CURRICULUM

FOUNDATIONS, PRINCIPLES AND ISSUES

SECOND EDITION

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CHAPTER 3

HISTORICAL FOUNDATIONS OF CURRICULUM

Focusing Questions

1. ***How were European educational ideas modified by American schools?***
2. ***How did American democratic ideas contribute to the rise of public schooling in the United States?***
3. ***In what ways did American nationalism during the first half of the nineteenth century influence the curriculum?***
4. ***How did nineteenth-century European pioneers of pedagogy influence the American school curriculum?***
5. ***What unique problems were evidenced in the nineteenth century as the elementary (secondary) school curriculum developed?***
6. ***How did the Committee of Fifteen and Committee of Ten influence curriculum for the twentieth century?***
7. ***How did scientism in education influence curriculum making?***
8. ***What basic principles of curriculum making have persisted for the last 50 or more years? Why?***

Because many scholars in the field of curriculum often lack historical perspective, they rely on the history of American education to analyze the heritage of our curriculum. By analyzing the first 200 years (or more) of curriculum, up to the turn of the twentieth century, we can view curriculum primarily in terms of evolving subject matter or content and the dominant philosophy of perennialism. Not until the rise of progressivism, followed by the early period of behaviorism and scientism in education (the use of empirical methods, analysis of human behavior, and generalizations), did attention in the curriculum field expand to include principles of curriculum development. This shift occurred in the early years of the twentieth century.

We begin our discussion with the colonial period and proceed through the eighteenth, nineteenth, and twentieth centuries. Most of our discussion focuses on the last 100 years. In the interest of brevity, we examine only the broad sweep of curriculum and how the curriculum evolved.

THE COLONIAL PERIOD: 1642–1776

The historical foundations of curriculum are largely rooted in the educational experiences of colonial Massachusetts. Massachusetts was settled mainly by Puritans who adhered to strict principles of theology. Unlike contemporary schools, the first schools in New England were closely related to the Puritan church. The major purpose of school, according to educational historians, was to teach children to read the Scriptures and notices of civil affairs.[1]

Reading, therefore, was the most important subject, followed by writing and spelling, for purposes of understanding the catechism and common law. Since colonial days, then, reading and related language skills have been basic to American education and basic to the elementary school curriculum.

Three Colonial Regions

Colonial schools established in Massachusetts were derived from two sources: legislation of

1642, which required parents and guardians of children to make certain that their charges could read and understand the principles of religion and the laws of the Commonwealth; and the "Old Deluder Satan" Act of 1647, which required every town of fifty or more families to appoint a reading and writing teacher. Towns of 100 or more families were to employ a teacher of Latin so that students could be prepared for entry to Harvard College.[2] The other New England colonies, except Rhode Island, followed the Massachusetts example.

These early laws reveal how important education was to the Puritan settlers. Some historians have regarded these laws as the roots of American school law and the public school movement. It is obvious that the Puritans did not want an illiterate class to grow in colonial America. They feared that such a class might comprise a group of dependent poor, an underclass, which would be reminiscent of that in England and other parts of Europe, and which they wanted to avoid. They also wanted to ensure that their children would grow up being committed to the religious doctrines.

In the middle colonies, unlike New England, no common language or religion existed. Writes George Beauchamp, "Competition among political and religious groups retarded willingness to expend the public funds for educational purposes."[3] No single system of schools could be established. What evolved instead were parochial and independent schools, related to different ethnic and religious groups, and the idea of community or local control of schools (as opposed to New England's concept of central or district-wide schools). The current notion of cultural pluralism thus took shape and form some 200 years ago. Just as the schools and the curriculum were uniform and centralized in the New England colonies, they were divergent and localized in the middle Atlantic colonies.

Until the end of the eighteenth century educational decisions in the Southern colonies were generally left to the family. Legislative action was taken, however, in behalf of poor children, orphans and illegitimate children—to ensure that their guardians provided private educational or vocational skills. Nevertheless, the plantation system of landholding, slavery, and gentry created a small privileged class of white children (children of plantation owners) who had the benefit of private tutors. For most poor whites who tilled the soil, formal education was nonexistent. Unable to read and write, many of them grew up to be subsistence farmers like their parents before them. Black slaves' children were forbidden to learn to read or write and were relegated as the underclass of the plantation system. In short, the economic and political system of the early South "tended to retard the development of a large-scale system of schools. This education [handicap] was felt long after the Civil War period."[4]

Despite the regional variations between the schools of New England, the middle Atlantic colonies, and the South, all three areas were influenced by English political ideas. And, despite differences in language, religion, and economic systems, religious commitment had a high priority throughout all schools and society; the family, too, played a major role in the socialization and education of all children. What was later to become the three Rs evolved from these schools as well.

"The curriculum of the colonial schools consisted of reading, writing, and [some] arithmetic along with the rudiments of religious faith and lessons designed to develop manners and morals."[5] It was a traditional curriculum, stressing basic-skill acquisition, timeless and absolute values, social and religious conformity, faith in authority, knowledge for the sake of knowledge, rote learning, and memorization. It was based on the notion of child depravity (children were born in sin, play was idleness, and child's talk gibberish), and thus the teacher needed to apply constant discipline. This approach to the curriculum dominated American education until the rise of progressivism.

Colonial Schools

The schools were important institutions for colonial society, as they are for today's. One difference is that a smaller percentage of the school-aged children attended elementary school on a regular basis compared to today, and a much smaller percentage of youth attended secondary school, much less graduated.

The Town School. In the New England colonies, the town school was a locally controlled and popular elementary school. Often it was a crude, one-room structure, dominated by the teacher's pulpit at the front of the room and attended by both boys and girls of the community. Students sat on benches and studied their assignments until called on to recite by the schoolmaster. The children ranged in age from 5 or 6 to 13 and 14. Attendance was not always regular; it depended on weather conditions and on individual families' needs for their children to work on their farms.[6]

Parochial and Private Schools. In the middle colonies, parochial schools and private schools predominated; the elementary schools were established by missionary societies and various religious and ethnic groups to educate their own children. Like the New England town schools, these schools focused on reading and writing and religious sermons. In the South, upper-class children attended private schools oriented to reading, writing, arithmetic, and studying the primer and Bible; less fortunate children attended charity schools (if they were lucky) to be trained in the three Rs, to recite religious hymns (which was less demanding than reading the Bible), and to learn vocational skills.

Latin Grammar Schools. At the secondary level, the sons of the upper class attended Latin grammar schools, first established in Boston in 1635, to be prepared for entry into college. These schools catered to those who planned to enter the professions (medicine, law, teaching, and the ministry) or to spend their lives as business owners or merchants.[7]

A boy would enter a Latin grammar school at the age of 8 or 9 and remain for eight years. His curriculum consisted of studying the classics. "There were some courses in Greek, rhetoric . . . and logic, but Latin was apparently three-quarters of the curriculum in most of the grammar schools, or more. . . ."[8] Little or no attention was given to the other arts and sciences. "The religious atmosphere was quite as evident . . . as it was in the elementary school" with the "master praying regularly with his pupils" and quizzing them "thoroughly on the sermons. . . ."[9] The regimen of study was exhausting and unexciting, and the school's role that of handmaiden of the church. As Samuel Morrison reminds us, the Latin grammar school was one of colonial America's closest links to European schools, and its curriculum resembled the classical humanist curriculum of the Renaissance (when schools were primarily intended for children of the upper classes and their role was to support the religious and social institution of that era).[10]

The Academy. The academy, established in 1751, was the second American institution to provide education at the secondary level. Based on the ideas of Benjamin Franklin, and intended to offer a practical curriculum for those not going to college, it had a diversified curriculum of English grammar, classics, composition, rhetoric, and public speaking.[11] Latin was no longer considered a crucial subject. Students could choose a foreign language based on their vocational needs—for example, a prospective clergyman could study Latin or Greek, and a future businessman could learn French, German, or Spanish. Mathematics was to be taught for its practical application to a job rather than as an abstract intellectual exercise. History was the chief ethical study, not religion. The academy also introduced many practical and manual skills into the formal curriculum; these formed the basis of vocational curriculum in the twentieth century: carpentry, engraving, printing, painting, cabinet making, farming, bookkeeping, and so on.

College. Most students went to Harvard or Yale after they graduated from Latin grammar schools. College was based on the Puritan conception that those called to the ministry needed to be soundly educated in the classics and scriptures. The students had to demonstrate their competency in Latin and Greek and the classics.

Latin grammar schools prepared students for Harvard or Yale college—much like high school academic programs prepare students for college today. The current relationship between the course offerings of secondary school and college admission requirements was, in fact, set in motion more than 200 years ago. Writes Ellwood Cubberley, "The student would be admitted into college 'upon Examination' whereby he could show competency 'to Read, Construe, Parce

Tully, Vergil and the Greek Testament; and to write Latin in Prose and to understand the Rules of Prosodia and Common Arithmetic' as well as to bring 'testimony of his blameless and inoffensive life.' "[12]

The Harvard/Yale curriculum consisted of courses in Latin, grammar, logic, rhetoric, arithmetic, astronomy, ethics, metaphysics, and natural sciences. The curriculum for the ministry or other professions also included Greek, Hebrew, and ancient history.

Old Textbooks, Old Readers

Because the hornbook, primer, Psalter, Testament, and Bible were considered textbooks, they were widely read (depending on the reading ability of the students). By and large, most elementary textbooks, until the time of the American Revolution, were of English origin or were direct imitations of English texts.[13] Children learned the alphabet, Lord's Prayer, some syllables, words, and sentences by memorizing the *hornbook*—a paddle-shaped board to which was attached a single sheet of parchment covered by a transparent sheath made by flattening cattle horns.

When the *New England Primer* was published in the last decade of the seventeenth century, it replaced the English primer. It was not only the first American basal reader, it was also the most widely used textbook in the colonies for over 100 years; more than 3 million copies were sold. The *New England Primer* was permeated with religious and moral doctrines. The somber caste of the Puritan religion and morals was evident as students memorized sermons and learned their ABCs through rote and drill:

A—In Adam's Fall
We sinned all
B—Thy Life to mend
This book attend
C—The Cat doth play
And after slay . . .
Z—Zacheus he
Did climb the tree
His Lord to see.[14]

In 1740 Thomas Dilworth published a *New Guide to the English Tongue*, which contained a mixture of grammar, spelling, and religious material. It was followed a few years later by the *School Master's Assistant*, a widely used mathematics text.

The narrowness of the elementary curriculum and the limited use of textbooks were illustrated by Noah Webster, an ardent cultural nationalist, years later in a letter to Henry Barnard, then Commissioner of Education of Connecticut:

> *before the Revolution . . . the books used were chiefly or wholly Dilworth's Spelling Books, the Psalter, Testament, and Bible. No geography was studied before the publication of Dr. Morse's small books on that subject, about the year 1786 or 1787. No history was read, as far as my knowledge extends, for there was no abridged history of the United States. Except the books above mentioned, no book for reading was used before the publication of the Third Part of my Institute, in 1785. . . . The Introduction of my Spelling Book, first published in 1783, produced a great change in the department of spelling. . . . No English grammar was generally taught in common schools when I was young, except that in Dilworth, and that to no good purpose.*[15]

THE NATIONAL PERIOD: 1776–1850

A new mission for education, which began to emerge during the Revolutionary period, continued through the early national period. Many leaders began to link free public schooling with the ideas of popular government and political freedom. Wrote President Madison, "A popular government without popular information, or the means of acquiring it, is but a prologue to a farce or a tragedy or perhaps both." Jefferson expressed a similar belief when he asserted: "If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be."

