become more inclusive and integrate special education students into general education classrooms, teacher assistants in both general education and special education classrooms increasingly assist students with disabilities. They attend to the physical needs of students with disabilities, including feeding, teaching good grooming habits, or assisting students riding the schoolbus. They also provide personal attention to students with other special needs, such as those who speak English as a second language or those who need remedial education. Some work with young adults to help them obtain a job or to apply for community services to support them after schooling. Teacher assistants help assess a student's progress by observing performance and recording relevant data.

While the majority of teacher assistants work in primary and secondary educational settings, others work in preschools and other child care centers. Often one or two assistants will work



Teacher assistants work with small groups of students during reading lessons.

with a lead teacher in order to better provide the individual attention that young children require. In addition to assisting in educational instruction, they also supervise the children at play and assist in feeding and other basic care activities.

Teacher assistants also work with infants and toddlers who have developmental delays or other disabilities. Under the guidance of a teacher or therapist, teacher assistants perform exercises or play games to help the child develop physically and behaviorally.

Work environment. Teacher assistants work in a variety of settings—including preschools, child care centers, and religious and community centers, where they work with young adults—but most work in classrooms in elementary, middle, and secondary schools. They also work outdoors supervising recess when weather allows, and they spend much of their time standing, walking, or kneeling.

Approximately 4 in 10 teacher assistants work part time. However, even among full-time workers, about 17 percent work less than 40 hours per week. Most assistants who provide educational instruction work the traditional 9-month to 10-month school year.

Seeing students develop and gain appreciation of the joy of learning can be very rewarding. However, working closely with students can be both physically and emotionally tiring. Teacher assistants who work with special education students often perform more strenuous tasks, including lifting, as they help students with their daily routine. Those who perform clerical work may tire of administrative duties, such as copying materials or entering data.

Training, Other Qualifications, and Advancement

Training requirements for teacher assistants vary by State or school district and range from a high school diploma to some college training. Increasingly, employers prefer applicants with some related college coursework.

Education and training. Many teacher assistants need only a high school diploma and on-the-job training. A college degree or related coursework in child development improves job opportunities, however. In fact, teacher assistants who work in Title 1 schools—those with a large proportion of students from low-income households—must have college training or proven academic skills. They face new Federal requirements as of 2006: assistants must hold a 2-year or higher degree, have a minimum of 2 years of college, or pass a rigorous State or local assessment.

A number of colleges offer associate degrees or certificate programs that either prepare graduates to work as teacher assistants or provide additional training for current teacher assistants.

All teacher assistants receive some on-the-job training. Teacher assistants need to become familiar with the school system and with the operation and rules of the school. Those who tutor and review lessons with students, must learn and understand the class

materials and instructional methods used by the teacher. Teacher assistants also must know how to operate audiovisual equipment, keep records, and prepare instructional materials, as well as have adequate computer skills.

Other qualifications. Many schools require previous experience in working with children and a valid driver’s license. Some schools may require the applicant to pass a background check. Teacher assistants should enjoy working with children from a wide range of cultural backgrounds and be able to handle classroom situations with fairness and patience. Teacher assistants also must demonstrate initiative and a willingness to follow a teacher’s directions. They must have good writing skills and be able to communicate effectively with students and teachers. Teacher assistants who speak a second language, especially Spanish, are in great demand for communicating with growing numbers of students and parents whose primary language is not English.

Advancement. Advancement for teacher assistants—usually in the form of higher earnings or increased responsibility—comes primarily with experience or additional education. Some school districts provide time away from the job or tuition reimbursement so that teacher assistants can earn their bachelor’s degrees and pursue licensed teaching positions. In return for tuition reimbursement, assistants are often required to teach for a certain length of time in the school district.

Employment

Teacher assistants held 1.3 million jobs in 2006. About 3 out of 4 worked for public and private elementary and secondary schools. Child care centers and religious organizations employed most of the rest.

Job Outlook

Many job openings are expected for teacher assistants due to turnover and average employment growth in this large occupation, resulting in favorable job prospects.

Employment change. Employment of teacher assistants is expected to grow by 10 percent between 2006 and 2016, about as fast as the average for all occupations. A large number of new jobs, 137,000, will arise over the 2006-16 period because of the size of the occupation. School enrollments are projected to increase slowly over the next decade, but faster growth is expected among special education students and students for whom English is a second language, and they will increase as a share of the total school-age population. These students are the ones who most need teacher assistants.

Legislation requires students with disabilities and non-native English speakers to receive an education equal to that of other students, so it will continue to generate jobs for teacher assistants, who help to accommodate these students’ special needs. Children with special needs require much personal attention, and teachers rely heavily on teacher assistants to provide much of

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Teacher assistants.....	25-9041	1,312,000	1,449,000	137,000	10

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

that attention. An increasing number of after-school programs and summer programs also will create new opportunities for teacher assistants.

The greater focus on school quality and accountability in recent years also is likely to lead to an increased demand for teacher assistants. Growing numbers of teacher assistants may be needed to help teachers prepare students for standardized testing and to provide extra assistance to students who perform poorly on these tests. Job growth of assistants may be moderated, however, if schools are encouraged to hire more full-fledged teachers for instructional purposes.

Job prospects. Favorable job prospects are expected. Opportunities for teacher assistant jobs should be best for those with at least 2 years of formal postsecondary education, those with experience in helping special education students, or those who can speak a foreign language. Demand is expected to vary by region of the country. Regions in which the population and school enrollments are expected to grow faster, such as many communities in the South and West, should have rapid growth in the demand for teacher assistants.

In addition to job openings stemming from employment growth, numerous openings will arise as assistants leave their jobs and must be replaced. Many assistant jobs require limited formal education and offer relatively low pay so many workers transfer to other occupations or leave the labor force to assume family responsibilities, to return to school, or for other reasons.

Earnings

Median annual earnings of teacher assistants in May 2006 were \$20,740. The middle 50 percent earned between \$16,430 and \$26,160. The lowest 10 percent earned less than \$13,910, and the highest 10 percent earned more than \$31,610.

Full-time workers usually receive health coverage and other benefits. Teacher assistants who work part time ordinarily do not receive benefits. In 2006, about 3 out of 10 teacher assistants belonged to unions—mainly the American Federation of Teachers and the National Education Association—which bargain with school systems over wages, hours, and the terms and conditions of employment.

Related Occupations

Teacher assistants who instruct children have duties similar to those of preschool, kindergarten, elementary, middle, and secondary school teachers, as well as special education teachers. However, teacher assistants do not have the same level of responsibility or training. The support activities of teacher assistants and their educational backgrounds are similar to those of child-care workers, library technicians, and library assistants. Teacher assistants who work with children with disabilities perform many of the same functions as occupational therapist assistants and aides.

Sources of Additional Information

For information on teacher assistants, including training and certification, contact:

- ▶ American Federation of Teachers, Paraprofessional and School Related Personnel Division, 555 New Jersey Ave. NW., Washington, DC 20001.
Internet: <http://www.aft.org/psrp/index.html>

- ▶ National Education Association, Educational Support Personnel Division, 1201 16th Street, NW., Washington, DC 20036. Internet: <http://www.nea.org/esphome>

- ▶ National Resource Center for Paraprofessionals, 6526 Old Main Hill, Utah State University, Logan, UT 84322.
Internet: <http://www.nrcpara.org>

Human resource departments of school systems, school administrators, and State departments of education also can provide details about employment opportunities and required qualifications for teacher assistant jobs.

Teachers—Adult Literacy and Remedial Education

(O*NET 25-3011.00)

Significant Points

- Many adult literacy and remedial education teachers work part time and receive no benefits; unpaid volunteers also teach these subjects.
- Most programs require teachers to have at least a bachelor's degree; a public school teaching license is required for publicly run programs in some States.
- Job opportunities are expected to be favorable, particularly for teachers of English to speakers of other languages.

Nature of the Work

Adult literacy and remedial education teachers instruct adults and out-of-school youths in reading, writing, speaking English, and performing elementary mathematical calculations—basic skills that equip them to solve problems well enough to become active participants in our society, to hold a job, and to further their education. The instruction provided by these teachers can be divided into three principle categories: *remedial* or *adult basic education (ABE)* is geared toward adults whose skills are either at or below an eighth-grade level; *adult secondary education (ASE)* is geared towards students who wish to obtain their General Educational Development (GED) certificate or other high school equivalency credential; and *English literacy* instruction for adults with limited proficiency in English. For the most part, students in these adult education classes traditionally have been those who did not graduate from high school or who passed through school without acquiring the knowledge needed to meet their education goals or to participate fully in today's high-skill society. Increasingly, however, students in these classes are immigrants or other people whose native language is not English. Educators who work with adult English-language learners are usually called *teachers of English as a second language (ESL)* or *teachers of English to speakers of other languages (ESOL)*.

Remedial education teachers, more commonly called adult basic education teachers, teach basic academic courses in mathematics, languages, history, reading, writing, science, and other areas, using instructional methods geared toward adult learning. They teach these subjects to students 16 years of age and older

who demonstrate the need to increase their skills in one or more of the subject areas mentioned. Classes are taught to appeal to a variety of learning styles and usually include large-group, small-group, and one-on-one instruction. Because the students often are at different proficiency levels for different subjects, adult basic education teachers must make individual assessments of each student's abilities beforehand. In many programs, the assessment is used to develop an individualized education plan for each student. Teachers are required to evaluate students periodically to determine their progress and potential for advancement to the next level.

Teachers in remedial or adult basic education may have to assist students in acquiring effective study skills and the self-confidence they need to reenter an academic environment. Teachers also may encounter students with learning or physical disabilities that require additional expertise. Teachers should possess an understanding of how to help these students achieve their goals, but they also may need to have the knowledge to detect challenges their students may have and provide them with access to a broader system of additional services that are required to address their challenges.

