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ENCYCLOPEDIA OF AMERICAN EDUCATION

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Harlow G. Unger



VOLUME III

R-Z

Encyclopedia of
**AMERICAN
EDUCATION**

Second Edition



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R-Z
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Encyclopedia of American Education, Second Edition

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Encyclopedia of
**AMERICAN
EDUCATION**

Second Edition



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R

race In education, a class of people with common, identifiable and presumably inherited characteristics. Most anthropologists classify humans into three races: Caucasoid (whites), Mongoloid (Asiatics) and Negroid (blacks). The U.S. Department of Education and other American government agencies, along with the entire educational establishment, keep detailed academic and other records, categorized by race, as well as by certain national and ethnic origins, such as data for HISPANICS, AMERICAN INDIANS and Pacific Islanders. For the first 250 years of white settlement in North America, the vast majority of blacks were enslaved by whites. After emancipation in 1863, state laws in much of the United States segregated them for an additional century from white life and opportunities.

Although legally free, blacks continue to suffer far higher rates of economic and cultural deprivation in the United States than do whites. During the last quarter of the 20th century, 26.1% of American blacks remained consistently below the POVERTY level, while the percentage of whites below the poverty level dropped steadily from nearly 18% in 1960 to 10.5% in 1998. During those same years, the poverty rate for the nation as a whole dropped from 22% to about 12.7%.

African-American educational achievement mirrors economic conditions, with the functional illiteracy rate among blacks at 12%, compared to less than 2% among American whites. According to U.S. Department of Edu-

cation figures in 2000, 37% of all blacks in the United States had failed to complete high school, compared to 22% of all whites. Only 11.4% of blacks held bachelor's degrees, compared to 21.5% of whites. In 1997, 60% of black high school graduates were enrolled in college, compared with 67.5% of white graduates. Moreover, proficiency of black elementary and secondary school students in reading, writing, science and other academic disciplines was substantially lower than that of whites. Scores of college-bound black high school students on verbal and mathematics SCHOLASTIC ASSESSMENT TESTS were 17.5% and 19.6% lower, respectively, than those of white students, while scores of ASIAN AMERICANS were only 6.8% below those of white students and 8.4% higher than white students' in mathematics.

In an effort to smooth out such differences in academic achievement, and ultimately reduce the economic deprivation perceived as the cause, the federal and state governments, along with the entire educational establishment, began establishing a broad array of COMPENSATORY EDUCATIONAL PROGRAMS 1963, the 100th anniversary of the Emancipation Proclamation. At the most elementary level, the federal government sponsored the establishment of the huge HEAD START program in preschool education to lift the level of school-readiness skills of culturally disadvantaged children. At the elementary and secondary school levels, a wide array of remedial instruction is now a standard element of the school curriculum in

disadvantaged areas. At the college level, most community colleges, as well as many state colleges and universities, adopted variations of open-enrollment admissions policies that admitted all applicants, regardless of high school grades and entrance examination scores, and, where necessary, provided remedial instruction to help the culturally disadvantaged cope with college-level academic work. Although academically selective private and public colleges maintained high academic standards for admission of most applicants, many adopted AFFIRMATIVE ACTION admissions policies that applied lower standards for black applicants "in the interests of diversity." Indeed, institutions as notable as Duke University, the University of Virginia, Washington University in St. Louis, Rice University in Houston and many others established merit scholarships awarded on the basis of race alone.

By the late 1990s, affirmative action had produced dramatic improvements in the percentage of African Americans attending college—60% versus only 24% in 1991—and 11.4% of African Americans had earned bachelor's degrees, compared to only 7.5% at the beginning of the decade. By the end of the decade, however, affirmative-action programs and race-based admissions and scholarship grants to minority students had come under attack for reverse discrimination against more qualified white applicants. In 1995, the U.S. Supreme Court refused to review a lower court ruling that declared publicly funded race-based scholarships unconstitutional, and by the early 2000s, most colleges and state boards of higher education had abandoned the practice.

In 1996, the people of California overwhelmingly approved a referendum banning racial and gender-based preferences in government hiring and contracting and in admissions to public colleges and educational institutions. After a federal court upheld the constitutionality of the ban the following year, other states, including Maine, Mississippi, Texas and Washington, followed California's example by

imposing legislative or court-ordered bans on affirmative action programs in college admissions and financial aid. Other states and cities across America followed suit, all but ending affirmative action in college admissions.