The emphasis on life, liberty, and equality was highlighted in the great documents of the era: the Declaration of Independence, the Bill of Rights, and the Northwest Ordinances. In 1785 these ordinances divided the Northwest Territory into townships and reserved the sixteenth section of "every township for the maintenance of public schools." In 1787, they reaffirmed that "schools

and the means of education shall forever be encouraged" by the states. The federal government thus recognized its commitment to education and exhibited its willingness to advance its cause, while assuring the autonomy of state and local schools, guaranteed by the U.S. Constitution. As a result of these Ordinances, thirty-nine states received over 154 million acres of land for schools from the federal government.[16]

By the turn of the nineteenth century, secular forces had developed sufficiently to challenge and ultimately cause the decline of religious influence over elementary and secondary schools. Among these secular forces were the development of democracy, the development of a strong federal government, the idea of religious freedom, and new discoveries in natural sciences.

Even though some leaders of the country mistrusted the mass of the people and continued to favor the classical curriculum, the popular movement in government mobilized against the money class and the old curriculum based on English traditions. Accompanying this growing political liberalism was an emerging cultural nationalism—a demand for an American language, an American culture, and an American educational system free of English ideas from the past. As a new nation, America sought its own political system and culture—and this thinking spilled over into the schools.

1791

Rush: Science, Progress, and Free Education

Dr. Benjamin Rush (1745–1813) represented this new era. In 1791, he wrote that the emphasis on the classics led to the prejudice the masses felt for institutions of learning. As long as Latin and Greek dominated the curriculum, universal education beyond the rudiments was wishful thinking. In a new country, in which the chief task was to explore and develop natural resources, as well as to promote democracy, education should be functional to these concerns. "Under these circumstances, to spend four or five years in learning two dead languages, is to turn our backs upon a gold mine, in order to amuse ourselves catching butterflies." If the time spent on Latin and Greek were devoted to science, continued this champion pragmatist, "the human condition would be much improved."[17] For Rush, science was the chief instrument of social progress.

Rush went on to outline a plan of education for Pennsylvania and the new Republic: free elementary schools in every township consisting of 100 families or more, a free academy at the county level, and free colleges and universities at the state level for the future leaders of society. The public would pay for the expenses, but, in the end, Rush argued, the educational system would reduce our taxes because a productive and well-managed workforce and entrepreneur force would result. (It was the same argument among other points that Horace Mann was to make 30 years later when he spearheaded the common school movement.) Rush's curriculum emphasized reading, writing, and arithmetic at the elementary school level; English, German, the arts, and especially the sciences at the secondary and college level; and good manners and moral principles from the beginning to the end of the educational sequence.

Jefferson: Education for Citizenship

Faith in the agrarian society and distrust toward the proletariat of the cities were basic in Thomas Jefferson's (1743–1826) idea of democracy. A man of wide-ranging interests that embraced politics, agriculture, science, and education, Jefferson assumed the state had the responsibility to cultivate an educated and liberated citizenry to ensure a democratic society. In "A Bill for the More General Diffusion of Knowledge," introduced in the Virginia legislature in 1779, Jefferson advocated a plan that provided educational opportunities for both common people and landed gentry "at the expense of all."[18] To Jefferson, formal education was largely a state or civic concern, rather than a matter reserved to religious or upper-class groups. Schools should be financed through public taxes.

Jefferson's plan subdivided the counties of Virginia into wards, each of which would have a free elementary school to teach reading, writing, arithmetic, and history. His proposal also provided for the establishment of twenty grammar schools at the secondary level, for which gifted students who could not afford to pay tuition

would be provided scholarships. There, the students would study Latin, Greek, English, geography, and higher mathematics. Upon completing grammar school, half the scholarship students would be assigned positions as elementary or ward school teachers. The ten scholarship students of highest achievement would attend William and Mary College. Jefferson's plan promoted the idea of school as a selective agency to identify bright students for continuing education, as well as the traditional idea of equality of opportunity for economically less fortunate students.

Neither Jefferson's proposal for Virginia nor Rush's proposal for Pennsylvania was enacted. Nonetheless, the bills indicate the type of educational theorizing characteristic of the young nation. Coupled with Franklin's academy, and its practical curriculum based on business and commercial principles of education rather than classical and religious principles, these bills demonstrated the purpose of education to be to promote good citizenship, social progress, and utilitarianism. The classical curriculum and religious influence were, in effect, beginning to decline. Rush and Jefferson (and to a lesser extent Franklin) were all concerned with equality of educational opportunity—that is, they proposed universal education for the masses of children and youth, and methods for identifying students of superior ability, who were to receive free secondary and college educations at public expense.

Webster: Schoolmaster and Cultural Nationalism

The United States differed from most new countries struggling for identity in that it lacked a shared cultural identity and national literature. In its struggle against the "older" cultures and "older" ideas, the new nation went to great lengths to differentiate itself from England.[19] Noah Webster (1758–1843) called passionately upon his fellow Americans to "unshackle [their] minds and act like independent beings. You have been children long enough, subject to the control and subservient to the interests of a haughty parent. . . . You have an empire to raise . . . and a national character to establish and extend by your wisdom and judgment."[20]

In 1789, when the Constitution went into effect as the law of the land, Webster argued that the United States should have its own system of "language as well as government." The language of Great Britain, he reasoned, "should no longer be our standard; for the taste of her writers is already completed, and her language on the decline."[21] By the act of revolution, the American people had declared their political independence from England, and now they needed to declare their cultural independence as well.

Realizing that a sense of national identity was conveyed through a distinctive national language and literature, Webster set out to reshape the English language used in the United States. He believed that a uniquely American language would (1) eliminate the remains of European usage, (2) create a uniform American speech that would be free of localism and provincialism, and (3) promote self-conscious American cultural nationalism.[22] The creation of an American language would become the linguistic mortar or national union; it would, however, have to be phonetically simple to render it more suitable to the common people.

Webster directly related the learning of language to organized education. As they learned the American language, children also would learn to think and act as Americans. The American language that Webster proposed would have to be taught deliberately and systematically to the young in the nation's schools. Because the curriculum of these Americanized schools would be shaped by the books that the students read, Webster spent much of his life writing spelling and reading books. His *Grammatical Institute of the English Language* was published in 1783. The first part of the *Institute* was later printed as *The American Spelling Book,* which was widely used throughout the United States in the first half of the nineteenth century.[23] Webster's *Spelling Book* went through many editions; it is estimated that 15 million copies had been sold by 1837. Webster's great work was *The American Dictionary,* which was completed in 1825 after twenty-five years of laborious research.[24] Often termed the "schoolmaster of the Republic,"

Noah Webster was an educational statesman of the early national period whose work helped to create a sense of American language, identity, and nationality.

McGuffey: The Reader and American Virtues

William Holmes McGuffey (1800–1873), who taught most of his life in Ohio colleges, also entered the debate on American cultural nationalism. The author of America's most popular textbooks of the period, called the *Readers*, McGuffey acknowledged with respect and gratitude America's "obligations to Europe and the descendants of the English stock" in science, art, law, literature, and manners. America had made its own contributions to humankind, however; they "were not literary or cultural, but moral and political." The seeds of popular liberty "first germinated from our English ancestors, but it shot up to its fullest heights in our land."[25] America had furnished to Europe proof that "popular institutions, founded on equality and the principle of representation, are capable of maintaining governments," that it was practical to elevate the masses, what Europe called the laboring and lower class, "to the great right and great duty of self-government."[26] Thus, McGuffey balanced the cultural indebtedness of the country with its political and social promise, the full realization of liberalism and traditions of the American common folk.

It is estimated that over 120 million copies of McGuffey's five *Readers* were sold between 1836 and 1920.[27] What McGuffey did was to combine the virtues of the Protestant faith with those of rural America—patriotism, heroism, hard work, diligence, and virtuous living. The tone was moral, religious, capitalistic, and pro-American; the selections of American literature included orations by George Washington, Patrick Henry, Benjamin Franklin, and Daniel Webster. Through his *Readers*, McGuffey taught several generations of Americans. He also provided the first graded *Readers* for our schools and paved the way for a graded system, which had its beginnings in 1840. So popular were his *Readers*, and so vivid and timeless his patriotism and faith in American institutions—home, work, church, and nationhood—that many of his *Readers* (also his *Pictorial Primer*) have been reintroduced today in some rural, conservative, and/or fundamentalist schools. See Curriculum Tips 3.1.

NINETEENTH-CENTURY EUROPEAN EDUCATORS

Even though much criticism was leveled against European thought, American education was greatly influenced by it. At the college level, German educators influenced the fields of natural science, psychology, and sociology; many of our research-oriented universities were based on the German model. At the public school level, K-12, German (and Swiss) thought introduced romantic and progressive ideas—and a curriculum and instructional method that were psychologically oriented and considered the needs and interests of the students. The English also affected American education by providing models of schooling that ranged from efficient to romantic.

However strongly American patriots may have desired a distinctive cultural life, they could not, as men and women of common sense and learning, turn their backs on the wealth and wisdom of European ideas. Moreover, the rising current of educational thought in the Old World was not all steeped in old-fashioned and classical ideas, because progressive and scientific principles were beginning to evolve.

The theme of reform characterized much of the educational discussions of the time. The limitations of the "traditional curriculum and typical school of this era were recognized by educational leaders in Europe and America, and many of the features that were now firmly established in [curriculum] theory and practice can be traced to the ideas of the men and women who were ahead of their time."[28] The traditional curriculum, which emphasized Latin, Greek, and the classics, was de-emphasized. New pedagogical practices were developed that ran contrary to the methods of rote learning, memorization, and corporal punishment.

Pestalozzi: General and Special Methods

During the early American period of education, educational reformers were influenced by Johann

CURRICULUM TIPS 3-1 The Need for Historical Perspective

All professional educators, including curriculum specialists, need a historical perspective to integrate the past with the present. Not only does an understanding of history help us not repeat the mistakes of the past, but it also better prepares us for the present, both in terms of the abstract and real world.

There are many other reasons to have an understanding of history and the history of education:

1. The development of ideas in education is part of our intellectual and cultural heritage.
2. Our notion of an educated person (or professionally literate person) is too narrow and technical; we need to expand the idea that an educated person (or professional person) is one who is steeped in an understanding in the humanities and social sciences, which stems from history.
3. A discussion of various theories and practices in education requires an understanding of historical (as well as philosophical, psychological, and social) foundations.
4. An understanding of historical foundations in education helps us integrate curriculum, instruction, and teaching.
5. History can be studied for the purpose of understanding current pedagogical practices.
6. In developing a common or core curriculum, a historical perspective is essential.
7. With a historical perspective, curriculum specialists can better understand the relationship between content and process in subject areas.
8. Through the use of history, especially case examples, we have more opportunity to add a moral dimension to our academic education.
9. The history of education permits practitioners to understand relationships between what students have learned (past) and what they are learning (in the present).
10. The study of education history is important for its own theoretical and research purposes.

Heinrich Pestalozzi (1746–1827), a Swiss educator. According to one educational historian, "Pestalozzi, probably more than any other educational reformer, laid the basis for the modern elementary school and helped to reform elementary-school practice."[29] Pestalozzi maintained that the educational process should be based on the natural development of the child and his or her sensory influences—similar thinking to that of current progressives and environmentalists. Pestalozzi's basic pedagogical innovation was his insistence that children learn through the senses rather than with words. He labeled rote learning as mindless, and he emphasized instead linking the curriculum to children's experiences in their homes and family lives.

Education, according to Pestalozzi, was to develop by considering the "general" method and "special" method. The general method called for educators, who were loving persons, to provide emotional security, trust, and affection for the children. The special method considered the auditory and visual senses of the children in the teaching process. To this end, Pestalozzi devised the "object" lesson, in which children studied common objects that they saw and experienced in their daily environments—plants, rocks, artifacts, and so on. The object lesson enhanced three types of learning—form, number, and sound. Children would first determine the form of the object, then draw it, then name it. From the lessons in form, number, and sound came more formal instruction in the three Rs.