For students who wish to get a GED credential in order to get a job or qualify for postsecondary education, adult secondary education, or GED, teachers provide help in acquiring the necessary knowledge and skills to pass the test. Earning a GED requires



Adult literacy teachers help students learn by using examples from everyday life.

passing a series of five tests in reading, writing, mathematics, science, and social studies; most teachers instruct students in all subject areas. To help students pass the tests and succeed later in life, teachers not only provide subject matter instruction but also focus on improving the communication, information-processing, problem-solving, and critical-thinking skills necessary for further education and successful careers.

ESOL teachers help adults to speak, listen, read, and write in English, often in the context of real-life situations to promote learning. More advanced students may concentrate on writing and conversational skills or focus on learning more academic or job-related communication skills. ESOL teachers work with adults from a wide range of backgrounds. They must be prepared to work with students of all ages and from many different language backgrounds. Some students may have extensive educational experiences in their native language, while others may have very little. As a result, some students may progress faster than others, so teachers must be able to tailor their instruction to the needs and abilities of their students. Because the teacher and students often do not share a common language, creativity is an important part of fostering communication in the classroom and achieving learning goals.

All adult literacy and remedial teachers must prepare lessons beforehand, do any related paperwork, and stay current in their fields. Attendance for students is mostly voluntary and course work is rarely graded. Because computers are increasingly being used to supplement instruction in basic skills and in teaching ESOL, many teachers also must learn the latest applications for computers in the classroom.

Work environment. Because many adult literacy and remedial education teachers work with adult students, they do not encounter some of the behavioral or social problems sometimes found with younger students. Adults attend by choice, are highly motivated, and bring years of experience to the classroom—attributes that can make teaching these students rewarding and satisfying. However, many adult education programs are located in cramped facilities that lack modern amenities, which can be frustrating for teachers.

A large number of these teachers work part time. Some have several part-time teaching assignments or work full time in addition to their part-time teaching job. Classes for adults are held on days and at times that best accommodate students who may have a job or family responsibilities, so evening and weekend work is common.

Training, Other Qualifications, and Advancement

Nearly all programs require teachers to have at least a bachelor's degree, but some require a master's degree in adult education or ESOL instruction. Some States require teachers to have a public school teacher license or a license specifically for adult education teachers.

Education and training. Adult education teachers need at least a bachelor's degree, although some programs prefer or require a master's degree. Programs may also prefer to hire those with teaching experience, especially with adults. Many colleges and universities offer master's degrees or graduate certificates in adult education, although some adult education programs offer classes or workshops themselves on topics relevant for their teachers. These include classes on teaching adults, using technology to teach, working with learners from a variety of cultures, and teach-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Adult literacy, remedial education, and GED teachers and instructors.....	25-3011	76,000	87,000	11,000	14

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

ing adults with learning disabilities. ESOL teachers also should have courses or training in second-language acquisition theory and linguistics. In addition, knowledge of the citizenship and naturalization process may be useful. Knowledge of a second language is not necessary to teach ESOL students, but can be helpful in understanding the students' perspectives. GED teachers should know what is required to pass the GED and be able to instruct students in the subject matter.

Professional development among adult education and literacy teachers varies widely. Both part-time and full-time teachers are expected to participate in ongoing professional development activities in order to keep current on new developments in the field and to enhance skills already acquired. Each State's professional development system reflects the unique needs and organizational structure of that State. Attendance by teachers at professional development workshops and other activities is often outlined in State or local policy. Some teachers are able to access professional development activities through alternative delivery systems such as the Internet or distance learning.

Licensure. Most States require teachers in these programs to have some form of license if they are employed in a State or local government-run program. Some States have specific licenses for adult education teachers, while others require a public school teacher license. Requirements for a license typically consist of a bachelor's degree and completion of an approved teacher training program.

Other qualifications. Adult education and literacy teachers must have the ability to work with students who come from a variety of cultural, educational, and economic backgrounds. They must be understanding and respectful of their students' circumstances and be familiar with their concerns. All teachers, both paid and volunteer, should be able to communicate well and motivate their students.

Advancement. Opportunities for advancement for adult education and literacy teachers again vary from State to State and program to program. Some part-time teachers are able to move into full-time teaching positions or program administrator positions, such as coordinator or director, when such vacancies occur. Others may decide to use their classroom experience to move into policy work at a nonprofit organization or with the local, State, or Federal Government or to perform research.

Employment

Teachers of adult literacy and remedial education held about 76,000 jobs in 2006. Many additional teachers worked as unpaid volunteers. Many of the jobs are federally funded, with additional funds coming from State and local governments. The overwhelming majority of these teachers are employed by the educational services industry, primarily in local school districts, adult learning centers, and community colleges.

Job Outlook

Employment is expected to grow faster than the average for all occupations, and a large number of job openings is expected due to the need to replace people who leave the occupation or retire. Job opportunities are expected to be favorable, particularly for teachers of English to speakers of other languages.

Employment change. Employment of adult literacy and remedial education teachers is expected to grow by 14 percent through 2016, faster than the average for all occupations. As employers increasingly require a more literate workforce, workers' demand for adult literacy, basic education, and secondary education classes is expected to grow. Significant employment growth is anticipated especially for ESOL teachers, who will be needed by the increasing number of immigrants and other residents living in this country who need to learn or improve their English skills. In addition, greater proportions of these groups are expected to take ESOL classes.

The demand for adult literacy and basic and secondary education often fluctuates with the economy. When the economy is good and workers are hard to find, employers may relax their standards and hire workers without a degree or GED or good proficiency in English. As the economy softens, employers can be more selective, and more students may find that they need additional education to get a job. In addition, adult education classes often are subject to changes in funding levels, which can cause the number of teaching jobs to fluctuate from year to year. In particular, budget pressures may limit Federal funding of adult education, which may cause programs to rely more on volunteers if other organizations and governments do not make up the difference. Other factors such as immigration policies and the relative prosperity of the United States compared with other countries also may have an impact on the number of immigrants entering this country and, consequently, on the demand for ESOL teachers.

Job prospects. Job prospects should be favorable as high turnover of part time jobs in this occupation creates many openings. Opportunities will be best for ESOL teachers, particularly in States that have large populations of residents who have limited English skills—such as California, Florida, Texas, and New York. However, many other parts of the Nation have begun to attract large numbers of immigrants, making good opportunities in this field widely available.

Earnings

Median hourly earnings of adult literacy and remedial education teachers were \$43,910 in May 2006. The middle 50 percent earned between \$32,660 and \$57,310. The lowest 10 percent earned less than \$24,610, and the highest 10 percent earned more than \$75,680. Part-time adult literacy and remedial education instructors are usually paid by the hour or for each class that they teach, and receive few or no benefits. Full-time teachers are gen-

erally paid a salary and receive health insurance and other benefits if they work for a school system or government.

Related Occupations

The work of adult literacy and remedial education teachers is closely related to that of other types of teachers, especially preschool, kindergarten, elementary school, middle school, and secondary school teachers. In addition, adult literacy and basic and secondary education teachers require a wide variety of skills and aptitudes. Not only must they be able to teach and motivate students (including, at times, those with learning disabilities), but they also must often take on roles as advisers and mentors. Workers in other occupations that require these aptitudes include special-education teachers, counselors, and social workers. Other occupations that involve working with speakers of languages other than English include interpreters and translators.

Sources of Additional Information

Information on adult literacy, basic and secondary education programs, and teacher certification requirements is available from State departments of education, local school districts, and literacy resource centers. Information also may be obtained through local religious and charitable organizations.

For information on adult education and family literacy programs, contact:

► The U.S. Department of Education, Office of Vocational and Adult Education, Potomac Center Plaza, 400 Maryland Ave. SW., Washington, DC 20202.

Internet:

<http://www.ed.gov/about/offices/list/ovae/index.html>

For information on teaching English as a second language, contact:

► The Center for Adult English Language Acquisition, 4646 40th St.NW., Washington, DC 20016.

Internet: <http://www.cal.org/caela>

Teachers—Postsecondary

(O*NET 25-1011.00, 25-1021.00, 25-1022.00, 25-1031.00, 25-1032.00, 25-1041.00, 25-1042.00, 25-1043.00, 25-1051.00, 25-1052.00, 25-1053.00, 25-1054.00, 25-1061.00, 25-1062.00, 25-1063.00, 25-1064.00, 25-1065.00, 25-1066.00, 25-1067.00, 25-1069.99, 25-1071.00, 25-1072.00, 25-1081.00, 25-1082.00, 25-1111.00, 25-1112.00, 25-1113.00, 25-1121.00, 25-1122.00, 25-1123.00, 25-1124.00, 25-1125.00, 25-1126.00, 25-1191.00, 25-1192.00, 25-1193.00, 25-1194.00, 25-1199.99)

Significant Points

- Educational qualifications range from expertise in a particular field to a Ph.D., depending on the subject taught and the type of educational institution.
- Job opportunities are expected to be very good, but many new openings will be for part-time or non-tenure-track positions.
- Prospects will be better and earnings higher in rapidly growing fields that offer many nonacademic career options.

Nature of the Work

Postsecondary teachers instruct students in a wide variety of academic and vocational subjects beyond the high school level. Most of these students are working toward a degree, but many others are studying for a certificate or certification to improve their knowledge or career skills. Postsecondary teachers include college and university faculty, postsecondary career and technical education teachers, and graduate teaching assistants. Teaching in any venue involves forming a lesson plan, presenting material to students, responding to students learning needs, and evaluating student progress. In addition to instruction, postsecondary teachers, particularly those at 4-year colleges and universities, also perform a significant amount of research in the subject they teach. They must also keep up with new developments in their field and may consult with government, business, nonprofit, and community organizations.

College and university faculty make up the majority of postsecondary teachers. Faculty usually are organized into departments or divisions, based on academic subject or field. They typically teach several different related courses in their subject—algebra, calculus, and statistics, for example. They may instruct undergraduate or graduate students, or both. College and university faculty may give lectures to several hundred students in large halls, lead small seminars, or supervise students in laboratories. They prepare lectures, exercises, and laboratory experiments; grade exams and papers; and advise and work with students individually. In universities, they also supervise graduate students' teaching and research. College faculty work with an increasingly varied student population made up of growing shares of part-time, older, and culturally and racially diverse students.