The end of affirmative action produced dramatic effects on minority applications and enrollment at colleges across the United States. Minority applications fell 13% at the University of Texas in 1997. Its law school reported a 42% drop in applications by black students; a 23% drop in applications by black students was reported at its medical school. And, while the number of total applications rose 1.6% at the University of California, the return to an academically meritocratic system of admissions saw applications by blacks fall 8.2%. Hispanic applications fell 3.7% and American Indian applications were down 9%. Ironically, Asian-Americans, who made up less than 4% of the total elementary and high school population, had been excluded from race-based affirmative action programs because of their disproportionately *high* academic performances. They made up more than 6% of the university population in 1998, and the end of affirmative action promised a sharp rise in that percentage.

(See also AFFIRMATIVE ACTION; AFRICAN AMERICANS; RACE-BASED SCHOLARSHIPS.)

References: DES; NYT; *Race and Races*, Richard A. Goldsby (1977); *Human Variation: Races, Types and Ethnic Groups*, Stephen Molnar (1991).

race-based scholarships Financial grants awarded by a college or university to a student primarily on the basis of race, rather than academic, athletic or other abilities. Until 1995, race-based scholarships had been permitted under U.S. federal regulations as long as they were granted to help "remedy past discrimination" and promote diversity on the campus. Race-based scholarships accounted for about 4% of the more than \$3.5 billion in scholarships awarded by four-year colleges in 1992. In 1995, the U.S. Supreme Court refused to review a lower court ruling that race-based

scholarships funded with public money at the University of Maryland were unconstitutional because they discriminated against white students. Race-based scholarships funded with private money, however, are part of a long tradition of privately funded scholarships for students from a wide variety of special groups, including American Indians, Chinese Americans, Italian Americans, Jews, foreign students, women, men, Christians, lineal descendants of Confederate soldiers and "students of Huguenot ancestry," among others.

Although privately funded race-based scholarships are entirely legal and ethical, many colleges hesitate to publicize the availability of race-based scholarships for fear of provoking reverse-discrimination lawsuits by white students who are refused admittance in favor of less qualified blacks (see *UNIVERSITY OF CALIFORNIA REGENTS V. BAKKE*). Most such scholarships are, therefore, awarded without fanfare, usually to black students who might otherwise forgo opportunities to attend a prestigious college because of financial need.

Among the most prestigious institutions that admit awarding race-based scholarships are the University of Virginia, Duke University, Washington University in St. Louis and Rice University. Emory University offers race-based scholarship programs for the top graduates of Atlanta's public schools, whose student bodies are predominantly black, and Rutgers University, New Jersey's state university, awards scholarships annually to minority students who finish in the top 10% of their high school classes and have combined SAT scores of at least 1,100. Called the Carr scholarships, the awards cover about two-thirds of the annual cost for tuition, room and board for New Jersey residents.

Reference: NYT.

racial balance In public education, a student population whose racial and ethnic makeup reflects the racial makeup of the general community. Thus, racial balance in a community whose population is 40% white, 30% His-

panic and 30% black would see the student population made up of roughly the same percentages of each group.

Racial balance in American public schools has been a primary goal of the U.S. federal courts since 1954, when the U.S. Supreme Court outlawed racial segregation in public schools in the case of *BROWN V. BOARD OF EDUCATION OF TOPEKA*. At that time, the Court ordered public schools to desegregate "with all deliberate speed." Although the decision and subsequent federal legislation outlawed de jure segregation, de facto segregation, based on residential patterns, has persisted. Thus, all-black neighborhoods tend to have all-black schools; all-white neighborhoods, all-white schools. Although reflective of neighborhood population, such schools are not considered racially balanced if they do not reflect a broader population of the town, city, county or area beyond the immediate district boundaries. Some communities instituted mandatory, inter-district busing of schoolchildren to achieve a modicum of racial balance in schools of all-white and all-black districts, but such forced busing was subsequently declared unconstitutional, and racial imbalances persist to this day in neighborhoods where de facto segregation exists.

Reference: *Desegregation: How Schools Are Meeting Historic Challenge*, National School Public Relations Association, Arlington, Virginia (1973).

racism The belief that race is the primary cause of human characteristics and abilities and that some races are inherently superior to others, intellectually, psychologically and physically. There are two broad forms of racism: institutional, practiced by government or business, educational and social organizations, and individual, practiced by one or more persons against a member of members of a different race. Both forms have influenced American education since the first white settlers arrived in the New World. From earliest colonial days, institutional racism barred blacks, American Indians and Asians from most schools. Southern

states made it a crime, punishable by fines and imprisonment, to teach blacks to read. Although the Civil War ended legalized slavery in the United States, southern states passed laws that segregated blacks from whites in public schools for nearly a century, while federal government regulations and local or state ordinances forced most American Indians to attend segregated schools on their reservations.