Pestalozzi's ideas had great impact on early nineteenth-century American education. William McClure and Joseph Neef, and later Horace Mann and Henry Barnard, when the latter was U.S. Commissioner of Education, all worked to introduce his ideas into American schools.[30] His basic concepts of education became part of progressive schooling and later appeared in the move for curriculum relevancy and humanistic curriculum. When educators discovered the "disadvantaged" in the 1960s and later promoted the ideas of Project Head Start and compensatory education, Pestalozzi's theories had special imprint.

Froebel: The Kindergarten Movement

Friedrich Froebel (1782–1852), a German educator, is known for his development of the kindergarten, what he called the "child's garden." Froebel formulated his educational principles around 3- and 4-year-old children; he believed that their schooling should be organized around play and individual and group interests and activities. This suggested a less formal and lockstep curriculum—one based on love, trust, and freedom, as well as the child's self-development.

Froebel's kindergarten was a prepared environment in which learning was based on the children's self-activities and self-development and on the children's trust and affection along the lines of Pestalozzi. Songs, stories, colorful materials, and games—what classical curriculum advocates would criticize as wasteful—were part of the formal curriculum. The children could manipulate objects (spheres, cubes, and circles), shape and construct materials (clay, sand, cardboard), and engage in playful activities (build castles and mountains, run and exercise).[31] Together these activities were to comprise the learning environment and provide a secure and pleasant place where children could grow naturally.

The kindergarten concept was brought to America by German immigrants, and the first American kindergarten was established in Watertown, Wisconsin, in 1855 by Margaret Schurz. William Harris, Superintendent of Schools in St. Louis, Missouri, and later U.S. Commissioner of Education, was instrumental in implementing the idea on a broader scale. The kindergarten is now an established part of American education, and many of Froebel's ideas of childhood experiences and methods of play are incorporated into current theories of early childhood education and progressive schooling.

Herbart: Moral and Intellectual Development

A famous German philosopher, Johann Freidrich Herbart (1776–1841), maintained that the chief aim of education was moral education, and that the traditional curriculum was too rigid and limited for this purpose. The need was to expand curriculum offerings and educate the good person who had diversified interests and a balanced perspective on life. Herbart specified two major bodies of subject matter: knowledge interests and ethical interests. Knowledge interests involved empirical data, factual data, and theoretical ideas; ethical interests involved personal convictions, benevolence, and regard for the social welfare of others, justice, and equity. Herbart wanted history, English, mathematics, and science integrated into all stages and grade levels of the curriculum. He also introduced the idea of *correlation* of all subjects to integrate the curriculum, an idea that influenced curriculum specialists who favored a core curriculum in the 1940s and 1950s.

Herbart was influential in integrating the techniques of instruction with learning, whereby the teacher would address the needs and interests of the students. It was a psychological process and involved the following:

1. *Preparation:* The teacher considers previous learning experiences and stimulates readiness of the learner.
2. *Presentation:* The new lesson is introduced.
3. *Association:* The new lesson is related to ideas or materials previously studied.
4. *Systemization:* Rules, principles, or generalizations of the new ideas are mastered by the learner.
5. *Application:* The new lesson is given meaning by testing and applying the new ideas to pertinent problems or activities.[32]

Speaking of Herbart's contribution to the instruction of teaching, John Dewey said: "Few attempts have been made to formulate a method, resting on general principles, of conducting a recitation. One of these is of great importance, and has probably had more influence upon the learning of lessons than all others put together; namely, the analysis by Herbart of a recitation into five successive steps."[33]

Herbart's formal steps of instruction were not only adopted by classroom teachers, they were applied to teacher training as well. In theory, teachers were asked to prepare their lessons by thinking of five steps and asking: What do my

students know? What questions should I ask? What events should I relate? What conclusions should be reached? How can students apply what they have learned? To a large extent, these instructional principles influenced the teaching-learning principles Dewey expressed in *How We Think*; they still serve as guidelines for teachers who use the developmental lesson approach.

Spencer: Utilitarian and Scientific Education

Herbert Spencer (1820–1903) was an English social scientist who based his ideas of education on Charles Darwin's theories of biological evolution and survival of the fittest. Spencer maintained that social development takes place according to the evolutionary process by which simple societies had evolved to more complex social systems, characterized by an increased variety of specialized professions and occupations.[34] Because of the laws of nature, only intelligent and productive populations would adapt to environmental changes. Less intelligent, weak, or lazy people would slowly disappear. The doctrine had immense implications for education based on excellence, the notion of social-economic progress, and the idea of intellectual development based on heredity.

Spencer also criticized religious doctrines and classical subject matter in education as nonscientific and unrelated to contemporary society. Rather, he advocated a curriculum fit for industrialized society—one that was scientific and practical (utilitarian). He believed that traditional schools were impractical and ornamental, a luxury for the upper class that failed to meet the needs of the people living in modern society.

For Spencer, the major purpose of education was to "prepare for complete living." Curriculum needed to be arranged according to this purpose. Spencer constructed a curriculum by prioritizing human activities so as to advance human survival and progress. His curriculum included the following activities, in order of importance: activities that (1) sustain life, (2) enhance life, (3) aid in rearing children, (4) maintain one's social and political relations, and (5) enhance leisure, tasks, and feelings.[35]

In his famous essay, "What Knowledge Is Most Worth?," Spencer argued that science was the most practical subject for the survival of the individual and society, yet it occupied minimal space in the curriculum because impractical and ornamental traditions prevailed. Spencer also maintained that students should be taught how to think (or problem solve) and not what to think.[36]

Although many of Spencer's ideas about religion, evolution, and social progress created a furor—and they still do among religious and political observers today—the ideas fitted well with those of thinkers in the second half of the nineteenth century, which was characterized by industrial growth, colonial expansion, and manifest destiny among European countries and the United States. Spencer's notion of discovery learning also influenced twentieth-century curricularists, both Deweyite progressive educators and later academic disciplinary educators. His demand for a curriculum steeped in science and linked with political survival and economic competition had special meaning during the Cold War-Sputnik era and still does—in light of present-day competition with Japan, Korea, and Germany.

THE RISE OF UNIVERSAL EDUCATION: 1820–1920

During the early nineteenth century America expanded westward. Life on the new frontier deepened America's faith in the common or average person, who built the new nation. Equality and rugged individualism were important concepts, expressed in the Declaration of Independence and reaffirmed by Westerners, who believed that all people were important and that in order to survive each had a job to do—despite different backgrounds. The common person, whether educated or not, was elected to various political offices; faith abounded in the capacity of humans to improve their lives. This kind of faith in the common people and in American civilization underscored to the frontier people the necessity of school.[37]

In the cities of the East, especially among the immigrant populations, there was also faith in the common person, in social mobility, and in the American dream of life, liberty, and equality. The upper class may not have had the same faith;

nonetheless, the traditional argument (since Franklin, Rush, and Jefferson)—that mass education was necessary for intelligent participation in political democracy and that it must extend beyond the common school to high schools and colleges—helped convert the American populace to supporting free schooling.

Monitorial Schools

The monitorial school was a European invention, based on Joseph Lancaster's model of education. It spread quickly to the large American urban centers, where the immigrant population was increasing, and to the frontier, where there was need for a system of schools. Its attraction, in the 1820s and the following decades, was its economy and efficiency: Bright student monitors served as instructors. The teacher taught the lesson to the monitors (high-achieving students) and they in turn presented the materials to their classmates—what some observers today might call "cooperative learning." The instruction was highly structured, and it was based on rote learning and drilling the three Rs.

Proponents of such teaching stressed that besides its economy, it kept potentially idle students busy while the teacher was occupied with other students. The class was divided into smaller groups, with a monitor in charge of each group. The students were kept actively involved in practice and drill activities and moved along at their own pace. Teachers were freed from some of their instructional chores and permitted to adopt new instructional roles—but mostly as inspectors and supervisors. The monitorial system was thus also considered "efficient" education.[38]

The monitorial system deemphasized classical education for the three Rs and religious theory for moral doctrines and citizenship, demonstrated the need for and possibility of systematic instruction, acquainted many people with formal education, and made educational opportunities more widely available. Most important, it promoted mass education and tax-supported elementary schools.[39] At the peak of its popularity, in the 1840s, it was organized in some high schools and suggested for the colleges.

But the monitorial system was considered too mechanical, and it was criticized for using students who knew little to teach those who knew even less. By the middle of the nineteenth century, its popularity waned. One hundred years later, however, the virtues of mechanical education resurfaced with the notion of programmed instruction. Instruction through self-pacing and drill could now be measured.

Common Schools

The common school was established in 1826 in Massachusetts, when the state passed a law requiring every town to choose a school board to be responsible for all the schools in the local area. Eleven years later, the Massachusetts legislature created the first state board of education, and Massachusetts organized the public common schools under a single authority. Connecticut quickly followed the example of its neighbor.[40] These common schools were devoted to elementary education with emphasis on the three Rs. The movement was spearheaded by Horace Mann and rooted in the ideas of progressive thought.

As a member of the Massachusetts legislature and later as the first Massachusetts Commissioner of Education, Horace Mann skillfully rallied public support for the common school by appealing to various segments of the population. To enlist the business community, Mann sought to demonstrate that "education has a market value" with a yield similar to "common bullion." The "aim of industry . . . and wealth of the country" would be augmented "in proportion to the diffusion of knowledge."[41] Workers would be more diligent and more productive. Mann also established a stewardship theory, aimed at the upper class, that the public good would be enhanced by public education. Schools for all children would create a stable society in which people would obey the laws and add to the nation's political and economic well-being. To the workers and farmers, Mann asserted that the common school would be a great equalizer, a means of social mobility for their children. To the Protestant community, he argued that the common school would assimilate ethnic and religious groups, promote a common culture, and help immigrant children learn English and the customs and laws of the land.[42] He was convinced that the

common school was crucial for the American system of equality and opportunity, for a sense of community to be shared by all Americans, and for the promotion of a national identity.

Although the pattern for establishing common schools varied among the states, and the quality of education varied as well, the foundation of the American public school was being forged through this system. The schools were common in the sense that they housed youngsters of all socioeconomic and religious backgrounds, from age 6 to 14 or 15, and were jointly owned, cared for, and used by the local community. Because a variety of subjects was taught to children of all ages, teachers had to plan as many as ten to twenty different lessons a day.[43] Teachers also had to try to keep their schoolrooms warm in the winter—a responsibility shared by the older boys, who cut and fetched wood—and cool in the summer. Schoolhouses were often in need of considerable repair, and teachers were paid miserably low salaries.

In New England, the state legislatures encouraged the establishment of school districts and elected school boards and state laws to govern the schools. But it was on the frontier where the common school flourished, where there was faith in the common person and a common destiny. The common one-room schoolhouse "eventually led to one of America's most lasting, sentimentalized pictures—the 'Little Red Schoolhouse'. . . in almost every community." It had problems and critics, but it symbolized the pioneers' spirit and desire to provide free education for their children. "It was a manifestation of the belief held by most of the frontier leaders that a school was necessary to raise the level of American civilization."[44]

This small school, meager in outlook and thwarted by inadequate funding and insufficient teachers, nevertheless fit with the conditions of the American frontier—of expansion and equality. It was a "blab school," according to Abe Lincoln, but it was the kind of school in which the common person's children—even those born in log cabins—could begin their "readin," "writin," and "cipherin,"[45] and could advance to limitless achievements. It was a school local citizens could use as a polling place, a center for Grange activities, a site for dances, and a location for community activities; it was a school controlled and supported by the local community.

The traditions built around the common school—the idea of neighborhood schools, local control of schools, and government support of schools—took a firm hold on the hearts and minds of Americans. America's confidence in the common school helped fashion the public schools later in the nineteenth century; it also influenced our present system of universal education.