Faculty keep up with developments in their field by reading current literature, talking with colleagues, and participating in professional conferences. They also are encouraged to do their own research to expand knowledge in their field by performing experiments; collecting and analyzing data; or examining original documents, literature, and other source material. They publish their findings in scholarly journals, books, and electronic media.

Most postsecondary teachers extensively use computer technology, including the Internet, e-mail, and software programs. They may use computers in the classroom as teaching aids and may post course content, class notes, class schedules, and other information on the Internet. The use of e-mail, chat rooms, and other techniques has greatly improved communications between students and teachers and among students.

Some instructors use the Internet to teach courses to students at remote sites. These so-called "distance learning" courses are an increasingly popular option for students who work while attending school. Faculty who teach these courses must be able to adapt existing courses to make them successful online or design a new course that takes advantage of the format.

Most full-time faculty members serve on academic or administrative committees that deal with the policies of their institution, departmental matters, academic issues, curricula, budgets, equipment purchases, and hiring. Some work with student and community organizations. Department chairpersons are faculty members who usually teach some courses but have heavier administrative responsibilities.

The proportion of time spent on research, teaching, administrative, and other duties varies by individual circumstance and type of institution. Faculty members at universities normally

spend a significant part of their time doing research; those in 4-year colleges, somewhat less; and those in 2-year colleges, relatively little. The teaching load, however, often is heavier in 2-year colleges and somewhat lighter at 4-year institutions. At all types of institutions, full professors—those that have reached the highest level in their field—usually spend a larger portion of their time conducting research than do assistant professors, instructors, and lecturers.

In addition to traditional 2- and 4-year institutions, an increasing number of postsecondary educators work in alternative schools or in programs aimed at providing career-related education for working adults. Courses are usually offered on-line or on nights and weekends. Instructors at these programs generally work part time and are only responsible for teaching, with little to no administrative and research responsibilities.

Postsecondary vocational education teachers, also known as *postsecondary career and technical education teachers*, provide instruction for occupations that require specialized training but not usually a 4-year degree. They may teach classes in welding, dental hygienics, x-ray technician techniques, auto mechanics, or cosmetology, for example. Classes often are taught in an industrial or laboratory setting where students are provided hands-on experience. For example, welding instructors show students various welding techniques and essential safety practices, watch them use tools and equipment, and have them repeat procedures until they meet the specific standards required by the trade. Increasingly, career and technical education teachers are integrating academic and vocational curriculums so that students obtain a variety of skills that can be applied on the job. In addition, career and technical education teachers at community colleges and career and technical schools also often play a key role in students' transition from school to work by helping to establish internship programs for students and by facilitating contact between students and prospective employers.

Graduate teaching assistants, often referred to as *graduate TAs*, assist faculty, department chairs, or other professional staff at colleges and universities by performing teaching or teaching-related duties. In addition to their work responsibilities, assistants have their own school commitments, as they are also students who are working towards earning a graduate degree, such as a Ph.D. Some teaching assistants have full responsibility for teaching a course—usually one that is introductory—which can include preparation of lectures and exams, and assigning final grades to students. Others help faculty members, which may include doing a variety of tasks such as grading papers, monitoring exams, holding office hours or help-sessions for students, conducting laboratory sessions, or administering quizzes to the class. Teaching assistants generally meet initially with the faculty member whom they are going to assist to determine exactly what is expected of them, as each faculty member may have his or her own needs. For example, some faculty members prefer assistants to sit in on classes, but others assign them other tasks to do during class time. Graduate teaching assistants may work one-on-one with a faculty member or, for large classes, they may be one of several assistants.

Work environment. Many postsecondary teachers find the environment intellectually stimulating and rewarding because

they are surrounded by others who enjoy their subject. The ability to share their expertise with others is also appealing to many.

Most postsecondary teachers have flexible schedules. They must be present for classes, usually 12 to 16 hours per week, and for faculty and committee meetings. Most establish regular office hours for student consultations, usually 3 to 6 hours per week. Otherwise, teachers are free to decide when and where they will work, and how much time to devote to course preparation, grading, study, research, graduate student supervision, and other activities.

Classes are typically scheduled during weekdays, although some occur at night or during the weekend. This is particularly true for teachers at 2-year community colleges or institutions with large enrollments of older students who have full-time jobs or family responsibilities. Most colleges and universities require teachers to work 9 months of the year, which allows them time during the summer and school holidays to teach additional courses, do research, travel, or pursue nonacademic interests.

About 30 percent of college and university faculty worked part time in 2006. Some part-timers, known as “adjunct faculty,” have primary jobs outside of academia—in government, private industry, or nonprofit research—and teach “on the side.”



Postsecondary teachers conduct research and publish articles and papers, in addition to instructing students.

Others may have multiple part-time teaching positions at different institutions. Most graduate teaching assistants work part time while working on their graduate studies. The number of hours that they work may vary, depending on their assignments.

University faculty may experience a conflict between their responsibilities to teach students and the pressure to do research and publish their findings. This may be a particular problem for young faculty seeking advancement in 4-year research universities. Also, recent cutbacks in support workers and the hiring of more part-time faculty have put a greater administrative burden on full-time faculty. Requirements to teach online classes also have added greatly to the workloads of postsecondary teachers. Many find that developing the courses to put online is very time-consuming, especially when learning how to operate the technology and answering large amounts of e-mail.

Graduate TAs usually have flexibility in their work schedules like college and university faculty, but they also must spend a considerable amount of time pursuing their own academic coursework and studies. Work may be stressful, particularly when assistants are given full responsibility for teaching a class. However, these types of positions allow graduate students the opportunity to gain valuable teaching experience, which is especially helpful for those who seek to become college faculty members after completing their degree.

Training, Other Qualifications, and Advancement

The education and training required of postsecondary teachers varies widely, depending on the subject taught and educational institution employing them. Educational requirements for teachers are generally highest at research universities, where a Ph.D. is the most commonly held degree; at career and technical institutes, experience and expertise in a related occupation is the principal qualification.

Education and training. Four-year colleges and universities usually require candidates for full-time, tenure-track positions, to hold a doctoral degree. However, they may hire master's degree holders or doctoral candidates for certain disciplines, such as the arts, or for part-time and temporary jobs.

Doctoral programs take an average of 6 years of full-time study beyond the bachelor's degree; this includes time spent completing a master's degree and a dissertation. Some programs, such as those in the humanities, may take longer to complete; others, such as those in engineering, usually are shorter. Candidates specialize in a subfield of a discipline, for example, organic chemistry, counseling psychology, or European history, and also take courses covering the entire discipline. Programs typically include 20 or more increasingly specialized courses and seminars plus comprehensive examinations on all major areas of the field. Candidates also must complete a dissertation—a written report on original research in the candidate's major field of study. The dissertation sets forth an original hypothesis or proposes a model and tests it. Students in the natural sciences and engineering usually do laboratory work; in the humanities, they study original documents and other published material. The dissertation is done

under the guidance of one or more faculty advisors and usually takes 1 or 2 years of full-time work.

In 2-year colleges, master's degree holders fill most full-time teaching positions. However, in certain fields where there may be more applicants than available jobs, institutions can be more selective in their hiring practices. In these fields, master's degree holders may be passed over in favor of candidates holding Ph.Ds. Many 2-year institutions increasingly prefer job applicants to have some teaching experience or experience with distance learning. Preference also may be given to those holding dual master's degrees, especially at smaller institutions, because they can teach more subjects.

Training requirements for postsecondary career and technical education teachers vary by State and subject. In general, career and technical education teachers need a bachelor's or graduate degree, plus at least 3 years of work experience in their field. In some fields, a license or certificate that demonstrates one's qualifications may be all that is required. These teachers may need to update their skills through continuing education to maintain certification. They must also maintain ongoing dialogue with businesses to determine the skills most needed in the current workplace.

Other qualifications. Postsecondary teachers should communicate and relate well with students, enjoy working with them, and be able to motivate them. They should have inquiring and analytical minds, and a strong desire to pursue and disseminate knowledge. Additionally, they must be self-motivated and able to work in an environment in which they receive little direct supervision.

Obtaining a position as a graduate teaching assistant is a good way to gain college teaching experience. To qualify, candidates must be enrolled in a graduate school program. In addition, some colleges and universities require teaching assistants to attend classes or take some training prior to being given responsibility for a course.

Although graduate teaching assistants usually work at the institution and in the department where they are earning their degree, teaching or internship positions for graduate students at institutions that do not grant a graduate degree have become more common in recent years. For example, a program called Preparing Future Faculty, administered by the Association of American Colleges and Universities and the Council of Graduate Schools, has led to the creation of many programs that are now independent. These programs offer graduate students at research universities the opportunity to work as teaching assistants at other types of institutions, such as liberal arts or community colleges. Working with a mentor, the graduate students teach classes and learn how to improve their teaching techniques. They may attend faculty and committee meetings, develop a curriculum, and learn how to balance the teaching, research, and administrative roles that faculty play. These programs provide valuable learning opportunities for graduate students interested in teaching at the postsecondary level, and also help to make these students aware of the differences among the various types of institutions at which they may someday work.

Some degree holders, particularly those who studied in the natural sciences, spend additional years after earning their

graduate degree on postdoctoral research and study before taking a faculty position. Some Ph.D.s are able to extend postdoctoral appointments, or take new ones, if they are unable to find a faculty job. Most of these appointments offer a nominal salary.