In 1954, the U.S. Supreme Court ruled that racially segregated schools were inherently unequal and unconstitutional, and it ordered an end to legalized, state-sponsored institutional racism in American education in its 1954 decision in *BROWN V. BOARD OF EDUCATION OF TOPEKA*. Institutional racism in private colleges and universities, however, continued until the U.S. Congress passed the CIVIL RIGHTS ACT OF 1964, outlawing all institutional racism in public facilities in the United States. Passage of subsequent federal, state and local laws discouraged overt institutional racism in education, although some subtle forms inevitably persisted. Among these was the failure of some schools to achieve racial balance in their faculties and thus give students of each race adequate numbers of adult role models. At the individual level, some teachers and their instructional materials failed to recognize the achievements of minorities in history, literature, science and other fields. The subtlest form of racism, however, often took the form of lower teacher expectations for poor and minority students. By demanding less of such students, teachers got exactly what they expected.

References: *The Retreat of Scientific Racism*, Elazar Barkan (1992); *Racism in the United States: An American Dilemma*, David M. Reimers, ed. (1972); *Equal Educational Opportunity: More Promise Than Progress*, Institute for the Study of Educational Policy, Washington, D.C.

radio The wireless transmission of sound, or "wireless telephone," as it was first called, following its invention in Europe in the late 19th century. Radio did not become an educa-

tive medium in the United States until the early 1920s, when the industry expanded from two local transmitters that reached a few thousand listeners in Pittsburgh and Detroit, to 530 stations broadcasting to more than 1 million American homes in 1924. Among the station owners were newspapers, which broadcast news; churches, which broadcast their varied interpretations of "the word"; and universities, which offered home study courses and certificates from what was loosely called the "university of the air."

By 1940, there were 847 American stations broadcasting to more than 28 million households—80% of all the households in the United States at that time. Radio became the most effective public medium of the day, reaching the unlettered as well as the educated with the informative, regular "fireside chats" of President Franklin D. Roosevelt; up-to-the-minute news of local, regional, national and international interest and news analysis by various experts; weekly concerts of the New York Philharmonic and the NBC Symphony; live opera from the Metropolitan Opera House; the weekly "Invitation to Learning," which brought readings of classical literature to more than a million listeners; and, of course, a wide variety of entertainment, including comedy, popular music, variety shows and quiz programs. A 1945 survey found that Americans thought more of radio than they did of their churches and schools, saying that radio provided them with substantial general knowledge, practical information and cultural opportunities. Moreover, they said they preferred programs with advertising to those without, arguing that commercials provided them with useful information and shopping guidance.

Reference: *A History of Broadcasting in the United States*, Erik Barnouw (3 vols., 1966–70).

Rainbow Curriculum A controversial series of short texts introduced in New York City schools in the early 1990s to inculcate in children a spirit of acceptance of a wide range of

people of different races, religions, ethnic backgrounds and sexual preferences. It was the last element—illustrated by titles such as *Heather Has Two Mommies*—that triggered a barrage of attacks and parent demonstrations against the New York Board of Education and its chancellor, Joseph A. Fernandez. The texts were withdrawn as a mandatory part of the elementary school curriculum. The booklets explaining “alternative lifestyles” remain available to the city’s schoolchildren as a counseling tool.

Reference: NYT.

rational counting The counting of specific, concrete objects, as opposed to the simple mastery of the sequence of numbers. Also called enumeration, rational counting is the standard method of teaching students to count. Rational counting replaced rote memorization, which was the conventional method of learning numbers in the 19th century, before the development of the progressive education concept of moving from the concrete to the abstract. Rational counting gives each number name a meaning—as in “one book” or “two pencils”—instead of simply one, two, three and four. Teachers of young children routinely use rational counting as a pedagogical tool, asking one child to count the number of students, another to count books and others to count blocks. Teachers report that physical touching of the objects counted quickens number mastery.

References: *Teaching and Learning in the Elementary School*, John Jarolimek and Clifford D. Foster (1985); *The Elementary School Handbook*, Joanne Oppenheim (1989).

raw score The actual number of correct answers on a test, unadjusted and unconverted to conventional grading systems or to relative positions in a distribution curve. Thus, the raw, or, as it is sometimes called, crude, score for six questions answered correctly on a test made up of 12 questions is six. As a percentage grade, it would be 50%. Graded by position on a distribution curve, it might, if it were

the highest grade in the class, merit an adjusted grade of 90%.