The Elementary School Curriculum Evolves. There was no agreement on an appropriate or common curriculum for the elementary school. The trend, throughout the nineteenth century, was to add courses to the essential or basic subjects of reading, spelling, grammar, and arithmetic. Religious doctrine changed to "manners" and "moral" instruction by 1825; the subject matter of textbooks was heavily moralistic (one reason for the popularity of McGuffey), and teachers provided extensive training in character building. By 1875 lessons in morality were replaced by courses in "conduct," which remained part of the twentieth-century curriculum. The traditional emphasis on curriculum was slowly altered, as more and more subjects were added—including geography and history by 1850; science, art (or drawing), and physical education by 1875; and nature study (or biology and zoology), music, and home and manual training by 1900. Table 3-1 shows this evolution of the elementary school curriculum.

Secondary Schools

The common school created the basis for a tax-supported and locally controlled elementary school education. The American high school was established on this base. By 1900 the majority of children aged 6 to 13 were enrolled in public elementary school, but only 11.5 percent of those aged 14 to 17 were enrolled in public secondary schools (and only 6.5 percent of the 17-year olds graduated). As shown in Table 3-2, not until 1930 did the secondary school enrollment figure exceed 50 percent. By 1970, the percentage of elementary aged children attending school was 98

TABLE 3-1 Evolution of the Elementary School Curriculum, 1800–1900

1800	1825	1850	1875	1900
Reading	*Reading*	*Reading*	*Reading*	*Reading*
	Declamation	*Declamation*	Literary selections	*Literature*
Spelling	*Spelling*	*Spelling*	*Spelling*	Spelling
Writing	Writing	*Writing*	*Penmanship*	Writing
Catechism	Good behavior	Conduct	Conduct	Conduct
Bible	Manners and morals	Manners.		
Arithmetic	*Arithmetic*	*Mental arithmetic*	*Primary arithmetic*	*Arithmetic*
		Ciphering	*Advanced arithmetic*	
	Bookkeeping	Bookkeeping		
	Grammar	*Grammar*	*Grammar*	Grammar
		Elementary language	Oral language	*Oral language*
	Geography	Geography	Home geography	Home geography
			Text geography	*Text geography*
		U.S. history	U.S. history	History studies
			Constitution	
		Object lessons	Object lessons	Nature study
			Elementary science	Elementary science
			Drawing	Drawing
				Music
			Physical exercises	Physical training
	Sewing			Play
				Sewing
				Cooking
				Manual training

Source: From E. P. Cubberley, *The History of Education* (Boston: Houghton Mifflin, 1920), p. 756.
Note: Italics indicate the most important subjects.

percent, and the percentage of secondary aged children was 94 percent (and 75 percent were graduating). The great enrollment revolution for elementary schools took place between 1850 and 1900; for high schools it evolved between 1900 and 1970. Since the 1980s to the present, enrollment percentages have leveled off—and are beginning to gradually decline.

The Academy

In the early nineteenth century, the academy began to replace the Latin grammar school; by the middle of the century, it was dominant. It offered a wide range of curricula, and it was designed to provide a practical program (for terminal students) as well as a college preparatory course of study. By 1855 more than 6,000 academies had an enrollment totalling 263,000 students[46] (more than two-thirds of the total secondary school enrollment of that period).

"One of the main purposes" of the academy, according to Ellwood Cubberley, "was the establishment of . . . subjects having value aside from mere preparation for college, particularly subjects of modern nature, useful in preparing youth for the changed conditions of society. The study of real things rather than words about things, and useful things rather than subjects merely preparatory to college became prominent features of the new course of study."[47]

By 1828 as many as fifty different subjects were offered by the academies of the state of New York. The top fifteen, in rank order, were: (1) Latin, (2) Greek, (3) English grammar, (4) geography, (5) arithmetic, (6) algebra, (7) composition and declamation, (8) natural philosophy, (9) rhetoric, (10) philosophy, (11) U.S. history, (12) French, (13) chemistry, (14) logic, and (15) astronomy. By 1837, the state Board of Regents reported seventy-two different subjects.[48]

TABLE 3-2 Percentage of Students Enrolled in Secondary School and College, 1900–1980

	14-TO 17-YEAR-OLDS ENROLLED IN SECONDARY SCHOOL	17-YEAR-OLDS GRADUATING HIGH SCHOOL	18-TO 21-YEAR-OLDS ENROLLED IN COLLEGE
1900	11.5	6.5	3.9
1910	15.4	8.8	5.0
1920	32.3	16.8	7.9
1930	51.4	29.0	11.9
1940	73.3	50.8	14.5
1950	76.8	59.0	26.9
1960	86.1	65.1	31.3
1970	93.4	76.5	45.2
1980	93.7	74.4	46.3
1990[a]	92.8	72.6	47.1

Source: From *Digest of Educational Statistics, 1982, 1985–1986, 1989* (Washington, D.C.: U.S. Government Printing Office, 1982, 1986, 1989), Table 35, p. 44; Table 9, p. 11. Tables 6, 49, pp. 13,62; *Projections of Education Statistics 1992–1993* (Washington, D.C.: U.S. Government Printing Office, 1988), Table 15, p. 19.
[a]Projections based on governmental sources.

Although no typical academy existed, with so many different course offerings, the academy inadvertently served the major function of preparing students for college. The traditional curriculum, or the classical side of the academy, continued in the new setting. Writes Elmer Brown, "The college preparatory course was the backbone of the whole system of instruction" in the better academies. Although practical courses were offered, "it was the admission requirements of the colleges, more than anything else, that determined their standards of scholarship."[49] And, writes Paul Monroe, "The core of academy education yet remained the old classical curriculum . . . just as the core of the student body in the more flourishing academies remained the group preparing for college."[50]

The era of the academies extended to the 1870s, when academies were replaced by public high schools. The academies, nevertheless, served as finishing schools for young ladies—with courses in classical and modern language, science, mathematics, art, music, and homemaking. Also, they offered the "normal" program for prospective common school teachers by combining courses in the classics with principles of pedagogy. A few private military and elite academic academies still exist today.

The High School

Although a few high schools existed in the early half of the nineteenth century (the first one was founded in 1821 in Boston), the high school did not become a major American institution until after 1874, when the Michigan court ruled, in the Kalamazoo decision, that the people could establish and support high schools with tax funds if they consented. There was some initial resistance—the fear that the taxes for the high schools would only benefit a small portion of the youth population—but after the court decision, the high school spread rapidly and compulsory attendance laws were established on a state-by-state basis. The idea of high school attendance for all youth, based on the notion of equality of educational opportunity, was a major educational reform.

Students were permitted to attend private schools, but the states had the right to establish minimum standards for all. By 1890, the 2,525 public high schools in the United States enrolled

more than 200,000 students, compared to 1,600 private secondary schools, which had fewer than 95,000 students. By 1900 the number of high schools had soared to 6,000, while the number of academies had declined to 1,200.[51] The public high school system, contiguous with common schools, had evolved. Although as late as 1900 the high schools were still attended by only a small percentage of the total youth population, the inclusion of terminal and college preparatory students as well as rich and poor students under one roof was evidence that the American people had rejected the European dual system of secondary education. Fifty years later, when the American high school had fully evolved, James Conant was to present his argument for the comprehensive high school on the basis that it integrated all types of learners and helped eliminate class distinctions. The comprehensive high school provided curriculum options for all students.

The high schools stressed the college preparatory program, but they also served to complete the formal education of terminal students. They offered, in addition, a more diversified curriculum than the academies. At the turn of the century, high schools began to offer vocational and industrial courses as well as commercial and clerical training courses. Despite all their problems and criticisms, the public high schools evolved into democratic and comprehensive institutions for social and political reform. They produced a skilled workforce in an expanding industrial economy, and they assimilated and Americanized millions of immigrant children in our cities. They emphasized that our society, unlike most others, could afford to educate the masses of 14 to 18 year olds. When the high school became a dominant institution, a student could attend a publicly supported and supervised institution from age 5 to 18. The high school, moreover, was a bridge to college and the university.

The Secondary School Curriculum Evolves. The curriculum of the Latin grammar school was virtually the same at the beginning and end of the colonial period. Table 3-3 lists the most popular courses. As indicated, Latin, Greek, arithmetic, and the classics were stressed. The academy introduced greater variation—courses for practical studies, for example—in the curriculum. By 1800, the academy offered about twenty-five different subjects (the table lists the seventeen most popular courses). Between 1850 and 1875, the peak period of the academy, estimates are that some 150 courses were offered.[52] The fifteen most popular ones in rank order were as follows: (1) algebra; (2) higher arithmetic; (3) English grammar; (4) Latin: (5) geometry; (6) U.S. history; (7) physiology; (8) natural philosophy; (9) physical geography; (10) German; (11) general history; (12) rhetoric; (13) bookkeeping; (14) French; and (15) zoology.[53]

There was no real philosophy or aim to these courses, except that most were college preparatory in nature, even though the original aim of the academy was to offer a practical program. It was believed then that a broad program with several course offerings was the hallmark of a better academy. The curriculum just expanded.[54]

After 1875, the high school rapidly grew and the academy rapidly declined. The secondary courses listed in Table 3-3 between 1875 and 1900 were high school courses. The curriculum continued to expand. The great variety in course offerings would allegedly allow the students to find where their interests and capabilities might be.[55] See Curriculum Tips 3-2.

THE TRANSITIONAL PERIOD: 1893–1918

From the colonial period until the turn of the twentieth century, the traditional curriculum, which emphasized classical studies for college-bound students, dominated at the elementary and secondary levels. The rationale for this emphasis was that the classics were difficult, and were thus the best source for intellectualizing and for developing mental abilities (a view later supported by the mental discipline approach to learning). The more difficult the subject and the more the students had to exercise their minds, the greater the subject's value. Such ideas of knowledge and subject matter, as well as mental rigor, were rooted in the philosophy of perennialism.

Along with the classics, more and more subjects were added to the curriculum. As a result the need was growing to bring some unity or a pattern for curriculum organization out of the

TABLE 3-3 Evolution of Secondary School Curriculum, 1800–1900

1800–1825	1825–1850	1850–1875	1875–1900
	Latin Grammar School		
Latin	Latin		
Greek	Greek		
Arithmetic	Arithmetic		
Classical literature	Classical literature		
	Ancient history		
	Academy and High School		
Latin	Latin	Latin	Latin
Greek	Greek	Greek	Greek†
Classical literature	Classical literature	English literature	English literature
Writing*	Writing*	Composition*	Composition*
Arithmetic*	Arithmetic*	Arithmetic*	Arithmetic*
		Higher arithmetic	
Geometry	Geometry	Geometry	Geometry
Trigonometry	Trigonometry	Trigonometry	Trigonometry
	Algebra	Algebra	Algebra
Bookkeeping*	Bookkeeping*	Bookkeeping*	Bookkeeping*†
English grammar	English grammar	English grammar	English
Rhetoric	Rhetoric	Rhetoric	Rhetoric*
Oratory	Oratory†		
	Debating	Debating†	
Surveying*	Surveying*		
Astronomy*	Astronomy*	Astronomy	Astronomy*
Navigation*	Navigation*†		
Geography	Geography	Physical geography	Physical geography†
	Natural philosophy	Natural philosophy†	
		Meteorology	Meteorology†
		Chemistry	Chemistry
		Physiology	Physiology†
			Health education
		Botany	Botany†
		Zoology	Zoology†
			Biology
			Physics
Foreign language* (French, Spanish, German)	Foreign language* (French, Spanish, German)	Foreign language (French, Spanish, German)	Foreign language (French, Spanish, German, Italian)
Philosophy	Philosophy	Mental philosophy	
		Moral philosophy†	
	History	General history†	World history
	Greek history	Greek history†	Ancient history

(continued)

TABLE 3-3 Continued

1800–1825	1825–1850	1850–1875	1875–1900
	U.S. history	U.S. history	U.S. history
			Civil government
			Political economy
			Manual training*
			Home economics*
			Agriculture*
			Music
			Art
			Physical education

Source: Adapted from Calvin Davis, *Our Evolving High School Curriculum* (New York: World Book, 1927), p. 38; Committee of Ten, *Report of the Committee on Secondary Studies* (Washington, D.C.: National Education Association, 1893), p. 4; Newton Edwards and Herman G. Richey, *The School in the American Social Order*, 2nd ed. (Boston: Houghton Mifflin, 1963), p. 250; and Gerald R. Firth and Richard D. Kimpston, *The Curricular Continuum in Perspective* (Itasca, Ill.: Peacock, 1973), pp. 102–104.
*Considered as part of practical studies.
†All but disappeared; limited enrollments.

chaotic and confused situation, especially at the secondary level, where subject matter was expanding the most. According to two educators, "subjects taught varied from school to school. There was no uniformity as to time allotments, and grade placements of topics or subjects pursued" differed from school to school.[56]

A companion problem existed. Most children, even as late as the turn of the century, completed their formal education at the elementary school level, and those students who did go to secondary schools usually ended their formal education upon graduation. As late as 1890, only 14.5 percent of the students enrolled in high school were preparing for college, and less than 3 percent went on to college.[57] Hence, the needs of more than 85 percent of these students were still being overlooked for only the top 15 percent; the discrepancy was more lopsided if the college track was considered. Reformers began to question the need for two curriculum tracks at the elementary level—one for high school-bound and the other for nonhigh school-bound children—the dominance of college over the high school, and the emphasis on mental discipline and the classics.