Advancement. For faculty, a major goal in the traditional academic career is attaining tenure. The process of attaining tenure can take approximately 7 years with faculty moving up the ranks in tenure-track positions as they meet specific criteria. The ranks are instructor, assistant professor, associate professor, and professor. Colleges and universities usually hire new tenure-track faculty as instructors or assistant professors under term contracts. At the end of the period, their record of teaching, research, and overall contribution to the institution is reviewed and tenure may be granted if the review is favorable. Those denied tenure usually must leave the institution. Tenured professors cannot be fired without just cause and due process. Tenure protects the faculty’s academic freedom—the ability to teach and conduct research without fear of being fired for advocating controversial or unpopular ideas. It also gives both faculty and institutions the stability needed for effective research and teaching, and provides financial security for faculty. Some institutions have adopted post-tenure review policies to encourage ongoing evaluation of tenured faculty.

The number of tenure-track positions is declining as institutions seek flexibility in dealing with financial matters and changing student interests. Institutions rely more heavily on limited term contracts and part-time, or adjunct, faculty, thus shrinking the total pool of tenured faculty. Limited-term contracts—typically 2- to 5 years, may be terminated or extended when they expire but generally do not lead to the granting of tenure. In addition, some institutions have limited the percentage of faculty who can be tenured.

For tenured postsecondary teachers, further advancement involves a move into administrative and managerial positions, such as departmental chairperson, dean, and president. At 4-year institutions, such advancement requires a doctoral degree. At 2-year colleges, a doctorate is helpful but not usually required, except for advancement to some top administrative positions. (Deans and departmental chairpersons are covered in the *Handbook* statement on education administrators, while college presidents are included in the *Handbook* statement on top executives.)

Employment

Postsecondary teachers held nearly 1.7 million jobs in 2006. Most were employed in 4-year colleges and universities and in 2-year community colleges. Other postsecondary teachers are employed by schools and institutes that specialize in training people in a specific field, such as technology centers or culi-

nary schools, or work for businesses that provide professional development courses to employees of companies. Some career and technical education teachers work for State and local governments and job training facilities. The following tabulation shows postsecondary teaching jobs in specialties having 20,000 or more jobs in 2006:

Health specialties teachers	145,000
Graduate teaching assistants	144,000
Vocational education teachers	119,000
Art, drama, and music teachers	88,000
Business teachers	82,000
English language and literature teachers.....	72,000
Education teachers	67,000
Biological science teachers	65,000
Mathematical science teachers.....	54,000
Nursing instructors and teachers.....	46,000
Computer science teachers.....	44,000
Engineering teachers.....	40,000
Psychology teachers.....	37,000
Foreign language and literature teachers	30,000
Communications teachers	29,000
History teachers	26,000
Philosophy and religion teachers	25,000
Chemistry teachers.....	24,000
Recreation and fitness studies teachers	20,000

Job Outlook

Employment of postsecondary teachers is expected to grow much faster than average as student enrollments continue to increase. However, a significant proportion of these new jobs will be part-time and non-tenure-track positions. Retirements of current postsecondary teachers should create numerous openings for all types of postsecondary teachers, so job opportunities are generally expected to be very good, although they will vary by the subject taught and the type of educational institution.

Employment change. Postsecondary teachers are expected to grow by 23 percent between 2006 and 2016, much faster than the average for all occupations. Because of the size of this occupation and its much faster than average growth rate, postsecondary teachers will account for 382,000 new jobs, which is among the largest number of new jobs for an occupation. Projected growth in the occupation will be primarily due to increases in college and university enrollment over the next decade. This enrollment growth stems mainly from the expected increase in the population of 18- to 24-year-olds, who constitute the majority of students at postsecondary institutions, and from the increasing number of high school graduates who choose to attend these institutions. Adults returning to col-

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Postsecondary teachers	25-1000	1,672,000	2,054,000	382,000	23

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

lege to enhance their career prospects or to update their skills also will continue to create new opportunities for postsecondary teachers, particularly at community colleges and for-profit institutions that cater to working adults. However, many postsecondary educational institutions receive a significant portion of their funding from State and local governments, so expansion of public higher education will be limited by State and local budgets.

Job prospects. A significant number of openings in this occupation will be created by growth in enrollments and the need to replace the large numbers of postsecondary teachers who are likely to retire over the next decade. Many postsecondary teachers were hired in the late 1960s and the 1970s to teach members of the baby boom generation, and they are expected to retire in growing numbers in the years ahead. As a result, Ph.D. recipients seeking jobs as postsecondary teachers will experience favorable job prospects over the next decade.

Although competition will remain tight for tenure-track positions at 4-year colleges and universities, there will be available a considerable number of part-time or renewable, term appointments at these institutions and at community colleges. Opportunities for master's degree holders are also expected to be favorable because there will be considerable growth at community colleges, career education programs, and other institutions that employ them.

Opportunities for graduate teaching assistants are expected to be very good, reflecting expectations of higher undergraduate enrollments coupled with more modest increases in graduate student enrollment. Constituting almost 9 percent of all postsecondary teachers, graduate teaching assistants play an integral role in the postsecondary education system, and they are expected to continue to do so in the future.

Opportunities will also be excellent for postsecondary vocational teachers due to an increased emphasis on career and technical education at the postsecondary level. Job growth, combined with a large number of expected retirements, will result in many job openings for these workers. Prospects will be best for instructors in specialties that pay well outside of the teaching field, such as the construction trades and manufacturing technology.

One of the main reasons why students attend postsecondary institutions is to prepare themselves for careers, so the best job prospects for postsecondary teachers are likely to be in rapidly growing fields that offer many nonacademic career options. These will include fields such as business, nursing and other health specialties, and biological sciences. Community colleges and other institutions offering career and technical education have been among the most rapidly growing, and these institutions are expected to offer some of the best opportunities for postsecondary teachers.

Earnings

Median annual earnings of all postsecondary teachers in 2006 were \$56,120. The middle 50 percent earned between \$39,610 and \$80,390. The lowest 10 percent earned less than \$27,590, and the highest 10 percent earned more than \$113,450.

Earnings for college faculty vary according to rank and type of institution, geographic area, and field. According to

a 2006-07 survey by the American Association of University Professors, salaries for full-time faculty averaged \$73,207. By rank, the average was \$98,974 for professors, \$69,911 for associate professors, \$58,662 for assistant professors, \$42,609 for instructors, and \$48,289 for lecturers. Faculty in 4-year institutions earn higher salaries, on average, than do those in 2-year schools. In 2006-07, faculty salaries averaged \$84,249 in private independent institutions, \$71,362 in public institutions, and \$66,118 in religiously affiliated private colleges and universities. In fields with high-paying nonacademic alternatives—medicine, law, engineering, and business, among others—earnings exceed these averages. In others fields, such as the humanities and education, earnings are lower. Earnings for postsecondary career and technical education teachers vary widely by subject, academic credentials, experience, and region of the country.

Many faculty members have significant earnings in addition to their base salary from consulting, teaching additional courses, research, writing for publication, or other employment. In addition, many college and university faculty enjoy unique benefits, including access to campus facilities, tuition waivers for dependents, housing and travel allowances, and paid leave for sabbaticals. Part-time faculty and instructors usually have fewer benefits than full-time faculty.

Related Occupations

Postsecondary teaching requires the ability to communicate ideas well, motivate students, and be creative. Workers in other occupations that require these skills are preschool, kindergarten, elementary, middle, and secondary school teachers; education administrators; librarians; counselors; writers and editors; public relations specialists; and management analysts. Faculty research activities often are similar to those of life, physical, and social scientists, as well as to those of managers and administrators in industry, government, and nonprofit research organizations.

Sources of Additional Information

Professional societies related to a field of study often provide information on academic and nonacademic employment opportunities. Names and addresses of many of these societies appear in statements elsewhere in the *Handbook*.

Special publications on higher education, such as *The Chronicle of Higher Education*, list specific employment opportunities for faculty. These publications are available in libraries.

For information on the Preparing Future Faculty program, contact:

► Council of Graduate Schools, One Dupont Circle, NW., Suite 430, Washington, DC 20036-1173.

Internet: <http://www.preparing-faculty.org>

For information on postsecondary career and technical education teaching positions, contact State departments of career and technical education. General information on adult and career and technical education is available from:

► Association for Career and Technical Education, 1410 King St., Alexandria, VA 22314. Internet: <http://www.acteonline.org>

Teachers—Preschool, Kindergarten, Elementary, Middle, and Secondary

(O*NET 25-2011.00, 25-2012.00, 25-2021.00, 25-2022.00, 25-2023.00, 25-2031.00, 25-2032.00)

Significant Points

- Public school teachers must be licensed, which typically requires a bachelor's degree and completion of an approved teacher education program.
- Many States offer alternative licensing programs to attract people into teaching, especially for hard-to-fill positions.
- Job prospects should be favorable; opportunities will vary by geographic area and subject taught.

Nature of the Work

Teachers play an important role in fostering the intellectual and social development of children during their formative years. The education that teachers impart plays a key role in determining the future prospects of their students. Whether in preschools or high schools or in private or public schools, teachers provide the tools and the environment for their students to develop into responsible adults.

Teachers act as facilitators or coaches, using classroom presentations or individual instruction to help students learn and apply concepts in subjects such as science, mathematics, or English. They plan, evaluate, and assign lessons; prepare, administer, and grade tests; listen to oral presentations; and maintain classroom discipline. Teachers observe and evaluate a student's performance and potential and increasingly are asked to use new assessment methods. For example, teachers may examine a portfolio of a student's artwork or writing in order to judge the student's overall progress. They then can provide additional assistance in areas in which a student needs help. Teachers also grade papers, prepare report cards, and meet with parents and school staff to discuss a student's academic progress or personal problems.

Many teachers use a "hands-on" approach that uses "props" or "manipulatives" to help children understand abstract concepts, solve problems, and develop critical thought processes. For example, they teach the concepts of numbers or of addition and subtraction by playing board games. As the children get older, teachers use more sophisticated materials, such as science apparatus, cameras, or computers. They also encourage collaboration in solving problems by having students work in groups to discuss and solve problems together. To be prepared for success later in life, students must be able to interact with others, adapt to new technology, and think through problems logically.