Reference: *Measuring and Evaluating School Learning*, Lou M. Carey (1988).

“reach” school A colloquialism referring to a college whose empirical qualifications for admission appear somewhat higher than the academic qualifications of an applicant, thus making it an academic “reach” for that student. College-bound students usually apply to at least one such “reach,” “dream” or “stretch” school, as it is variously called, that they would most like to attend, but for which their academic qualifications are below those of the average student accepted to that institution. In addition to one “reach” school, college-bound high school students usually apply to at least one “safety” school for which they appear somewhat over-qualified academically, in comparison to the majority of applicants.

Reference: *A Student’s Guide to College Admissions*, Harlow G. Unger (1995).

readability The degree of reader understanding of written material. Readability is an essential measure for publishers of educational materials to determine, prior to publication and distribution to specific student age groups. Materials too easy or too difficult to understand are of little educational value in the classroom, and teachers as well as publishers attempt to determine readability before distributing written materials to students. Vocabulary, syllabic structures, sentence structure, average sentence length, number of prepositional and participial phrases, page design and format, average paragraph length and type size and design are all elements taken into account in measuring readability. There are, however, a variety of different formulas and systems for measuring readability, none of which are accepted as entirely valid or reliable.

References: *Teaching Them to Read*, Dolores Durkin (1989); *How to Measure Readability*, W. B. Gray, Jr. (1975).

readiness skills (for school) A body of knowledge and abilities that provide a preschool or kindergarten child with a foundation for the formal school experience and academic learning. A child who cannot read the individual letters of the alphabet, for example, lacks the readiness skills for learning to read. School readiness heads the list of educational priorities of the U.S. government's GOALS 2000 program to make American education the world's best.

The basic readiness skills required for learning in the school situation can be categorized as social, oral, interpretive and mathematical:

- Social readiness skills: ability to listen to others, take turns talking and not interrupt or distract others.
- Oral skills: ability to identify rhyming words (e.g., cat, bat), position words (front, back, beginning, end, etc.), upper case and lower case letters, and the sounds and names of letters.
- Interpretive skills: ability to understand the overall form of a story—i.e., beginning, middle, end—and analyze the traits of characters and predict what may happen to them after the story ends; ability to recount a story from a picture; ability to differentiate between real and make-believe.
- Mathematical skills: ability to sort and compare objects by color, kind, size, shape, details; ability to count from one to 10, backwards and forwards and starting from any number within the sequence; ability to estimate quantities and determine which of two groups is probably larger.

According to a study by the Carnegie Foundation for the Advancement of Teaching, lack of school readiness skills developed from a wide variety of causes, including poor health care, inattentive or overworked parents, scarce child care and preschool opportunities, unsafe neighborhoods, malnourishment, mindless television programming and isolation from caring adults.

(See also NURSERY SCHOOL; READINESS TESTS; TESTING PRESCHOOLERS.)

References: *The School-Smart Parent*, Gene I Maeroff (1989); *Ready to Learn: A Mandate for the Nation*, Carnegie Foundation for the Advancement of Teaching (1994).

readiness tests Examinations administered to preschoolers and kindergartners to measure their readiness for the formal elementary school educational process. Readiness tests are usually required for applicants to highly selective, private elementary schools, with far more applicants than available seats. Administered somewhat less routinely by public schools, readiness tests are far from reliable and are often invalid, because of built-in cultural biases that can obscure the educational promise of perfectly healthy or even gifted children. A rural child from a home with a huge, covered porch might fail to select the tricycle from a picture question that asks, "Which of these toys do you never use in the house?"

(See also NURSERY SCHOOL; READINESS SKILLS; TESTING PRESCHOOLERS.)

Reference: *The Elementary School Handbook*, Joanne Oppenheim (1989).

reading The perception, comprehension and intellectual integration of printed letters or symbols, words and groups of words. The most basic element of formal education and the school curriculum, reading is generally defined as a four-part sequence: word perception, or recognition of a word and the understanding of its meaning; comprehension, or grasp of ideas from word groupings; reaction, or intellectual, emotional or physical effect or response; and integration, or absorption of all or parts of the material into one's own body of knowledge and experience.