Reaffirming the Traditional Curriculum: Three Committees

With these unsettled questions as background, the National Education Association (NEA) organized three major committees between 1893 and 1895: the Committee of Fifteen on Elementary Education, the Committee of Ten on Secondary School Studies, and the Committee on College Entrance Requirements. These committees were to determine the specifics of the curricula for these schools. Their reports "standardized" the curriculum for much of this century. In the words of Ellwood Cubberley, "The committees were dominated by subject-matter specialists, possessed of a profound faith in mental discipline." No concern for student "abilities, social needs, interest, or capabilities . . . found a place in their . . . deliberations."[58]

The Committee of Fifteen. The Committee of Fifteen was heavily influenced by Charles Eliot, president of Harvard University, who had initiated vigorous discussion on the need for school reform in the years preceding, and by William Harris, then the U.S. Commissioner of Education, a staunch perennialist, who believed in strict

CURRICULUM TIPS 3-2 Process of Historical Research

How does one go about conducting historical research? For students, teachers, and historians alike, the six suggestions below should have meaning and value regarding how to go about doing historical research.

1. Define a problem or an issue that has roots in the past, or attempt to recreate a historical event and give it meaning.
2. Use primary sources (documents and other printed or written evidence) that relate to the event or problem and that were part of the context in which it occurred.
3. Use secondary sources (literature after the event occurred) that historians have developed to interpret it.
4. Based on the examination of authentic primary and secondary sources, recreate an event, a life, or a situation from the past; interpret that event to give it meaning for people in the present.
5. Use history, especially case examples or case studies, to add a moral dimension to our teaching.
6. Do not try to rewrite history; it is to be explained or reinterpreted to add meaning.

Source: Adapted from Gerald Gutek, unpublished materials, January 1992.

teacher authority and discipline. Both Eliot and Harris wanted the traditional curriculum to remain intact. Eliot's plan, which was adapted by the Committee, was to reduce the elementary grades from ten to eight. The Committee stressed the three Rs, as well as English grammar, literature, geography, and history. Hygiene, culture, vocal music, and drawing were given 60 minutes, or one lesson, per week. Manual training, sewing, and/or cooking, as well as algebra and Latin, were introduced in the seventh and eighth grades.

In general, the Committee resisted the idea of newer subjects and the principles of pedagogy or teaching that had characterized the reform movement of the European pioneers since the early 1800s. The Committee also rejected the idea of kindergarten and the idea that the children's needs or interests should be considered when planning the curriculum.[59] Any idea of interdisciplinary subjects or curriculum synthesis was rejected. Isolation of each branch of knowledge, or what John Dewey, in *Democracy and Education,* and Ralph Tyler, in *Basic Principles of Curriculum and Instruction,* later referred to as "compartmentalization" of subject matter, was considered the norm; it still is today in most schools.

The Committee of Ten. The Committee of Ten was the most influential of the three committees. Its recommendations best illustrate the tough-minded, mental discipline approach supported by Eliot, who was the chair. The Committee identified nine academic subjects as central to the high school curriculum. As shown in Table 3-4, they were: (1) Latin; (2) Greek; (3) English; (4) other modern languages; (5) mathematics (algebra, geometry, trigonometry, and higher or advanced algebra); (6) physical sciences (physics, astronomy, and chemistry); (7) natural history or biological sciences (biology, botany, zoology, and physiology); (8) social sciences (history, civil government, and political economy); and (9) geography, geology, and meteorology.

The Committee recommended four different programs or tracks: (1) classical; (2) Latin scientific; (3) modern languages; and (4) English. The first two required four years of Latin; the first program emphasized English (mostly classical) literature and math, and the second program, math and science. The modern language program required four years of French or German (Spanish was considered not only too easy, but also not as important a culture or language as French or German). The English program permitted four years of either Latin, German, or French. Both of

TABLE 3-4 Secondary School Programs and Subjects Proposed by Committee of Ten, 1893

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
Latin	5 p.*	Latin	4 p.	Latin	4 p.	Latin	4 p.
English Literature 2 p. English Composition 2 p.	4 p.	Greek	5 p.	Greek	4 p.	Greek	4 p.
German [or French]	5 p.	English Literature 2 p. English Composition 2 p.	4 p.	English Literature, 2 p. English Composition, 1 p. Rhetoric, 1 p.	4 p.	English Literature 2 p. English Composition 1 p. Grammar, 1 p.	4 p.
Algebra	4 p.	German continued French, begun	4 p.	German	4 p.	German	4 p.
History of Italy, Spain, and France	3 p.	Algebra,* 2 p. Geometry 2 p.	5 p.	French	4 p.	French	4 p.
Applied Geography (European political-continental and oceanic flora and fauna)	4 p.	Botany or Zoology English History to 1688	4 p. 3 p.	Algebra,* 2 p. Geometry, 2 p.	4 p.	Trigonometry Higher Algebra	2 p.
	25 p.		33 p.	Physics	4 p.	Chemistry	4 p.
				History, English and U.S.	3 p.	History (intensive) and Civil Government	3 p.
				Astronomy, 3 p. 1st 1/2 yr. Meterology, 3 p. 2nd 1/2 yr.	3 p. 3 p.	Geology or Physiography, 4p. 1st 1/2 yr. Anatomy, Physiology, and Hygiene, 4 p. 2nd 1/2 yr.	4 p.
					34 p.		33 p.

Source: From Committee of Ten, *Report of the Committee of Ten on Secondary School Studies* (Washington, D. C.: National Educational Association, 1893), p. 4.
*p. = periods.

these programs also included literature, composition, and history.

The Committee of Ten took a position and claimed that the latter two programs, which did not require Latin or emphasize literature, science, or mathematics, were "in practice distinctly inferior to the other two."[60] In taking this position, the Committee indirectly tracked college-bound students into the first two or superior programs and noncollege-bound students into the latter two or inferior programs. To some extent, this bias reflected the Committee's composition—eight of the ten members represented college and private preparatory school interests.

The Committee ignored art, music, physical education, and vocational education, maintaining that these subjects contributed little to mental discipline. In analyzing the effects of the Committee's action, two curricularists wrote: "The choice of these subjects and the omission of others from consideration was enough to set the course for secondary education" for many years and to indirectly set the tone at the elementary level, too. As "might be expected," the Committee suggested that "the nine subjects be taught sooner" and that all subjects except Latin and Greek be taught at the elementary school level.[61]

Even though very few students at that time went to college, this college preparatory program established a curriculum hierarchy, from elementary school to college, that promoted academics and ignored the majority of students, who were noncollege bound. Today, even though we offer vocational, industrial, and/or technical programs, the academic program is still considered superior to and of more status than the other programs.

The Committee on College Entrance Requirements. When this Committee met in 1895, it reaffirmed college dominance over the high school, in terms of admission requirements and classical subjects for mental training at the high school and college levels. Consisting mainly of college and university presidents, including Eliot, the Committee recommended to strengthen the college preparatory aspect of the high school curriculum, believing that it best served all students. It also made recommendations regarding the number of credits required in different subjects for college admission; it served as a model for the Carnegie Unit, a means for evaluating credits for college admission, imposed on the high schools in 1909 and still in existence today in most high schools.

Pressure for a Modern Curriculum

Gradually, demands were made for various changes to be made in the schools to meet the needs of a changing society. The pace of immigration and industrial development led a growing number of educators to question the classical curriculum and the constant emphasis on mental discipline and incessant drill. This shift in curriculum was influenced by the scientific movement in psychology and education in the late nineteenth and early twentieth centuries, particularly the pragmatic theories of Charles Pierce and William James; the social theories of Darwin, Herbart, and Spencer; and the impact of Pestalozzi, Froebel, Montessori, and others on pedagogy. The movement rejected the mental discipline approach and classic curriculum (both of which stressed that certain traditional and "cultural" subjects were best for disciplining the mind), as well as faculty psychology (that is, enhancing the "faculties" or mind of the child through stimulation of the senses). Instead, the new scientism put emphasis on vocational, technical, and scientific subjects—fitting into the concurrent age of industrialism, colonialism, and materialism.

Increased pressure against the traditional curriculum was evident at the turn of the century—with the educational ideas of John Dewey and Francis Parker, the Gestalt psychology and child psychology movements (which focused on the whole child), the learning theories of behaviorism and transfer learning (which involved connections between stimuli and responses), and the progressive movement in schools and society.

The argument eventually appeared that the classics had no greater disciplinary or mental value than other subjects, and that mental discipline (which emphasized rote, drill, and memorization) was not conducive to the inductive method of science or compatible with contemporary educational theory. Wrote Edward Thorndike, the most influential learning psychologist of the era:

The expectation of any large difference in general improvement of the mind from one study rather than another seems doomed to disappointment. The chief reason why good thinkers seem superficially to have been made such by having taken certain school studies is that good thinkers have taken such studies. . . . Now that good thinkers study Physics and Trigonometry, these seem to make good thinkers. If abler pupils should all study Physical Education and Dramatic Art, these subjects would seem to make good thinkers.[62]

Even Latin came under attack, by none other than old-time perennialists. In 1917, for example, Charles Eliot, a former advocate of Latin, was saying Latin should no longer be compulsory for high school or college students.[63] Abraham Flexner, a former teacher of the classics who had become a celebrity with his exposé of the American medical schools, claimed that Latin had "no purpose" in the curriculum and that the classics were out of step with scientific developments.[64] Flexner, who had become a strong advocate of utilitarianism, argued that tradition was an inadequate criterion for justifying subject matter. In short, society was changing and people could alter the conditions around them; the stress on psychology and science and the concern for social and educational reform made evident the need for a new curriculum.

Flexner: A Modern Curriculum. In a famous paper, "A Modern School," published in 1916, Abraham Flexner (1866–1959) rejected the traditional curriculum of the secondary school and proposed a "modern" curriculum for contemporary society. Flexner's curriculum consisted of four basic areas: (1) science (the major emphasis of the curriculum); (2) industry (occupations and trades of the industrial world); (3) civics (history, economics, and government); and (4) esthetics (literature, languages, art, and music).[65] Modern languages would replace Latin and Greek. Flexner concluded that, unless a utilitarian argument could be made for a subject, it had little value in the curriculum, regardless of traditional value.