Preschool, kindergarten, and elementary school teachers play a vital role in the development of children. What children learn and experience during their early years can shape their views of themselves and the world and can affect their later success or failure in school, work, and their personal lives. Pre-

school, kindergarten, and elementary school teachers introduce children to mathematics, language, science, and social studies. They use games, music, artwork, films, books, computers, and other tools to teach basic skills.

Preschool children learn mainly through play and interactive activities. *Preschool teachers* capitalize on children's play to further language and vocabulary development (using storytelling, rhyming games, and acting games), improve social skills (having the children work together to build a neighborhood in a sandbox), and introduce scientific and mathematical concepts (showing the children how to balance and count blocks when building a bridge or how to mix colors when painting). Thus, a less structured approach, including small-group lessons, one-on-one instruction, and learning through creative activities such as art, dance, and music, is adopted to teach preschool children. Play and hands-on teaching also are used by *kindergarten teachers*, but academics begin to take priority in kindergarten classrooms. Letter recognition, phonics, numbers, and awareness of nature and science, introduced at the preschool level, are taught primarily in kindergarten.

Most *elementary school teachers* instruct one class of children in several subjects. In some schools, two or more teachers work as a team and are jointly responsible for a group of students in at least one subject. In other schools, a teacher may teach one special subject—usually music, art, reading, science, arithmetic, or physical education—to a number of classes. A small but growing number of teachers instruct multilevel classrooms, with students at several different learning levels.

Middle school teachers and *secondary school teachers* help students delve more deeply into subjects introduced in elementary school and expose them to more information about the world. Middle and secondary school teachers specialize in a specific subject, such as English, Spanish, mathematics, history, or biology. They also may teach subjects that are career oriented. *Vocational education teachers*, also referred to as career and technical or career-technology teachers, instruct and train students to work in a wide variety of fields, such as healthcare, business, auto repair, communications, and, increasingly, technology. They often teach courses that are in high demand by area employers, who may provide input into the curriculum and offer internships to students. Many vocational teachers play an active role in building and overseeing these partnerships. Additional responsibilities of middle and secondary school teachers may include career guidance and job placement, as well as follow-ups with students after graduation. (*Special education teachers*—who instruct elementary and secondary school students who have a variety of disabilities—are discussed separately in this section of the *Handbook*.)

In addition to conducting classroom activities, teachers oversee study halls and homerooms, supervise extracurricular activities, and accompany students on field trips. They may identify students with physical or mental problems and refer the students to the proper authorities. Secondary school teachers occasionally assist students in choosing courses, colleges, and careers. Teachers also participate in education conferences and workshops.

Computers play an integral role in the education teachers provide. Resources such as educational software and the Inter-



Teachers instruct students in both academic and personal enrichment subjects.

net expose students to a vast range of experiences and promote interactive learning. Through the Internet, students can communicate with other students anywhere in the world, allowing them to share experiences and differing viewpoints. Students also use the Internet for individual research projects and to gather information. Computers are used in other classroom activities as well, from solving math problems to learning English as a second language. Teachers also may use computers to record grades and perform other administrative and clerical duties. They must continually update their skills so that they can instruct and use the latest technology in the classroom.

Teachers often work with students from varied ethnic, racial, and religious backgrounds. With growing minority populations in most parts of the country, it is important for teachers to work effectively with a diverse student population. Accordingly, some schools offer training to help teachers enhance their awareness and understanding of different cultures. Teachers may also include multicultural programming in their lesson plans, to address the needs of all students, regardless of their cultural background.

In recent years, site-based management, which allows teachers and parents to participate actively in management decisions regarding school operations, has gained popularity. In many schools, teachers are increasingly involved in making decisions regarding the budget, personnel, textbooks, curriculum design, and teaching methods.

Work environment. Seeing students develop new skills and gain an appreciation of knowledge and learning can be very rewarding. However, teaching may be frustrating when one is dealing with unmotivated or disrespectful students. Occasionally, teachers must cope with unruly behavior and violence in the schools. Teachers may experience stress in dealing with large classes, heavy workloads, or old schools that are run down and lack many modern amenities. Accountability standards also may increase stress levels, with teachers expected to produce students who are able to exhibit satisfactory performance on standardized tests in core subjects. Many teachers, particularly in public schools, are also frustrated by the lack of control they have over what they are required to teach.

Teachers in private schools generally enjoy smaller class sizes and more control over establishing the curriculum and setting standards for performance and discipline. Their students also tend to be more motivated, since private schools can be selective in their admissions processes.

Teachers are sometimes isolated from their colleagues because they work alone in a classroom of students. However, some schools allow teachers to work in teams and with mentors to enhance their professional development.

Including school duties performed outside the classroom, many teachers work more than 40 hours a week. Part-time schedules are more common among preschool and kindergarten teachers. Although most school districts have gone to all-day kindergartens, some kindergarten teachers still teach two kindergarten classes a day. Most teachers work the traditional 10-month school year with a 2-month vacation during the summer. During the vacation break, those on the 10-month schedule may teach in summer sessions, take other jobs, travel, or pursue personal interests. Many enroll in college courses or workshops to continue their education. Teachers in districts with a year-round schedule typically work 8 weeks, are on vacation for 1 week, and have a 5-week midwinter break. Preschool teachers working in day care settings often work year round.

Most States have tenure laws that prevent public school teachers from being fired without just cause and due process. Teachers may obtain tenure after they have satisfactorily completed a probationary period of teaching, normally 3 years. Tenure does not absolutely guarantee a job, but it does provide some security.

Training, Other Qualifications, and Advancement

The traditional route to becoming a public school teacher involves completing a bachelor's degree from a teacher education program and then obtaining a license. However, most States now offer alternative routes to licensure for those who have a college degree in other fields. Private school teachers do not have to be licensed but still need a bachelor's degree. A bachelor's degree may not be needed by preschool teachers and vocational education teachers, who need experience in their field rather than a specific degree.

Education and training. Traditional education programs for kindergarten and elementary school teachers include courses designed specifically for those preparing to teach. These courses include mathematics, physical science, social science, music, art, and literature, as well as prescribed professional education courses, such as philosophy of education, psychology of learning, and teaching methods. Aspiring secondary school teachers most often major in the subject they plan to teach while also taking a program of study in teacher preparation. Many 4-year colleges require students to wait until their sophomore year before applying for admission to teacher education programs. To maintain their accreditation, teacher education programs are now required to include classes in the use of computers and other technologies. Most programs require students to perform a student-teaching internship. Teacher education programs are accredited by the National Council for Accreditation of Teacher Education and the Teacher Education Accreditation Council. Graduation from an accredited program is not necessary to be-

come a teacher, but it may make fulfilling licensure requirements easier.

Many States now offer professional development schools, which are partnerships between universities and elementary or secondary schools. Professional development schools merge theory with practice and allow the student to experience a year of teaching firsthand, under professional guidance. Students enter these 1-year programs after completion of their bachelor's degree.

Licensure and certification. All 50 States and the District of Columbia require public school teachers to be licensed. Licensure is not required for teachers in most private schools. Usually licensure is granted by the State Board of Education or a licensure advisory committee. Teachers may be licensed to teach the early childhood grades (usually preschool through grade 3); the elementary grades (grades 1 through 6 or 8); the middle grades (grades 5 through 8); a secondary-education subject area (usually grades 7 through 12); or a special subject, such as reading or music (usually grades kindergarten through 12).

Requirements for regular licenses to teach kindergarten through grade 12 vary by State. However, all States require general education teachers to have a bachelor's degree and to have completed an approved teacher training program with a prescribed number of subject and education credits, as well as supervised practice teaching. Some States also require technology training and the attainment of a minimum grade point average. A number of States require that teachers obtain a master's degree in education within a specified period after they begin teaching.

Almost all States require applicants for a teacher's license to be tested for competency in basic skills, such as reading and writing, and in teaching. Almost all also require teachers to exhibit proficiency in their subject. Many school systems are presently moving toward implementing performance-based systems for licensure, which usually require teachers to demonstrate satisfactory teaching performance over an extended period in order to obtain a provisional license, in addition to passing an examination in their subject. Most States require teachers to complete a minimum number of hours of continuing education to renew their license. Many States have reciprocity agreements that make it easier for teachers licensed in one State to become licensed in another.

Licensing requirements for preschool teachers also vary by State. Requirements for public preschool teachers are generally more stringent than those for private preschool teachers. Some States require a bachelor's degree in early childhood education, while others require an associate's degree, and still others require certification by a nationally recognized authority. The Child Development Associate (CDA) credential, the most common type of certification, requires a mix of classroom training and experience working with children, along with an independent assessment of the teacher's competence.

Nearly all States now also offer alternative licensure programs for teachers who have a bachelor's degree in the subject they will teach, but who lack the necessary education courses required for a regular license. Many of these alternative licensure programs are designed to ease shortages of teachers

of certain subjects, such as mathematics and science. Other programs provide teachers for urban and rural schools that have difficulty filling positions with teachers from traditional licensure programs. Alternative licensure programs are intended to attract people into teaching who do not fulfill traditional licensing standards, including recent college graduates who did not complete education programs and those changing from another career to teaching. In some programs, individuals begin teaching quickly under provisional licensure under the close supervision of experienced educators while taking education courses outside school hours. If they progress satisfactorily, they receive regular licensure after working for 1 or 2 years. In other programs, college graduates who do not meet licensure requirements take only those courses that they lack and then become licensed. This approach may take 1 or 2 semesters of full-time study. The coursework for alternative certification programs often leads to a master's degree. In extreme circumstances, when schools cannot attract enough qualified teachers to fill positions, States may issue emergency licenses to individuals who do not meet the requirements for a regular license that let them begin teaching immediately.

In many States, vocational teachers have many of the same licensure requirements as other teachers. However, knowledge and experience in a particular field are important, so some States will license vocational education teachers without a bachelor's degree, provided they can demonstrate expertise in their field. A minimum number of hours in education courses may also be required.