In broadest terms, reading instruction consists of three stages: development of a sense (sight or, in the case of Braille, touch); development of word-attack skills (learning to soundout, learning meanings by their context,

etc.); and integration of reading and thinking. Ironically, learning to read does not begin with instruction in letters, but in the absorption of ideas and concepts during the preliterate years of infancy and early childhood. To begin to learn to read, infants and young children must first hear language, associate meanings to words and gradually intuit that words are composed of sounds, represented by printed symbols, or letters. "Play" with words and sounds is an essential element in acquiring reading readiness skills, by focusing the child's attention on word sounds as well as meaning. A second important element is parental reading to children, to help them learn new words and meanings, expand vocabulary, provide contact with letters and words and build awareness that printed words tell stories and provide information. Some reading instruction also begins before preschool, as the child observes and, with parental assistance, recognizes large-print logos—e.g., "PIZZA"—and engages in pretend-reading from books whose stories he or she already knows from parental readings. Depending on the individual child's stage of development, formal instruction in reading-readiness skills may begin in preschool, but certainly no later than kindergarten, when children are taught to read, recite and write the alphabet and match capital and small letters.

Kindergarten reading instruction begins with elementary phonics, with children taught to make letter-sound associations, sound out and name letters at the beginning of short, monosyllabic words, and to read and rhyme short words such as man and ran. Teacher-directed storytime takes up a significant part of the kindergarten day. Children have read-along copies of many stories and poems and are encouraged to read aloud, according to their abilities. Cross-disciplinary stories introduce children to subjects such as history and science. Children also learn to differentiate between real and make-believe and to dictate their own words and stories to the teacher, who slowly transcribes them on the chalkboard.

Teacher transcriptions of children's words into written words are a basic teaching technique for kindergarten-aged children and are critical to their learning to read. Some children learn to write short words—spelled phonetically, correctly or incorrectly (immaterial at this age)—and all learn to write their own first and last names correctly.

As simplistic as such reading-readiness skills may appear, they are essential to the development of basic reading skills, which, in turn, are essential to academic success throughout primary, secondary and higher education and to economic and professional success in adult life. Better-than-average readers are generally higher-than-average achievers; those in power have traditionally sought to preserve their authority by limiting the literacy of the populace.

In the Western world, the development of reading as a popular skill got under way only after 1382, when a group of dissident Oxford University students, followers of John Wycliffe, first translated the Vulgate, or Latin Bible, into the vernacular. Until then, only priests and a minority of the nobility, fluent in Latin, had direct access to the contents of the Bible, which they could interpret as best served their interests. Wycliffe broke with the papacy over his belief in a direct relationship between humanity and God, without the mediation of popes, prelates and the church. Denouncing many of the beliefs and practices of the Catholic Church as nonscriptural, he called the Scriptures the sole religious truth; a translation of the Bible brought that truth to an expanded audience, who were encouraged not only to follow the text but also to interpret it. The development of the printing press during the 15th century and the Renaissance contributed further to the climate of literacy.

Wycliffe's efforts helped bring about the Protestant Reformation that split the Catholic Church in 1517 and also sowed the seeds of a popular education movement, which had begun in England as a struggle between

Wycliffe's followers and those loyal to the papacy. The struggle grew more violent following Henry VIII's break with the pope in 1532. In an attempt to resolve the conflict, Henry forced Parliament to pass the Act of Supremacy declaring him the head of the English Church. Recognizing the continuing strength of Catholics in England, his daughter, Elizabeth I, forced Parliament in 1562 to add "all teachers of children" to those required to take the oath of supremacy.

The object, of course, was not to spread education in the modern sense, but to produce a generation of Englishmen loyal to the Crown and its version of Protestantism, the Church of England. The result, however, was an unprecedented expansion of schooling throughout the end of the 16th and beginning of the 17th centuries. Instead of cementing popular loyalty to Crown and church, however, reading opened the door to knowledge, and knowledge produced an endless array of intellectual and religious rebellions that, in turn, produced a civil war in Britain and sent many Britons fleeing to the American colonies.

The majority of schools produced by the Tudor educational revolution were PETTY SCHOOLS, which concentrated on learning to read Scripture. The study of reading began with the alphabet and syllables, taken from a HORN-BOOK, or ABC. Introduced in the 16th century, the ALPHABET METHOD asked the beginning reader first to memorize the alphabet and, second, to memorize all the sounds for each letter (for example, ba, be, bi, bo, bu by for the letter *b*). The third step of the method required the teacher to present students with word lists of successively increasing difficulty, progressing from monosyllabic words of two, three, four and more letters to words of two, three and more syllables. Each word list ended with one or more short reading lessons incorporating words from that list for students to practice using the words they learned by pronouncing each letter and word as they read aloud in unison. As students grew more proficient, the

teacher/minister proceeded sequentially to a PRIMER, a catechism, a Psalter, the Old Testament and the New Testament. For wealthier students, education progressed from petty school to grammar school, where they studied Latin, mathematics and other advanced subjects. It was this type of education that the first English settlers brought to the American colonies.