Flexner's concepts of utility and modern subject matter tend to resemble Spencer's views on science and subject matter. The difference is that Flexner's timing was on the mark, and Spencer was ahead of his time. Flexner was tuned to the changing social and political times during which many educators were willing to listen to his proposals. In 1917, for example, Flexner's "Modern School" was established at the Lincoln School of Teachers College, Columbia University. The school combined the four core areas of study, with emphasis on scientific inquiry; it represented Dewey's type of progressivism and science of education, and it also reflected the fact that Dewey was now teaching at Columbia University.

Dewey: Pragmatic and Scientific Principles of Education. The same year Flexner published his modern school report, John Dewey (1859–1952) published *Democracy and Education,* in which can be found all elements of his philosophy as well as their implications for the educational process.[66] In the book, Dewey showed the relationship between education and democracy and set forth the notion that democracy itself was a social process that could be enhanced through the school. Dewey considered schools as neutral institutions that could serve the ends of either freedom or repression and authority. Dewey envisioned school in America as an instrument of democracy.

Thus, the aims of education went hand in hand with the particular type of society involved; conversely, the society that evolved influenced the aims of education.

Dewey argued that subjects could not be placed in a value hierarchy and that attempts to do so were misguided. Any study or body of knowledge was capable of expanding the child's experience, and "experiencing"—that is, being stimulated to develop and internalize intellectual capabilities—was the process of educating the child. Traditional subjects such as Latin or Greek were no more valuable than music or art.

One subject that may be more important to Dewey is science. Science, for Dewey, was another name for knowledge, and it represented "the perfected outcome of learning—its consummation. . . . What is known, certain, settled" and what "we think with rather than that which we think about" is science or rationalized knowledge. Dewey considered scientific inquiry to be the best form of knowledge for a society, because

it consisted of the "special . . . methods which the race has slowly worked out in order to conduct reflection under conditions whereby its procedures and results are tested."[67] He thus elevated the place of science in education.

What is relevant to educating an individual to function well as a free person in a free society remained constant for Dewey. His emphasis on the "method of inquiry," which is really synonymous with "intelligent behavior," is as valued today as it was seventy-five years ago.

Judd: Systematic Studies and Social Sciences. Charles Judd (1873–1946) was the colleague of John Dewey; in fact, he was the head of the Department of Education at the University of Chicago when Dewey directed the lab school. Along with Dewey and others, he constructed a science of education based on the methods of finding facts and then applying them as a basis for reasoning out solutions to problems and for making decisions. Whereas Charles Pierce and William James referred to this method as pragmatism, Judd referred to it as "scientism in education."

Judd was an evolutionist and felt the laws of nature could be used to educate the young. He used statistical research (which was then in its infancy stage) to determine the worth of curriculum content, that is, which subjects would best promote thinking and dealing with the problems of contemporary life. By preparing students to deal with problems, not acquire endless knowledge, he argued students would be prepared to deal with the changing world and the problems they would encounter as adults.

The justification for the method of determining subject matter was outlined in Judd's book *The Scientific Study of Education,* which was concerned with what he called "systematic studies . . . of the curriculum."[68] His emphasis was on reading, writing, and spelling based on words shown statistically to be used by successful adults, as well as on math problems applied to practical problems of everyday life. Utilitarian and pragmatic in philosophy, he urged that elementary students be exposed to "career education" to help them formulate ideas about the world of work and thus prepare them for the evolving social order. At the secondary level, Judd sought practical subjects that had a vocational or technical orientation, not a "cultural" or elitist one. For slower students, he advocated English, business math, mechanics or stenography, and office management—what later was to become part of the commercial and vocational tracks in high school. For average and talented students, he urged a curriculum consisting of science, mathematics, modern language, and the social sciences—what later was to be labeled the academic track.

Although, today, we might criticize Judd's evolutionary ideas as prejudicial, his ideas fit into the scientific and social science era of the day, that is, the "survival of the fittest." The same ideas resurfaced during the Sputnik and Cold War era, especially with regard to James Conant's ideas of tracking students and separating them into vocational and academic programs; it appears in slightly different form as we enter the 1990s and engage in economic combat with Germany, Japan, and Korea.

On a less philosophical basis, one which is more focused on curriculum, Judd was to influence the next generation of theorists, who sought to systematize curriculum making by applying scientific methods to curriculum development. These new theorists, sometimes called *technicians,* starting with Bobbitt and Charters in the 1920s and ending with Tyler in the 1950s, evoked his educational utility and social science/research methods.

Commission on the Reorganization of Secondary Education. In 1918 the NEA Commission on the Reorganization of Secondary Education published the famous *Cardinal Principles of Secondary Education,*[69] a highly progressive document. Influenced by Flexner's "A Modern School" and Dewey's *Democracy and Education,* the Commission stressed the whole child (not just the cognitive area of study), education for all youth (not just college-bound youth), diversified areas of study (not classical or traditional studies), common culture, ideas, and ideals for a democratic society (not religious, elitist, or mental, discipline learning).

The Commission noted the following:

1. *Seven major aims or "Cardinal Principles" should comprise education: health, command of*

the fundamentals, worthy home membership, vocation, citizenship, leisure, and ethical character.
2. *High school should be a comprehensive institution based on the various social and economic groups that populate the nation.*
3. *The high school curriculum should offer various programs to meet various student needs—agricultural, business and commercial, vocational, and college preparatory.*
4. *The current ideas of psychology of education, principles of pedagogy, measurement, and evaluation should be applied to the curriculum and instruction of the high school.*
5. *American education comprises a set of defined institutions that should function in conjunction with, rather than in isolation from, each other.*

Indeed, the high school was assuming its modern curricular patterns—combining academic programs with several nonacademic programs. The choice of subject matter was being fine-tuned to emphasize five basic or essential subjects such as English, math, science, social science, and modern language. Classical languages and classical literature took a back seat to modern languages and English literature. Aims and subjects were related, not separated or compartmentalized. The idea of mental discipline was replaced by utilitarian modes of thought and scientific inquiry. There was a growing recognition that curriculum, too, should not be compartmentalized but interdisciplinary, and that it should not be static, but change as society changed. The needs and interests of the students were now considered. Most important, there was recognition of the responsibility of schools (including the high school) to serve all children and youth, not just college-bound youth. The era of progressive education was about to begin impacting the schools—and traditional education (which had dominated American education for so long) was vanishing.

CURRICULUM AS A FIELD IS BORN: 1918–1949

The early twentieth century was a period of educational ferment. Scientific methods of research, the influence of psychology, the child study movement, the idea of efficiency in industry, and the muckracker-progressive movement in society all influenced education. Many of the resulting ideas were applied to curriculum: From them evolved the process and how-to-do aspects of curriculum. Curriculum was now viewed as a science, with principles and methodology, not just as content or subject matter. The ideas of planning and describing a curriculum, as opposed to describing curriculum in terms of subjects and the amount of time needed to study each subject, appeared in the literature.

Bobbitt and Charters: Behaviorism and Scientific Principles

Franklin Bobbitt (1876–1956) and Werrett Charters (1875–1952) were influenced by the idea of efficiency, promoted by business and industry, and the scientific management theories of Frederick Taylor, who analyzed factory efficiency in terms of time and motion studies and concluded that each worker should be paid on the basis of his or her individual output (as measured by the number of units produced in a specified period of time).[70] Efficient operation of the schools, sometimes called "machine" theory by sociologists and economists, became a major goal in the 1920s. Often ensuring efficiency meant eliminating small classes, increasing the student-teacher ratio, cutting costs in teacher salaries, and so on, and then preparing charts and graphs to show the resultant lower costs. Raymond Callahan later branded this idea the "cult of efficiency."[71] The effects were to make curriculum making more scientific and to reduce teaching and learning to precise behaviors with corresponding activities and learning experiences that could be measured. These ideas were cultivated by Taylor's faithful followers: Bobbitt and Charters.

Bobbitt's book, *The Curriculum*, published in 1918, is considered by some observers as the first book devoted solely to curriculum as a science and to curriculum in all its phases. Bobbitt outlined the principles of curriculum planning by focusing on an activities approach, which he defined as "a series of things which children and youth must do and experience by way of developing abilities to do things well and make up the affairs of adult life."[72] To Bobbitt the purpose of curriculum was to outline what knowledge was important for each subject, and then to develop

various activities to train the learner and enhance his or her performance.

Bobbitt understood the importance of analyzing the process of curriculum making, especially the need for specifications, tasks, and detail to what one wanted to accomplish and then measure—all part of machine theory and the cult of efficiency, as well as the behaviorist movement of the era. Adherence to the traditional curriculum, which emphasized subject matter, did not provide educators with methods for developing curricula. Bobbitt described the problems as he set out to organize a course of studies for the elementary grades:

> *We need principles of curriculum making. We did not know that we should first determine objectives from a study of social needs. We supposed education consisted only of teaching the familiar subjects. We had not come to see that it is essentially a process of unfolding the potential abilities of [students]. . . . We had not learned that studies are means, not ends."*[73]

Bobbitt further developed his objectives and activities approach in the early 1920s in *How to Make a Curriculum.* Here he outlined more than 800 objectives and related activities to coincide with student needs. These activities ranged from the "ability to care for [one's] teeth. . . . eyes, . . . nose, and throat, . . . ability to keep the heart and blood vessels in normal working condition, . . . to keep home appliances in good working condition . . . to spelling and grammar."[74]

Bobbitt's methods were quite sophisticated for the period. Moreover, his guidelines for selecting objectives can be applied today: (1) *eliminate* objectives that are impractical or cannot be accomplished through normal living; (2) *emphasize* objectives that are important for success and adult living; (3) *avoid* objectives opposed by the community; (4) *involve* the community in selecting objectives; (5) *differentiate* between objectives that are for all students and those that are for only a portion of the student population; and (6) *sequence* the objectives in such a way as to establish how far students should go each year in attaining them—that is, establish criteria for achievement.

Taken out of context, however, Bobbitt's list of hundreds of objectives and activities, along with the machine or factory analogy that he advocated, were easy to criticize.[75] Nevertheless, Bobbitt's insistence that curriculum making was a specialty based on scientific methods and procedures was important for elevating curriculum to a field of study, or what he called a "new specialization." His offer was that educators try his method with the intention of improving it or suggesting a better one. He was one of the first to propose the idea of a curriculum specialist, with special training.

Charters advocated the same behaviorist, precise approach, which he termed a "scientific" approach. He viewed the curriculum as a series of objectives that students must attain by way of a series of learning experiences. In his book on *Curriculum Construction,* Charters, who was influenced by the machine theory of business, envisioned curriculum as the analysis of definite operations—a process he termed *job analysis*—such as those involved in running a machine.[76]

Charters's statement about the weakness of curriculum is still relevant today: that even though curriculum writers often begin "with the statement of aim, none has been able to derive a curriculum logically from his statement of aim." In almost every case, a "mental leap [is made] from the aim to the subject matter, without providing adequate principles such as would bridge the gap . . . and lead us from aim to selection of materials."[77] Charters attempted to bridge the gap by proposing a curriculum derived from specific objectives and precise activities. He considered objectives to be observable and measurable, an outlook that is similar to today's notion that behavioral objectives can be sound and definable. He felt the state of knowledge at that time did not permit scientific measurement that would specifically identify the outcomes of the objectives, but he set out to develop a method for selecting objectives, based on social consensus, and for applying subject matter and student activities to analysis and verification. Although Charters did not use the term *evaluation* during this period, he was laying the groundwork for curriculum evaluation, which surfaced twenty years later.

As prime initiators of the behavioral and scientific movements in curriculum, Bobbitt and Charters had a profound impact on curriculum. They (1) developed principles for curriculum

making, involving aims, objectives, needs, and learning experiences (which they called activities); (2) highlighted the use of behavioral objectives, which has a legacy in various contemporary educational ideas, such as the use of instructional objectives and curriculum evaluation; (3) introduced the ideas that objectives are derived from the study of needs (later called needs assessment) and that objectives and activities are subject to analysis and verification (later called evaluation); and (4) emphasized that curriculum making cuts across subject matter, and that a curriculum specialist need not necessarily be a specialist in any *subject*, rather a professional in *method* or *process*.