Private schools are generally exempt from meeting State licensing standards. For secondary school teacher jobs, they prefer candidates who have a bachelor's degree in the subject they intend to teach, or in childhood education for elementary school teachers. They seek candidates among recent college graduates as well as from those who have established careers in other fields.

Other qualifications. In addition to being knowledgeable about the subjects they teach, teachers must have the ability to communicate, inspire trust and confidence, and motivate students, as well as understand the students' educational and emotional needs. Teachers must be able to recognize and respond to individual and cultural differences in students and employ different teaching methods that will result in higher student achievement. They should be organized, dependable, patient, and creative. Teachers also must be able to work cooperatively and communicate effectively with other teachers, support staff, parents, and members of the community. Private schools associated with religious institutions also desire candidates who share the values that are important to the institution.

Additional certifications and advancement. In some cases, teachers of kindergarten through high school may attain professional certification in order to demonstrate competency beyond that required for a license. The National Board for Professional Teaching Standards offers a voluntary national certification. To become nationally certified, experienced teachers must prove their aptitude by compiling a portfolio showing their work in the classroom and by passing a written assessment and evaluation of their teaching knowledge. Currently, teachers may become certified in a variety of areas, on the basis of the age of the

students and, in some cases, the subject taught. For example, teachers may obtain a certificate for teaching English language arts to early adolescents (aged 11 to 15), or they may become certified as early childhood generalists. All States recognize national certification, and many States and school districts provide special benefits to teachers who earn certification. Benefits typically include higher salaries and reimbursement for continuing education and certification fees. In addition, many States allow nationally certified teachers to carry a license from one State to another.

With additional preparation, teachers may move into such positions as school librarians, reading specialists, instructional coordinators, or guidance counselors. Teachers may become administrators or supervisors, although the number of these positions is limited and competition for them can be intense. In some systems, highly qualified, experienced teachers can become senior or mentor teachers, with higher pay and additional responsibilities. They guide and assist less experienced teachers while keeping most of their own teaching responsibilities. Preschool teachers usually work their way up from assistant teacher, to teacher, to lead teacher—who may be responsible for the instruction of several classes—and, finally, to director of the center. Preschool teachers with a bachelor's degree frequently are qualified to teach kindergarten through grade 3 as well. Teaching at these higher grades often results in higher pay.

Employment

Preschool, kindergarten, elementary school, middle school, and secondary school teachers, except special education, held about 4.0 million jobs in 2006. Of the teachers in those jobs, about 1.5 million are elementary school teachers, 1.1 million are secondary school teachers, 674,000 are middle school teachers, 437,000 are preschool teachers, and 170,000 are kindergarten teachers. The vast majority work in elementary and secondary schools. Preschool teachers, except special education, are most often employed in child daycare services (59 percent), public and private educational services (16 percent), and reli-

gious organizations (15 percent). Employment of teachers is geographically distributed much the same as the population.

Job Outlook

Employment of preschool, kindergarten, elementary, middle, and secondary school teachers is projected to grow about as fast as average. Job prospects are expected to be favorable, with particularly good prospects for teachers in high-demand fields like math, science, and bilingual education, or in less desirable urban or rural school districts.

Employment change. Employment of school teachers is expected to grow by 12 percent between 2006 and 2016, about as fast as the average for all occupations. However, because of the size of the occupations in this group, this growth will create 479,000 additional teacher positions, more than all but a few occupations.

Through 2016, overall student enrollments in elementary, middle, and secondary schools—a key factor in the demand for teachers—are expected to rise more slowly than in the past as children of the baby boom generation leave the school system. This will cause employment of teachers from kindergarten through the secondary grades to grow as fast as the average. Projected enrollments will vary by region. Fast-growing States in the South and West—led by Nevada, Arizona, Texas, and Georgia—will experience the largest enrollment increases. Enrollments in the Midwest are expected to hold relatively steady, while those in the Northeast are expected to decline. Teachers who are geographically mobile and who obtain licensure in more than one subject should have a distinct advantage in finding a job.

The number of teachers employed is dependent on State and local expenditures for education and on the enactment of legislation to increase the quality and scope of public education. At the Federal level, there has been a large increase in funding for education, particularly for the hiring of qualified teachers in lower income areas. Also, some States are instituting programs to improve early childhood education, such as offering full day kindergarten and universal preschool. These programs, along with projected higher enrollment growth for preschool

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Teachers—preschool, kindergarten, elementary, middle, and secondary	—	3,954,000	4,433,000	479,000	12
Preschool and kindergarten teachers.....	25-2010	607,000	750,000	143,000	23
Preschool teachers, except special education.....	25-2011	437,000	552,000	115,000	26
Kindergarten teachers, except special education	25-2012	170,000	198,000	28,000	16
Elementary and middle school teachers.....	25-2020	2,214,000	2,496,000	282,000	13
Elementary school teachers, except special education.....	25-2021	1,540,000	1,749,000	209,000	14
Middle school teachers, except special and vocational education	25-2022	658,000	732,000	74,000	11
Vocational education teachers, middle school	25-2023	16,000	15,000	-800	-5
Secondary school teachers	25-2030	1,133,000	1,187,000	54,000	5
Secondary school teachers, except special and vocational education	25-2031	1,038,000	1,096,000	59,000	6
Vocational education teachers, secondary school	25-2032	96,000	91,000	-4,400	-5

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

age children, will create many new jobs for preschool teachers, which are expected to grow much faster than the average for all occupations.

Job prospects. Job opportunities for teachers over the next 10 years will vary from good to excellent, depending on the locality, grade level, and subject taught. Most job openings will result from the need to replace the large number of teachers who are expected to retire over the 2006-16 period. Also, many beginning teachers decide to leave teaching for other careers after a year or two—especially those employed in poor, urban schools—creating additional job openings for teachers.

The job market for teachers also continues to vary by school location and by subject taught. Job prospects should be better in inner cities and rural areas than in suburban districts. Many inner cities—often characterized by overcrowded, ill-equipped schools and higher-than-average poverty rates—and rural areas—characterized by their remote location and relatively low salaries—have difficulty attracting and retaining enough teachers. Currently, many school districts have difficulty hiring qualified teachers in some subject areas—most often mathematics, science (especially chemistry and physics), bilingual education, and foreign languages. Increasing enrollments of minorities, coupled with a shortage of minority teachers, should cause efforts to recruit minority teachers to intensify. Also, the number of non-English-speaking students will continue to grow, creating demand for bilingual teachers and for those who teach English as a second language. Qualified vocational teachers also are currently in demand in a variety of fields at both the middle school and secondary school levels. Specialties that have an adequate number of qualified teachers include general elementary education, physical education, and social studies.

The supply of teachers is expected to increase in response to reports of improved job prospects, better pay, more teacher involvement in school policy, and greater public interest in education. In addition, more teachers may be drawn from a reserve pool of career changers, substitute teachers, and teachers completing alternative certification programs. In recent years, the total number of bachelor's and master's degrees granted in education has been increasing slowly. But many States have implemented policies that will encourage even more students to become teachers because of a shortage of teachers in certain locations and in anticipation of the loss of a number of teachers to retirement.

Earnings

Median annual earnings of kindergarten, elementary, middle, and secondary school teachers ranged from \$43,580 to \$48,690 in May 2006; the lowest 10 percent earned \$28,590 to \$33,070; the top 10 percent earned \$67,490 to \$76,100. Median earnings for preschool teachers were \$22,680.

According to the American Federation of Teachers, beginning teachers with a bachelor's degree earned an average of \$31,753 in the 2004–05 school year. The estimated average salary of all public elementary and secondary school teachers in the 2004–05 school year was \$47,602.

In 2006, more than half of all elementary, middle, and secondary school teachers belonged to unions—mainly the American Federation of Teachers and the National Education Associa-

tion—that bargain with school systems over salaries, hours, and other terms and conditions of employment. Fewer preschool and kindergarten teachers were union members—about 17 percent in 2006.

Teachers can boost their earnings in a number of ways. In some schools, teachers receive extra pay for coaching sports and working with students in extracurricular activities. Getting a master's degree or national certification often results in a raise in pay, as does acting as a mentor. Some teachers earn extra income during the summer by teaching summer school or performing other jobs in the school system. Although private school teachers generally earn less than public school teachers, they may be given other benefits, such as free or subsidized housing.

Related Occupations

Preschool, kindergarten, elementary school, middle school, and secondary school teaching requires a variety of skills and aptitudes, including a talent for working with children; organizational, administrative, and recordkeeping abilities; research and communication skills; the power to influence, motivate, and train others; patience; and creativity. Workers in other occupations requiring some of these aptitudes include teachers—postsecondary; counselors; teacher assistants; education administrators; librarians; child care workers; public relations specialists; social workers; and athletes, coaches, umpires, and related workers.

Sources of Additional Information

Information on licensure or certification requirements and approved teacher training institutions is available from local school systems and State departments of education.

Information on teachers' unions and education-related issues may be obtained from the following sources:

- ▶ American Federation of Teachers, 555 New Jersey Ave. NW., Washington, DC 20001. Internet: <http://www.aft.org>
- ▶ National Education Association, 1201 16th St. NW., Washington, DC 20036. Internet: <http://www.nea.org>

A list of institutions with accredited teacher education programs can be obtained from:

- ▶ National Council for Accreditation of Teacher Education, 2010 Massachusetts Ave. NW., Suite 500, Washington, DC 20036-1023. Internet: <http://www.ncate.org>
- ▶ Teacher Education Accreditation Council, Suite 300, One Dupont Circle, Washington, DC 20036. Internet: <http://www.teac.org>

Information on alternative certification programs can be obtained from:

- ▶ National Center for Alternative Certification, 1901 Pennsylvania Ave NW., Suite 201, Washington, DC 20006. Internet: <http://www.teach-now.org>

Information on National Board Certification can be obtained from:

- ▶ National Board for Professional Teaching Standards, 1525 Wilson Blvd., Suite 500, Arlington, VA 22209. Internet: <http://www.nbpts.org>

For information on vocational education and vocational education teachers, contact:

➤ Association for Career and Technical Education, 1410 King St., Alexandria, VA 22314. Internet: <http://www.acteonline.org>

For information on careers in educating children and issues affecting preschool teachers, contact either of the following organizations:

➤ National Association for the Education of Young Children, 1509 16th St.NW., Washington, DC 20036.