After independence, some leaders of the new nation, such as THOMAS JEFFERSON, JAMES MADISON, BENJAMIN FRANKLIN and NOAH WEBSTER, recognized that the ability to read was essential for democratic self-government. Northern industrialists and southern plantation owners feared that education might provoke worker rebellions and deprive them of their cheapest labor—children and black slaves. Again, reading was seen as a danger to the powers of the ruling class, and southern states passed laws making it a crime, punishable by fines and imprisonment, to teach blacks how to read. The creation of state public school systems following the Civil War legally opened education and reading to all American children, but pervasive child labor prevented almost half the children in the United States from attending school. It was not until the passage of the last of the state compulsory education laws in the early 1920s that every American child was given the right to learn how to read.

In today's schools, children equipped with reading-readiness skills begin in first grade to learn to recognize whole words, read complete sentences, paragraphs and short stories and, above all, to understand the meaning of the texts they read. Although some schools preface whole-word instruction by PHONICS—i.e., the "sounding" out of individual letters, letter combinations, then words—most teachers combine phonics and whole-word instruction, followed by the BASAL READER program, a group of instructional materials consisting of readers and workbooks.

In the later elementary school and middle school years, reading instruction gradually

shifts from development of basic recognition skills to vocabulary expansion and the development of a variety of subskills, including understanding word meanings from their context, finding the main idea in a sentence, paragraph or passage, distinguishing between fact and opinion and summarizing and interpreting complex written materials. By the end of elementary school, learning to read has evolved into reading to learn, with the learning of new reading skills limited to subskills such as scanning, finding meanings through context, comprehending abstract materials and acquiring a larger, more technical vocabulary.

References: EB; *Teaching Them to Read*, Dolores Durkin (1989); *Literacy: Reading the Word and the World*, Paulo Freire and Donaldo Macedo (1987).

reading accelerator Any of a variety of mechanical devices developed in the 1960s to increase the reading speed of slow readers and students with reading disabilities. One device uses a flat bar, about an inch and a half wide, that lies across the page and moves down it at a speed that can be adjusted mechanically, forcing the reader to stay ahead of the bar. Another device covering the entire page is equipped with a moving shutter mechanism that moves downward, exposing one line at a time. By shortening the time of exposure, the teacher can force the student to read faster. Comprehension is tested after each page is read. Somewhat effective with "lazy" but otherwise normal readers, the device can prove extremely anxiety provoking.

Reference: *Corrective Reading*, Miles V. Zintz (1977).

reading age The age-equivalent level of a student's reading ability as measured by standardized, norm-based examinations. Reading age does not take chronological age into account. Thus, a student with a reading age of 10 may actually be six, 10 or 20 years of age.

(See also READING LEVELS.)

Reference: *Teaching Them to Read*, Dolores Durkin (1989).

reading clues A variety of elements in a written passage that indirectly suggest the meaning of a word, of a character's personality or feelings or of story content and plot. Teaching students how to identify reading clues—probable story content from a title or the meaning of a word from its context—is an essential element of reading instruction in elementary school education.

References: *Teaching Them to Read*, Dolores Durkin (1989); *Principles and Practices of Teaching Reading*, Arthur W. Heilman, Timothy R. Blair and William H. Rupley (1986).

reading comprehension The ability to infer meaning from a printed passage. There are four levels of reading comprehension that develop sequentially: literal, interpretive, critical and creative. The first limits understanding of written materials to words, phrases, sentences and explicitly stated ideas. Interpretive comprehension allows the reader to understand ideas implied, but not specifically stated, in a printed passage. Critical comprehension allows the reader to evaluate the accuracy and aesthetic value of a passage, while creative comprehension allows the reader to relate and apply ideas expressed or implied in a passage to the world beyond that described in the reading. An essential part of the reading instruction program is to teach students to progress from one level of comprehension to the next, although the rate of progress is determined in part by individual development and sociocultural and economic background.

