any process, either formal or informal, that shapes the potential of a maturing organism. Informal education results from the constant effect of environment, and its strength in shaping values and habits can not be overestimated. Formal education is a conscious effort by human society to impart the skills and modes of thought considered essential for social functioning. Techniques of instruction often reflect the attitudes of society, i.e., authoritarian groups typically sponsor dogmatic methods, while democratic systems may emphasize freedom of thought.

Development of Education

In ancient Greece education for freemen was a matter of studying Homer, mathematics, music, and gymnastics. Higher education was carried on by the Sophists and philosophers before the rise of the Academy and the philosophical schools.

In medieval Western Europe, education was typically a charge of the church: the monastic schools and universities were the chief centers, and virtually all students took orders. Lay education consisted of apprentice training for a small group of the common people, or education in the usages of chivalry for the more privileged. With the Renaissance, education of boys (and some girls) in classics and mathematics became widespread. After the Reformation both Protestant and Roman Catholic groups began to offer formal education to more people, and there was a great increase in the number of private and public schools, although the norm remained the classical-mathematical curriculum.

The development of scientific inquiry in the 19th cent. brought new methods and materials. As elementary and secondary schools were established and as larger proportions of the population attended, curriculums became differentiated (see progressive education; guidance and counseling) and included aspects of vocational education. Opportunities for higher education were expanded, especially in the land-grant colleges of the western United States. A large increase in college and vocational training resulted from the various veterans' assistance acts that have been passed since World War II. These measures have provided financial assistance to veterans seeking higher education or job training.

Most modern political systems recognize the importance of universal education. One of the first efforts of the Soviet Union was to establish a comprehensive national school system. In the United States education has traditionally been under state and local control, although the federal government has played a larger role in the latter half of the 20th cent. Various religious groups, notably the Roman Catholic Church, administer parochial schools that parallel public schools. Private schools and colleges have frequently been leaders in educational experiment.

See adult education; audiovisual education; bilingual education; kindergarten; nursery schools; school; vocational education.

Theories of Education

Education theorists today struggle over whether a single model of learning is appropriate for both sexes (see coeducation), or for students of all ethnic backgrounds; although equality of educational
opportunity in the United States is an accepted principle, it is not always easy to practice. Throughout history theories of education have reflected the dominant psychologies of learning and systems of ethics.

An ancient idea, held by Socrates, is that the rightly trained mind would turn toward virtue. This idea has actually never been abandoned, although varying criteria of truth and authority have influenced both the content and the techniques of education. It was reflected in the classical curriculum of the Renaissance, the theorists of which included Erasmus, Sir Thomas More, and George Buchanan.

Since the 17th cent. the idea has grown that education should be directed at individual development for social living. John Comenius, Jean Jacques Rousseau, Johann Pestalozzi, Friedrich Froebel, Maria Montessori, and Horace Mann were outstanding figures in this development. In the 20th cent. John Dewey declared that young people should be taught to use the experimental method in meeting problems of the changing environment. Later in the century the psychologist B. F. Skinner developed a theory of learning, based on animal experimentation, that came to have a strong effect on modern theories of education, especially through the method of programmed instruction. More recent educational models based on the theories of Jean Piaget, Jerome Bonner, and Howard Gardner have gained wide support. In the United States, recent developments have included an emphasis on standardized testing, the emergence of the charter school, and such national reform programs as No Child Left Behind (2001) and Race to the Top (2009).

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