Finally, Bobbitt and Charters taught at the University of Chicago when Tyler was a graduate student in the department of education (in fact, Tyler was Charters's graduate assistant). Tyler was highly influenced by their behaviorist ideas, particularly that (1) objectives derive from student needs and society, (2) learning experiences relate to objectives, (3) activities organized by the teacher should be integrated into the subject matter, and (4) instructional outcomes should be evaluated. Tyler's stress on evaluation as a component of curriculum is rooted in the research background of Charters, who helped his graduate student get appointed to his first teaching and evaluation position in 1929 as Head of Testing and Evaluation for the Ohio State Bureau of Educational Research (Charters had assumed the directorship of the bureau the previous year). Tyler's principles of curriculum and instruction, especially his four major components (objectives, learning experiences, methods of organization, and evaluation), are rooted in Bobbitt's and especially Charters's ideas.

Kilpatrick: The Progressive Influence

The increasing rise of progressive education and universal education, that is, education for the masses, led to an attack against the rigidity and rote memorization of the classical curriculum, the emphasis on tough subject matter, and the high school curriculum standardized on the basis of preparation for college. The progressive movement consisted of many wings. and among the most influential were the child-centered and activity-centered curricularists. Subject matter emphasis was replaced by emphasis on the student or learner; the needs and interests of the child dominated the new thinking, and cognitive processes were replaced by social processes. The curriculum was organized around classroom and school social activities, group enterprises, and group projects. See Curriculum Tips 3-3.

Creative self-expression and freedom were the major goals of the child-centered movement, and this was a reaction against the rigid and domineering influence of the traditional curriculum. While the method relied on Dewey's progressivism, it was Dewey who made several criticisms in the 1920s and 1930s about this new education, which he felt to be a distortion of his original ideas and to lack purpose and method as well as teacher direction. According to Dewey, the method of surrounding students with materials but not suggesting a purpose or a plan, but rather allowing students to respond according to their interests, "is really stupid [and] attempts the impossible which is always stupid."[78]

William Kilpatrick, a colleague of Dewey when he moved to Teachers College, Columbia University, attempted to merge the current behaviorist psychology of the day, particularly Thorndike's (connectionism) and Watson's (conditioning) theories with Dewey's and Judd's progressive philosophy, which became known as the "Project Method,"[79] or what was later called *purposeful activity*. Kilpatrick combined four steps in methodology, which were actually more behaviorist than progressive: purposing, planning, executing, and judging, with his projects (ranging from classroom projects to school and community projects).

Two of his doctoral students applied many of his ideas in the Missouri schools. One was Junius Merian, who called Kilpatrick's projects "subjects of study" and organized them into four areas: observation, play, stories, and hard work.[80] The second student, Ellsworth Collings, developed a curriculum around the real-life experiences of children. He had both teachers and students present several guided experiences or activities that were related and developmental in nature; one activity led to another. "The curriculum was continuously made 'on the spot' by the joint action of pupils and teachers." The idea was that such a joint endeavor "would mean most for

CURRICULUM TIPS 3-3 Enriching the Curriculum

The following suggestions combine Kilpatrick's activities curriculum and Rugg's child-centered curriculum. In general, the suggestions integrate elementary's schooling with the philosophy of progressivism, which evolved during the first half of the twentieth century. The specific suggestions are still viable today for those schools and teachers who stress a student-centered curriculum.

1. Study the cumulative record of each child.
2. Compare the achievement score with ability indices.
3. Examine a pupil's creative production for words, symbols, and topics that are used frequently.
4. Listen to pupils talk about themselves.
5. Provide opportunity for a choice of activities.
6. Visit each pupil's home, if possible.
7. Help each pupil learn as much as possible about his or her values, attitudes, purposes, skills, interests, and abilities.
8. Be willing to allow pupils to say what they think.
9. Encourage students to reflect on their beliefs and values.
10. Analyze with pupils their interpretations of their in-class and out-of-class experiences.
11. Organize class activities around individual or group study of problems important to the individuals involved.
12. Help each pupil to state his or her purposes, both immediate and long term. Share with pupils the information available about their present status.
13. Clarify with pupils the limitations (in time, materials, and resources) of the situation.
14. Ask each pupil to formulate a plan of work.
15. Encourage each pupil to collect and share materials.
16. Make possible the collection of information in out-of-class situations.
17. Use record-keeping as a way of helping the individual student to organize his or her learning.

Source: Kimball Wiles, *Teaching for Better Schools* (Englewood Cliffs, N.J.: Prentice Hall, 1952), p. 286.

the children."[81] His projects were similar to Merian's four study areas, but included more field trips and community activities.

Although advocates such as Boyd Bode and John Childs treated these ideas as "innovative" and "new,"[82] there was almost nothing new with the idea of purposeful activity. The idea was rooted in the curriculum ideas of Bobbitt and Charters, as expressed by their stress on objectives and related activities, and the philosophy of Dewey, particularly his doctrine of growth, which was derived from "purposeful activity," and "modes of action" to meet the needs and interests of students.

Kilpatrick's project method was mainly implemented at the elementary schools, like the activity movement, because both were child centered. His method was fully developed in his text, *Foundations of Method,* and became part of the activity movement. Nonetheless, he argued that the difference was that his doctrine had "social purpose," whereas the activity-centered curriculum had only "child purpose." When forced to decide who should plan the curriculum, the child or teacher, Kilpatrick opted for the child, arguing that "if you want to educate the boy to think and plan for himself, then let him make his own plan."[83] In this respect, he differed from Dewey, who put more emphasis on the role of the teacher.

For Kilpatrick, the child had to learn to "search . . . compare . . . think why . . . and in the end . . . make his own decision."[84] The teacher could serve as a guide, but not as the source of information or dispenser of knowledge. When Kilpatrick's project method was eventu-

ally introduced in the high school curriculum, it became fused with social studies and the core curriculum. All these curriculum experiences meshed subject matter, social issues, and social problems important to students involved.[85]

Kilpatrick was also part of the wing of the radical progressive movement, later called reconstructionism, which was concerned with social issues and saw traditional education (expressed in perennialist terms) as reactionary. Bode, Caswell, Counts, and Rugg were part of this new social movement. Although these radicals criticized the Committee of Ten and felt its members had legitimatized traditional systems of education, Kilpatrick (like members of the Committee) was concerned about "a curriculum containing a bewildering variety of more or less unrelated subjects." New subjects were being added "as occasion arose," lacking in philosophy or related goals.[86] But whereas the traditional curricularists of the Committee of Ten urged a curriculum based on perennialist philosophy, clearly compartmentalized and tough academics, with emphasis on Latin, language, and science, Kilpatrick argued for progressive philosophy, integrated subject matter, and a general education with emphasis on values and social issues. Whereas the Committee of Ten saw school as a place where students go to primarily acquire knowledge, Kilpatrick and his progressive colleagues saw school as a "way of life" and "ideal community" where students practiced "cooperation, self-government . . . and application of intelligence . . . to problems as they may arise."[87]

The traditional practice of education focused on certain subjects, usually the three Rs at the elementary level and basic academic subjects at the secondary level. These were considered as logically organized bodies of subject matter. The basic method for teaching these subjects was through rote practices. Kilpatrick and his followers challenged both of these positions regarding method and the assumption about logically organized subject matter. As Collings asserted, the activities movement made the individual child the focus of thinking in a social context. The child's growth along social lines, not the mastery of content, was the purpose of education.[88] School was preparation for life; it had social purpose.

In the end, the emphasis in education was the student—interested, active, and interacting with peers in school and adults in the community. Students had needs, interests, and problems growing out of their experiences with each other, their family, and community. Hence, the curriculum had to be derived not from organized bodies of subject matter, but from real-life experiences and expressed in terms of purposeful activities.

The Twenty-Sixth Yearbook

In 1930, the National Society for the Study of Education (NSSE), an honor society with headquarters at the University of Chicago, published its twenty-sixth yearbook in two parts, *Curriculum-Making: Past and Present* and *The Foundations of Curriculum Making*.[89]

The committee that developed the two volumes consisted of twelve members, including Harold Rugg (the chairperson) and William Bagley, Franklin Bobbitt, Werrett Charters, George Counts, Charles Judd, and William Kilpatrick, among others. Leaders of curriculum development during that period were mainly scientific-oriented (including Bobbitt and Charters) and progressive (including Counts, Judd, and Kilpatrick), and many were affiliated with the University of Chicago, which emphasized this science of education.

The Yearbook comprised two parts. The first part began as a harsh criticism of traditional education and its emphasis on subject matter, rote learning, drill, and mental discipline. It then became a synthesis of progressive practices and programs—the best and most innovative since the turn of the century—in public and private schools across the country. Part II has become a landmark text. It described the state of the art in curriculum making up to that period of time, and it included a consensual statement by the group on the nature of curriculum making. It is still relevant today.

The committee recognized the need for curriculum reform and the need for "those who are constructing our school curriculum" to determine "an overview . . . [and] orientation . . . to curriculum making."[90] With this idea in mind, the Yearbook outlined characteristics of the ideal curriculum—a curriculum that:

1. *Focuses on the affairs of human life.*
2. *Deals with the facts and problems of the local, national, and international community.*
3. *Enables students to think critically about various forms of government.*
4. *Informs and develops an attitude of open mindedness.*
5. *Considers student interests and needs as well as opportunities for debate, discussion, and exchange of ideas.*
6. *Deals with the issues of modern life and the cultural and historical aspects of society.*
7. *Considers problem-solving activities and practice in choosing alternatives.*
8. *Consists of carefully graded organization of problems and exercises.*
9. *Deals with humanitarian themes, and purposeful and constructive attitudes and insights.*[91]

This description of the ideal curriculum is basically one that might be developed today. The problems and issues identified by the committee are chiefly those that another curriculum committee could recognize as important for the 1990s.

In the same vein, Harold Rugg maintained that the people should formulate the aims and purposes of education through committees or legislative groups; the appropriate materials and methods of instruction "through which to achieve those aims and purposes [were] . . . technical . . . demanding special professional preparation." The role of trained curriculum specialists was to plan the curriculum in advance and to include four tasks (which were later to become the basis of Tyler's four principles): (1) "a statement of objectives, (2) a sequence of experiences [to achieve] the objectives, (3) subject matter found to be . . . the best means of engaging in the experiences, and (4) statements of immediate outcomes of achievements to be derived from the experiences." Rugg concluded that curriculum was adapting scientific methods and that there was need "for specialization and for professional . . . training."[92] Experienced teachers and specialists in curriculum making should work together to organize the content and materials within the various fields of subject matter—what many schools do today.

The Yearbook represented a tremendous advance in clarifying problems curriculum workers were encountering and in proposing procedures for the future in curriculum making. It had major influence in many school districts (both large and small, as well as city, suburban, and rural), as illustrated by the plan that was later called "The Eight-Year Study," and by the ideas that Ralph Tyler and Hilda Taba expressed in their classic texts 20 and 30 years later.

Rugg and Caswell: The Development Period

During the late 1920s, the 1930s, and the early 1940s, a number of important books were published on curriculum principles and processes and on techniques for helping the teacher in curriculum making. Harold Rugg (1886–1960), the chairperson of the NSSE Yearbook, shared the faith of Bobbitt and Charters in a "science of curriculum." By training Rugg was an engineer, but, like Dewey, he had a broad view of curriculum that focused on the whole child and the way the child would grapple with the changing society. In this respect, Rugg was a progressive thinker as well as a forerunner of reconstructionism.