Internet: <http://www.naeyc.org>

➤ Council for Professional Recognition, 2460 16th St.NW., Washington, DC 20009-3575.

Internet: <http://www.cdacouncil.org>

Teachers—Self-Enrichment Education

(O*NET 25-3021.00)

Significant Points

- Many self-enrichment teachers are self-employed or work part time.
- Teachers should have knowledge and enthusiasm for their subject, but little formal training is required.
- Employment is projected to grow much faster than average, and job prospects should be favorable; opportunities may vary by subject taught.

Nature of the Work

Self-enrichment teachers provide instruction in a wide variety of subjects that students take for fun or self-improvement. Some teach a series of classes that provide students with useful life skills, such as cooking, personal finance, and time management. Others provide group instruction intended solely for recreation, such as photography, pottery, and painting. Many others provide one-on-one instruction in a variety of subjects, including dance, singing, or playing a musical instrument. Some teachers conduct courses on academic subjects, such as literature, foreign language, and history, in a non-academic setting. The classes self-enrichment teachers give seldom lead to a degree and attendance is voluntary, but dedicated, talented students sometimes go on to careers in the arts.

Self-enrichment teachers may have styles and methods of instruction that differ greatly. Most self-enrichment classes are relatively informal. Some classes, such as pottery or sewing, may be largely hands-on, with the instructor demonstrating methods or techniques for the class, observing students as they attempt to do it themselves, and pointing out mistakes to students and offering suggestions to improve techniques. Other classes, such as those involving financial planning or religion and spirituality, may center on lectures or might rely more heavily on group discussions. Self-enrichment teachers may also teach classes offered through religious institutions, such as marriage preparation or classes in religion for children.

Many of the classes that self-enrichment educators teach are shorter in duration than classes taken for academic credit; some finish in 1 or 2 days or several weeks. These brief classes tend to be introductory in nature and generally focus on only one

topic—for example, a cooking class that teaches students how to make bread. Some self-enrichment classes introduce children and youth to activities, such as piano or drama, and may be designed to last anywhere from 1 week to several months.

Many self-enrichment teachers provide one-on-one lessons to students. The instructor may only work with the student for an hour or two a week, but tells the student what to practice in the interim until the next lesson. Many instructors work with the same students on a weekly basis for years and derive satisfaction from observing them mature and gain expertise. The most talented students may go on to paid careers as craft artists, painters, sculptors, dancers, singers, or musicians.

All self-enrichment teachers must prepare lessons beforehand and stay current in their fields. Many self-enrichment teachers are self-employed and provide instruction as a business. As such, they must collect any fees or tuition and keep records of students whose accounts are prepaid or in arrears. Although not a requirement for most types of classes, teachers may use computers and other modern technologies in their instruction or to maintain business records.

Work environment. Few self-enrichment education teachers are full-time salaried workers. Most either work part time or are self-employed. Some have several part-time teaching assignments, but it is most common for teachers to have a full-time job in another occupation, often related to the subject that they teach, in addition to their part-time teaching job. Although jobs in this occupation are primarily part time and pay is low, most teachers enjoy their work because it gives them the opportunity to share a subject they enjoy with others.

Many classes for adults are held in the evenings and on weekends to accommodate students who have a job or family responsibilities. Similarly, self-enrichment classes for children are usually held after school, on weekends, or during school vacations.



Self-enrichment teachers cover a wide range of subjects, including gardening, photography, and personal finance.

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Self-enrichment education teachers	25-3021	261,000	322,000	60,000	23

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Students in self-enrichment programs attend by choice so they tend to be highly motivated and eager to learn. Students also often bring their own unique experiences to class, which can make teaching them rewarding and satisfying. Self-enrichment teachers must have a great deal of patience, however, particularly when working with young children.

Training, Other Qualifications, and Advancement

The main qualification for self-enrichment teachers is expertise in their subject area, but requirements vary greatly with the type of class taught and the place of employment.

Education and training. In general, there are few educational or training requirements for a job as a self-enrichment teacher beyond being an expert in the subject taught. To demonstrate expertise, however, self-enrichment teachers may be required to have formal training in disciplines, such as art or music, where specific teacher training programs are available. Prospective dance teachers, for example, may complete programs that prepare them to teach many types of dance—from ballroom to ballet. Other employers may require a portfolio of a teacher's work. For example, to secure a job teaching a photography course, an applicant often needs to show examples of previous work. Some self-enrichment teachers are trained educators or other professionals who teach enrichment classes in their spare time. In many self-enrichment fields, however, instructors are simply experienced in the field, and want to share that experience with others.

Other qualifications. In addition to knowledge of their subject, self-enrichment teachers should have good speaking skills and a talent for making the subject interesting. Patience and the ability to explain and instruct students at a basic level are important as well, particularly for teachers who work with children.

Advancement. Opportunities for advancement in this profession are limited. Some part-time teachers are able to move into full-time teaching positions or program administrator positions, such as coordinator or director. Experienced teachers may mentor new instructors.

Employment

Teachers of self-enrichment education held about 261,000 jobs in 2006. The largest numbers of teachers were employed by public and private educational institutions, religious organizations, and providers of social assistance and amusement and recreation services. More than 20 percent of workers were self-employed.

Job Outlook

Employment of self-enrichment education teachers is expected to grow much faster than average, and job prospects should be favorable. A large number of job openings are expected due to

job growth, the retirement of existing teachers, and because of those who leave their jobs for other reasons. New opportunities arise constantly because many jobs are short term and are often held as a second job.

Employment change. Employment of self-enrichment education teachers is expected to increase by 23 percent between 2006 and 2016, much faster than the average for all occupations. The need for self-enrichment teachers is expected to grow as more people embrace lifelong learning and as course offerings expand. Demand for self-enrichment education will also increase as a result of demographic changes. Retirees are one of the larger groups of participants in self-enrichment education because they have more time for classes. As members of the baby boom generation begin to retire, demand for self-enrichment education should grow. At the same time, the children of the baby boomers will be entering the age range of another large group of participants, young adults—who often are single and participate in self-enrichment classes for the social, as well as the educational, experience.

Job prospects. Job prospects should be favorable as increasing demand and high turnover creates many opportunities, but opportunities may vary as some fields have more prospective teachers than others. Opportunities should be best for teachers of subjects that are not easily researched on the Internet and those that benefit from hands-on experiences, such as cooking, crafts, and the arts. Classes on self-improvement, personal finance, and computer and Internet-related subjects are also expected to be popular.

Earnings

Median hourly earnings of wage-and-salary self-enrichment teachers were \$16.08 in May 2006. The middle 50 percent earned between \$11.29 and \$23.08. The lowest 10 percent earned less than \$8.53, and the highest 10 percent earned more than \$32.02. Self-enrichment teachers are generally paid by the hour or for each class that they teach. Earnings may also be tied to the number of students enrolled in the class.

Part-time instructors are usually paid for each class that they teach, and receive few benefits. Full-time teachers are generally paid a salary and may receive health insurance and other benefits.

Related Occupations

The work of self-enrichment teachers is closely related to that of other types of teachers, especially preschool, kindergarten, elementary school, middle school, and secondary school teachers. Self-enrichment teachers also teach a wide variety of subjects that may be related to the work done by those in many other occupations, such as dancers and choreographers; artists and related workers; musicians, singers, and related workers;

recreation workers; and athletes, coaches, umpires, and related workers.

Sources of Additional Information

For information on employment of self-enrichment teachers, contact local schools, colleges, or companies that offer self-enrichment programs.

Teachers—Special Education

(O*NET 25-2041.00, 25-2042.00, 25-2043.00)

Significant Points

- All States require teachers to be licensed; traditional licensing requires the completion of a special education teacher training program and at least a bachelor's degree, though many States require a master's degree.
- Many States offer alternative licensure programs to attract college graduates who do not have training in education.
- Excellent job prospects are expected due to rising enrollments of special education students and reported shortages of qualified teachers.

Nature of the Work

Special education teachers work with children and youths who have a variety of disabilities. A small number of special education teachers work with students with severe cases of mental retardation or autism, primarily teaching them life skills and basic literacy. However, the majority of special education teachers work with children with mild to moderate disabilities, using or modifying the general education curriculum to meet the child's individual needs. Most special education teachers instruct students at the elementary, middle, and secondary school level, although some work with infants and toddlers.

The various types of disabilities that may qualify individuals for special education programs include specific learning disabilities, speech or language impairments, mental retardation, emotional disturbance, multiple disabilities, hearing impairments, orthopedic impairments, visual impairments, autism, combined deafness and blindness, traumatic brain injury, and other health impairments. Students are classified under one of the categories, and special education teachers are prepared to work with specific groups. Early identification of a child with special needs is an important part of a special education teacher's job, because early intervention is essential in educating children with disabilities.

Special education teachers use various techniques to promote learning. Depending on the disability, teaching methods can include individualized instruction, problem-solving assignments, and small-group work. When students need special accommodations to take a test, special education teachers see that appropriate ones are provided, such as having the questions read orally or lengthening the time allowed to take the test.

Special education teachers help to develop an Individualized Education Program (IEP) for each student. The IEP sets personalized goals for the student and is tailored to that student's individual needs and ability. When appropriate, the program includes a transition plan outlining specific steps to prepare students with disabilities for middle school or high school or, in the case of older students, a job or postsecondary study. Teachers review the IEP with the student's parents, school administrators, and the student's general education teachers. Teachers work closely with parents to inform them of their child's progress and suggest techniques to promote learning at home.