References: *How to Increase Reading Ability*, Albert J. Harris and Edward R. Sipay (1985); *Principles and Practices of Teaching Reading*, Arthur W. Heilman, Timothy R. Blair and William H. Rupley (1986); *Reading Comprehension: New Directions for Classroom Practice*, John D. McNeil (1987).

reading games Any of a variety of entertaining activities that require students to read. Some reading games, such as crossword puzzles, picture riddles, rebuses and card games,

are commercially prepared; others are prepared by teachers. By associating reading with "fun," reading games are designed as conditioning experiences that, presumably, help students develop a lasting interest in reading. There are no valid or reliable studies to support that assumption, however, and experienced teachers are careful to keep games to a minimum and to select only those that focus on the acquisition of specific skills. One disadvantage of reading games is their failure to teach children that learning often requires serious, albeit rewarding, concentration. Overuse of games can dissuade some children from learning efforts that fail to entertain and provoke a "that's-no-fun" response.

Reference: *How to Increase Reading Ability*, Albert J. Harris and Edward R. Sipay (1985).

reading levels A broad-based measure of individual reading achievement, valid only when related to the reader's age and the level of difficulty (or readability) of the material. There are three basic evaluative levels, as determined by an INFORMAL READING INVENTORY:

- Dependent level. Reader needs no assistance, makes fewer than 2% oral reading errors and comprehends more than 90% of the material.
- Instructional level. Oral reading errors reach 5%, while comprehension, or comprehension "capacity," drops to about 75%, and reader needs some teacher assistance.
- Frustration level. Oral reading errors climb to more than 10%, while comprehension falls to less than 50%; a level detrimental to instructional progress and one at which materials are withdrawn in favor of easier reading.

Teacher evaluation of a student's reading level and comprehension capacity is essential in the selection of appropriate materials for basal reading instruction of early elementary school students.

References: *How to Increase Reading Ability*, Albert J. Harris and Edward R. Sipay (1985); *Reading Comprehension: New Directions for Classroom Practice*, John D. McNeil (1987).

reading lists In education, any roster of books and other reading materials deemed appropriate in terms of content, language and readability for a youngster at a specific age or grade in elementary or secondary school. Publishers of children's and young adult (adolescent) books generally specify the age groups for which each book is most appropriate. There are myriad reading lists prepared by libraries, teachers' associations, religious organizations and publishers. Some lists are inclusive, in that they include all literature generally regarded by scholars as classical along with newly published works deemed appropriate by teachers of reading and English; others are exclusive, in that they exclude materials—classical or not—deemed objectionable to a particular community or group within that community. Although there are no universally accepted reading lists, in 1988 then-secretary of education William J. Bennett developed reading lists of appropriate literature for every grade from kindergarten through high school. The New York Public Library and various teachers' associations also produce annual reading lists largely related to new books published in that year.

References: New York Public Library; *James Madison Elementary School* and *James Madison High School*, William J. Bennett, U.S. Department of Education, Washington, D.C. (1988).

reading rate The speed at which one reads orally and silently, expressed in words per minute. Normal oral and silent reading rates for a 10-year-old child at the beginning of fourth grade are about 130 words per minute. Although oral reading rates remain relatively stable at that level, silent reading rates climb to about 250 words a minute by the time students graduate from high school. Silent reading rates are affected by reader interest, reader familiarity with the context of the material, reading environment (lighting, noise levels, etc.) and the reader's physical and psychological condition.

References: *How to Increase Reading Ability*, Albert J. Harris and Edward R. Sipay (1985); *Principles and*

Practices of Teaching Reading, Arthur W. Heilman, Timothy R. Blair and William H. Rupley (1986).

reading readiness That level of physical, intellectual, emotional and sociocultural development at which a child is most susceptible to successful acquisition of reading skills. Most normal children do not know how to read when they enter kindergarten at five years old, but they are ready to learn to read. Reading readiness is evident by a number of distinct, measurable characteristics: sight recognition of familiar words, such as one's own name, product names and road signs; ability to recite all or most of the alphabet and to point out and name letters and numbers; the knowledge of how books "work": from left to right and top to bottom on each page and from front to back, that the printed symbols on each page represent spoken sounds and words, and the knowledge of story form—with a beginning, middle and end.

Most schools generally try to measure reading readiness with tests that measure alphabet and letter recognition, whole-word recognition, vocabulary and visual discrimination (the ability to distinguish between p and b, for example). Although the tests correctly predict that children with high scores do indeed progress quickly in reading instruction and achieve superior reading proficiency by third grade, they have relatively little validity in predicting the future progress of children with low scores. Indeed, they may simply evaluate the child's level of development at the time of the test rather than any real reading "aptitude." Experienced first grade teachers maintain they can determine a child's reading aptitude far more accurately than tests, through observation of a child's drawings, body language, listening skills, reaction to stories, participation in classroom discussions and interaction with peers, adults and classroom materials.

Reading readiness is largely a function of a child's socioeconomic and cultural background during the preliterate years. Children

acquire such skills both by direct instruction and by simply observing their surroundings and absorbing knowledge independently. Acquisition of the first reading-readiness skills begins when the infant first hears language spoken. Gradually, the child begins to associate meanings to words and eventually to intuit that words are composed of sounds, represented by printed symbols, or letters. "Play" with words and sounds are an essential element in acquiring reading-readiness skills, by focusing the child's attention on word sounds as well as meaning. A second important element is parental reading, which teaches new words and meanings, provides contact with letters and words and builds awareness that printed words tell stories and provide information.

Some reading instruction begins before preschool, as the child observes and, with parental assistance initially, but eventually independently, recognizes large-print logos—e.g., "PIZZA"—and engages in pretend-reading from books whose stories he or she already knows from parental readings. The process continues in day care, nursery school and preschool, with acquisition of alphabet and limited word recognition skills and other reading "building blocks."

(See also PRESCHOOL; READING.)

Reference: *The Elementary School Handbook*, Joanne Oppenheim (1989).

reading reversals A perceptual dysfunction whereby the reader sees similarly shaped letters and words in reverse—*b*, for example, instead of *d* or *p*, and *saw* instead of *was*. Relatively common among preschool children and beginning readers, reading reversals, if they persist, can be one symptom of more serious visual perception problems or learning disorders in reading letters, words or sentences. For normal reading-reversal problems, many teachers introduce multisensory instruction, whereby children trace each letter with their fingers, while reading and reciting the letter aloud.

(See also LEARNING DISABILITIES; DYSLEXIA; ORTON GILLINGHAM METHOD.)

Reference: *Teaching Reading to Slow and Disabled Learners*, Samuel A. Kirk et al. (1978).

reasoning skills The ability to infer or reach conclusions in an orderly, rational way on the basis of a group of facts and applicable principles or laws. Often called higher-order thinking skills, reasoning skills are generally defined as the ability to identify a problem, to determine what information is needed to solve it, to generate possible solutions from such information, to evaluate each solution and select the correct one, to implement the solution and to describe and defend the reasons behind the implementation. In short, reasoning skills require students to arrive at the correct solution and explain how and why they arrived at it.

Reasoning skills have been at the center of a highly charged educational debate over the apparent failure of American public schools to teach such skills to most students. Much of the failure is ascribed to the pervasive use of objective tests requiring only rote answers and memory skills, instead of written essay-style tests and assignments requiring original thought.

Generally required for academic proficiency, beginning in the fifth grade, reasoning skills are essential to academic success at the high school and college level. Although many students acquire problem-solving skills and strategies intuitively or by imitating others, some educators believe that instruction in reasoning skills should be an integral part of the curriculum throughout the elementary and middle school years. Instruction in reasoning skills begins with extensive use of teacher questioning and problem-raising, followed, initially, by teacher guidance in and discussion about identifying, evaluating and selecting problem-solving strategies. In solving problems for the class, teachers intent on teaching reasoning skills carefully describe the reasoning skills and problem-solving strate-

gies they used in arriving at a solution, rather than simply providing the solution.

References: *Successful Problem Solving Technique*, Carole E. Greenes et al. (1977); *The School-Smart Parent*, Gene I. Maeroff (1989).

rebus A common READING GAME that combines pictures and other symbols with printed letters and words in a sequence that permits a young reader to decode a complete sentence by sequentially pronouncing the name of each picture, letter or word. Thus, the number 2 might be used as a symbol for the words to or too, as well as two, while a picture of a bee might be used to symbolize the word be. The word *rebus* is derived from the Latin word *res*, or thing.

References: *Teaching Reading to Slow and Disabled Learners*, Samuel A. Kirk et al. (1978); *Peabody Rebus Reading Program*, Richard W. Woodcock and Charlotte R. Clark (1970).

recital In education, the public demonstration of a student's skills in the performing arts, either alone or in concert with one or more other students. Recitals are often required in performing arts courses in lieu of the traditional final examination of academic courses. They are generally required, as well, as auditions for admission to specialized schools for the performing arts. Recitals may also be an extracurricular activity, in which students perform for the entertainment of fellow students, parents, faculty and friends. In all cases, they are essential instructionally for future public performers, who require preparation and emotions far different from that of instrumentalists who perform alone.

Reference: *Music Talks: Conversations with Musicians*, Helen Epstein (1987).

Reconstruction The decade (approximately) following the Civil War, during which normal relations were restored between the Union and the secessionist Southern states. For education, Reconstruction meant the introduction