Special education teachers design and teach appropriate curricula, assign work geared toward each student's needs and abilities, and grade papers and homework assignments. They are involved in the students' behavioral, social, and academic development, helping them develop emotionally, feel comfortable in social situations, and be aware of socially acceptable behavior. Preparing special education students for daily life after graduation also is an important aspect of the job. Teachers provide students with career counseling or help them learn routine skills, such as balancing a checkbook.

As schools become more inclusive, special education teachers and general education teachers increasingly work together in general education classrooms. Special education teachers help general educators adapt curriculum materials and teaching techniques to meet the needs of students with disabilities. They coordinate the work of teachers, teacher assistants, and related personnel, such as therapists and social workers, to meet the individualized needs of the student within inclusive special education programs. A large part of a special education teacher's job involves communicating and coordinating with others involved in the child's well being, including parents, social workers, school psychologists, occupational and physical therapists, school administrators, and other teachers.

Special education teachers work in a variety of settings. Some have their own classrooms and teach only special education students; others work as special education resource teachers and offer individualized help to students in general education classrooms; still others teach together with general education teachers in classes including both general and special education students. Some teachers work with special education students for several hours a day in a resource room, separate from their general education classroom. Considerably fewer special education teachers work in residential facilities or tutor students in homebound or hospital environments.

Some special education teachers work with infants and usually travel to the child's home to work with the parents. Many of these infants have medical problems that slow or preclude normal development. Special education teachers show parents techniques and activities designed to stimulate the infant and encourage the growth and development of the child's skills. Toddlers usually receive their services at a preschool where special education teachers help them develop social, self-help, motor, language, and cognitive skills, often through the use of play.

Technology is becoming increasingly important in special education. Teachers use specialized equipment such as com-

puters with synthesized speech, interactive educational software programs, and audiotapes to assist children.

Work environment. Special education teachers enjoy the challenge of working with students with disabilities and the opportunity to establish meaningful relationships with them. Although helping these students can be highly rewarding, the work also can be emotionally and physically draining. Many special education teachers are under considerable stress due to heavy workloads and administrative tasks. They must produce a substantial amount of paperwork documenting each student's progress and work under the threat of litigation against the school or district by parents if correct procedures are not followed or if they feel that their child is not receiving an adequate education. Recently passed legislation, however, is intended to reduce the burden of paperwork and the threat of litigation. The physical and emotional demands of the job cause some special education teachers to leave the occupation.

Some schools offer year-round education for special education students, but most special education teachers work only the traditional 10-month school year.

Training, Other Qualifications, and Advancement

All States require special education teachers to be licensed, which typically requires at least a bachelor's degree and completion of an approved training program in special education teaching. Many States require a master's degree. Most States have alternative methods for entry for bachelor's degree holders who do not have training in education.

Education and training. Many colleges and universities across the United States offer programs in special education at the undergraduate, master's, and doctoral degree levels. Special education teachers usually undergo longer periods of training than do general education teachers. Most bachelor's degree programs last years and include general and specialized courses in special education. However, an increasing number of institutions require a 5th year or other graduate-level preparation. Among the courses offered are educational psychology, legal issues of special education, child growth and development, and strategies for teaching students with disabilities. Some programs require specialization, while others offer generalized special education degrees or a course of study in several specialized areas. The last year of the program usually is spent student teaching in a classroom supervised by a certified teacher.

Licensure. All 50 States and the District of Columbia require special education teachers to be licensed. The State board of education or a licensure advisory committee usually grants licenses, and licensure varies by State. In some States, special education teachers receive a general education credential to teach kindergarten through grade 12. These teachers then train in a specialty, such as learning disabilities or behavioral disorders. Many States offer general special education licenses across a variety of disability categories, while others license several different specialties within special education.

For traditional licensing, all States require a bachelor's degree and the completion of an approved teacher preparation program with a prescribed number of subject and education credits and supervised practice teaching. However, many States also re-



Special education teachers adapt learning plans to the individual needs of their students.

quire a master's degree in special education, involving at least 1 year of additional course work, including a specialization, beyond the bachelor's degree. Often a prospective teacher must pass a professional assessment test as well. Some States have reciprocity agreements allowing special education teachers to transfer their licenses from one State to another, but many others still require that experienced teachers reapply and pass licensing requirements to work in the State.

Most States also offer alternative routes to licensing which are intended to attract people into teaching who do not fulfill traditional licensing standards. Most alternative licensure programs are open to anyone with a bachelor's degree, although some are designed for recent college graduates or professionals in other education occupations. Programs typically require the successful completion of a period of supervised preparation and instruction and passing an assessment test. Individuals can then begin teaching under a provisional license and can obtain a regular license after teaching under the supervision of licensed teachers for a period of 1 to 2 years and completing required education courses through a local college or other provider.

Other qualifications. Special education teachers must be patient, able to motivate students, understanding of their students' special needs, and accepting of differences in others. Teachers must be creative and apply different types of teaching methods to reach students who are having difficulty learning. Communication and cooperation are essential skills because special

education teachers spend a great deal of time interacting with others, including students, parents, and school faculty and administrators.

Advancement. Special education teachers can advance to become supervisors or administrators. They may also earn advanced degrees and become instructors in colleges that prepare others to teach special education. In some school systems, highly experienced teachers can become mentors to less experienced ones, providing guidance to those teachers while maintaining a light teaching load.

Employment

Special education teachers held a total of about 459,000 jobs in 2006. Nearly all work in public and private educational institutions. A few worked for individual and social assistance agencies or residential facilities, or in homebound or hospital environments.

Job Outlook

Employment of special education teachers is expected to increase faster than average. Job prospects should be excellent as many districts report problems finding adequate numbers of certified special education teachers.

Employment change. The number of special education teachers is expected to increase by 15 percent from 2006 to 2016, faster than the average for all occupations. Although student enrollments in general are expected to grow slowly, continued increases in the number of special education students needing services will generate a greater need for special education teachers.

The number of students requiring special education services has grown steadily in recent years due to improvements that have allowed learning disabilities to be diagnosed at earlier ages and medical advances that have resulted in more children surviving serious accidents or illnesses, but with impairments that require special accommodations. In addition, legislation emphasizing training and employment for individuals with disabilities and educational reforms requiring higher standards for graduation has increased demand for special education services. The percentage of foreign-born special education students also is expected to grow, as teachers become more adept in recognizing disabilities in that population. Finally, more parents are expected to seek special services for their children who have difficulty meeting the new, higher standards required of students.

Job prospects. In addition to job openings resulting from growth, a large number of openings will result from the need to

replace special education teachers who switch to teaching general education, change careers altogether, or retire. At the same time, many school districts report difficulty finding sufficient numbers of qualified teachers. As a result, special education teachers should have excellent job prospects.

The job outlook does vary by geographic area and specialty. Although most areas of the country report difficulty finding qualified applicants, positions in inner cities and rural areas usually are more plentiful than job openings in suburban or wealthy urban areas. Student populations also are expected to increase more rapidly in certain parts of the country, such as the South and West, resulting in increased demand for special education teachers in those regions. In addition, job opportunities may be better in certain specialties—such as teachers who work with children with multiple disabilities or severe disabilities like autism—because of large increases in the enrollment of special education students classified under those categories. Legislation encouraging early intervention and special education for infants, toddlers, and preschoolers has created a need for early childhood special education teachers. Bilingual special education teachers and those with multicultural experience also are needed to work with an increasingly diverse student population.

Earnings

Median annual earnings in May 2006 of wage-and-salary special education teachers who worked primarily in preschools, kindergartens, and elementary schools were \$46,360. The middle 50 percent earned between \$37,500 and \$59,320. The lowest 10 percent earned less than \$31,320, and the highest 10 percent earned more than \$73,620.

Median annual earnings of wage-and-salary middle school special education teachers were \$47,650. The middle 50 percent earned between \$38,460 and \$61,530. The lowest 10 percent earned less than \$32,420, and the highest 10 percent earned more than \$80,170.

Median annual earnings of wage-and-salary special education teachers who worked primarily in secondary schools were \$48,330. The middle 50 percent earned between \$38,910 and \$62,640. The lowest 10 percent earned less than \$32,760, and the highest 10 percent earned more than \$78,020.

In 2006, about 58 percent of special education teachers belonged to unions—mainly the American Federation of Teachers and the National Education Association—that bargain with school systems over wages, hours, and the terms and conditions of employment.

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Special education teachers	25-2040	459,000	530,000	71,000	15
Special education teachers, preschool, kindergarten, and elementary school	25-2041	219,000	262,000	43,000	20
Special education teachers, middle school.....	25-2042	102,000	118,000	16,000	16
Special education teachers, secondary school	25-2043	138,000	150,000	12,000	9

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

In most schools, teachers receive extra pay for coaching sports and working with students in extracurricular activities. Some teachers earn extra income during the summer, working in the school system or in other jobs.

Related Occupations

Special education teachers work with students who have disabilities and special needs. Other occupations involved with the identification, evaluation, and development of students with disabilities include psychologists, social workers, speech-language pathologists, audiologists, counselors, teacher assistants, occupational therapists, recreational therapists, and teachers—preschool, kindergarten, elementary, middle, and secondary.

Sources of Additional Information

For information on professions related to early intervention and education for children with disabilities, listings of schools with

special education training programs, information on teacher certification, and general information on related personnel issues, contact:

► The Council for Exceptional Children, 1110 N. Glebe Rd., Suite 300, Arlington, VA 22201.

Internet: <http://www.cec.sped.org>

► National Center for Special Education Personnel & Related Service Providers, National Association of State Directors of Special Education, 1800 Diagonal Rd., Suite 320, Alexandria, VA 22314. Internet: <http://www.personnelcenter.org>

To learn more about the special education teacher certification and licensing requirements in individual States, contact the State's department of education.