In 1928, Rugg and Shumaker coauthored their controversial text, *The Child-centered School*. In an era which stressed student input in planning the curriculum, the authors stressed the need for curriculum specialists to construct the curriculum.[83] They also stressed the role of the teacher in implementing the curriculum at the classroom and instructional level. Hence, the teacher needed to preplan; the idea of student input was rejected by Rugg, as was the idea of a curriculum based on the needs and interests of students. Such a curriculum would lack direction and logic. But the idea of a preplanned, fixed curriculum was antithetical to the progressive doctrine that was becoming more influential during this period. More in line with progressivism, however, Rugg advocated cooperation among educational professionals from different areas, including teachers, administrators, test experts, and curriculum specialists from various fields.

Rugg's attention in the 1930s and the 1940s shifted almost entirely to the integration of history, geography, civics, and economics—commonly called social studies. Some of his ideas about labor history and collectivism and his criticisms of American life, compounded by his activities with the teachers' union, resulted in a

great deal of criticism from Establishment groups. Like Counts and Dewey, Rugg, too, had the distinction of having an FBI file.[94]

During the mid-1920s and 1930s, most school districts and state education departments were developing curriculum guides. However, the selection of methods and activities was left to the teachers. Hollis Caswell (1901–1989), was concerned that this practice was limited; he wanted to shift emphasis from formulating a course of study to improving instruction. He envisioned curriculum making as a means of helping teachers coordinate their instructional activities with subject matter and students' needs and interests. He considered courses of study as guides or sources that teachers could use to plan their daily work, but not as plans they should follow in detail. He sought to combine three major curriculum components: content, teacher's instruction, and student's learning.

Caswell attempted to assist teachers by providing a step-by-step procedure for curriculum making. He and his colleagues outlined seven points, in question form, that still have relevancy today:

1. *What is a curriculum?*
2. *Why is there need for curriculum revision?*
3. *What is the function of subject matter?*
4. *How do we determine educational objectives?*
5. *How do we organize curriculum?*
6. *How do we select subject matter?*
7. *How do we measure the outcomes of instruction?*[95]

Influenced by Bobbitt's definition of curriculum as "that series of things which children and youth must do and experience," Caswell and Campbell, in their classic text *Curriculum Development,* maintained that the curriculum must consider "all elements in the experience of the learner."[96] They thought curriculum should synthesize the fields of philosophy, psychology, and sociology—what other curricularists would later refer to as the foundations of curriculum. To a large extent, Caswell envisioned curriculum as a field with few limitations on content; rather, he thought curriculum represented a procedure or process that incorporated scientific steps of development, organization, instruction, and evaluation.

Caswell and Campbell believed that the curriculum must address three basic elements: children's interests, social functions, and organized knowledge. The curriculum was to provide the proper scope and sequence of subject matter at every grade level. The *scope* was to represent broad themes based on social functions (similar to educational aims), such as conservation of natural resources, worthy home membership, democratic living, and so on. The *sequence* was based on experiences according to the children's interests. *Subject matter* was suggested to match the social functions and the learner's interests; the knowledge that was taught was to be measured as outcomes of instruction.

Caswell and Campbell's book "became heavily prominent during the next two decades, almost becoming synonymous with curriculum study at large."[97] Their three elements of curriculum, as well as scope and sequence, heavily influenced Taba's book *Curriculum Development: Theory and Practice.* Their three foundations and elements of curriculum also influenced the classic textbook written by B. Othanel Smith and his colleagues, *Fundamentals of Curriculum Development.* Both textbooks served as bridges between Caswell and Campbell and many present curriculum textbooks (which stress foundations and principles of curriculum).

Eight Year Study. Although traditional subject matter and methods dominated the school curriculum, the progressive movement was still influential in certain parts of the country, particularly in Denver, St. Louis, and Winnetka. While most high schools implemented the mainstream curriculum, there were sharp criticism and outspoken differences among elementary school progressive educators. Most high school teachers and principals were reluctant to implement progressive changes because the curriculum was (as it is today) test driven and dominated by college admission requirements.[98]

The Progressive Education Association launched the "Eight Year Study," from 1932 to 1940, to show that a new curriculum designed to meet the needs and interests of students was just as effective as one designed around traditional tests and admission requirements to college. As many as 30 progressive or experimental high

schools and 1,475 graduates were matched with corresponding schools and students from traditional college preparatory tracks. It was found that the experimental or progressive group did just as well as or better than the control or traditional group on cognitive, social, and psychological bases.

Despite the evidence suggesting that the progressive curriculum was as good or better for college preparation, the traditional academic program prevailed. Nevertheless, the study demonstrated the essential principles of curriculum making as purported by the Twenth-sixth Yearbook of the National Society for the Study of Education (NSSE). The study established a curriculum commission largely around the ideas of Rugg (and the Yearbook), and it led to several books; among the best known are those by Wilford Aiken and Harry Giles.[99] One major participant in the project was Giles's colleague Ralph Tyler. Many of Tyler's ideas, later to be published in *Basic Principles of Curriculum and Instruction,* stemmed from the principles and ideas generated by the Study (as well as the NSSE Yearbook).

Although the idea of stating objectives in behavioral terms had been introduced 20 years prior to the Study, it was this group of curriculum specialists that first introduced it on a national level; and, because of the visibility of the Study, it has remained a standard approach since. The Study group insisted on classifying or grouping objectives into homogeneous types or related categories. Tyler and Taba were both later to use this idea as a basis for classifying objectives into the (1) acquisition of knowledge, (2) intellectual skills, (3) attitudes and feelings, and (4) academic skills or study habits.[100] See Curriculum Tips 3-4.

Members of the Eight Year Study understood that education was designed to change people (an idea rooted in Dewey and Thorndike) and that objectives would classify the desired behavioral changes. It was further understood that the nature of objectives required an evaluation to determine whether the objectives had been achieved or to what extent. The Study confirmed the need for comprehensive evaluation, as part of curriculum making, including data on (1) *student achievement,* such as initial levels of mastery, standardized tests, social and psychological skills, and creativity; (2) *social factors,* such as social class, peer group, community patterns, and motivational abilities; (3) *teaching-learning processes,* such as classroom management, homework assignments, and student-teacher interaction; and (4) *instructional methods,* such as discussions, demonstrations, problem solving, and discovery.

Taba worked on the evaluation team of the Study, along with Tyler, and later developed the idea of comprehensive evaluation in her work as chair of the ASCD's Commission on Evaluation in the 1940s and 1950s and in her classic text, *Curriculum Development: Theory and Practice,* in 1962. Tyler also played a key role in the evaluation of the Study, and some of his ideas were the basis of the evaluation component of the Study; they were further elaborated in his classic text, *Basic Principles of Curriculum and Instruction,* in 1949.

It later became apparent that the ideas of curriculum making developed by the Study did not filter down to the schools because teachers were not deeply involved in the curriculum. Most curriculum committees failed to include teachers, and restricted them to examining classroom textbooks and materials or modifying curriculum guides developed by central district offices. The exclusion of teachers from clarifying school goals and program objectives, organizing subject matter and learning activities, and participating in the evaluation process confirmed the traditional top-down practice of curriculum making of the period.

Tyler: Basic Principles

An account of curriculum as a field is not complete without discussion of Ralph Tyler, (1902-). Although Tyler published more than 700 articles and sixteen books (eleven of which are coauthored) on the subjects of curriculum, instruction, and evaluation, he is best known for his small book, *Basic Principles of Curriculum and Instruction.*[101] Originally written as a course syllabus for his students at the University of Chicago, the book was published in 1949; it has already gone through over thirty-five print-

CURRICULUM TIPS 3-4 Classifying Objectives

Those in charge of formulating objectives should pay close attention in translating school goals into objectives. The process is twofold: (1) formulating objectives into subject areas and/or grade levels, often called program objectives, and (2) categorizing objectives into related categories or clusters. The example below, derived from the South Bend school district, involves elementary social studies and was developed during the era of the Eight Year Study. It includes three of four categories later advocated by Tyler and Taba as a method for grouping objectives. Most interesting, the objectives are still relevant today.

1. Children need to understand (knowledge):
   a. That all peoples of the world are in some way dependent on each other and must get along with each other.
   b. That our world is constantly changing.
   c. That events, discoveries, and inventions may improve some ways of living but create problems in others.
   d. That people have established communities and governments to meet their needs.
   e. That groups develop traditions, values, and ways of doing things, and new generations learn these from their elders.
   f. That the physical geography of a place affects way people live.
2. Children need to learn how (skills):
   a. To seek information from many sources and to judge its validity.
   b. To organize facts and form generalizations based on facts.
   c. To carry on a discussion based on facts and to make generalizations or conclusions.
   d. To plan, to carry out plans. and to evaluate the work and the planning.
   e. To accept responsibility as part of living.
   f. To develop a set of values for judging right and wrong actions.
3. Children need to become (attitudes):
   a. Willing to undertake and carry through a job to completion.
   b. Anxious to help others and to work with others for desirable group goals.
   c. Appreciative of others like and unlike themselves.

Source: For Our Time: A Handbook for Elementary Social Studies Teachers (South Bend, Ind.: School City of South Bend, 1949). pp. 229–230.

ings. It is, in fact, considered by some as a "mini-Bible" of curriculum.

In 128 pages, Tyler covers the basic questions that he believes should be answered by anyone involved in planning or writing a curriculum for any subject or grade level:

1. *What educational purposes should the school seek to attain?*
2. *What educational experiences can be provided that are likely to attain these purposes?*
3. *How can these educational experiences be effectively organized?*
4. *How can we determine whether these purposes are being attained?*[102]

Tyler was highly influenced by the progressive social theories of Judd and Dewey, as well as the learning theories of Thorndike and Piaget. He drew from the behaviorists, too, including Bobbitt and Charters. His philosophy and principles of curriculum were influenced by older contemporaries, such as George Counts (while Tyler was at the University of Chicago) and Boyd Bode (while he was at Ohio State University).

Not much in Tyler's model is new; we might consider it an elaboration of Rugg's four major tasks in curriculum and a condensed version of the NSSE's Twenty-Sixth Yearbook. One critic claims that "it clearly paraphrased, restated, and

elaborated the position taken by the NSSE committee."[103] Others infer that the four questions and related discussions closely resemble the companion curriculum report, *Exploring the Curriculum,* submitted with "The Eight Year Study."[104] The model was not fully developed at that time, however; Tyler fully developed it later.

To some extent, also, Tyler's model can be considered an elaboration of an earlier work he did with Douglas Waples, when Tyler was at Ohio State University. In their publication, Tyler and Waples outlined the major elements in curriculum and instruction: (1) defining objectives, organizing content, and adopting materials; (2) selecting learning experiences and diagnosing learners; (3) managing students; and (4) outlining techniques of instruction and evaluation.[105]

Tyler, also, was highly influenced by Hilda Taba, his colleague for over 20 years at Ohio State and the University of Chicago. Tyler had a close professional relationship with Taba, and together they served on numerous research projects involving curriculum and evaluation. Because Taba's classic book on *Curriculum Development* was published several years after Tyler's book, most people think that Tyler influenced Taba. Actually, they influenced each other, but Tyler was the first to lay out four linear steps, which Taba further developed into seven linear steps.

The Tyler model depicts a rational, logical, and systematic approach to curriculum making. Although it embraces no philosophical or political bias in the sense that any subject can be organized around the model, its ideas are rooted in progressivism (it emphasizes the needs of the learner), scientific procedures (its principles are applicable in varying situations), and behaviorism (its objectives are the most important consideration, in Tyler's own words).

As the NSSE Yearbook put little emphasis on the teachers' role in curriculum making, Tyler said very little about the students' or the principals' roles. Although Tyler claims the book deals with principles and processes, the work is a "cookbook" approach to curriculum making. Nevertheless, the book is highly influential, because of its rational, no-nonsense, and sequential approach. In just over 100 pages, Tyler laid out a basic procedure to follow with easy-to-understand examples—different from the complex and cumbersome writings of other texts. Tyler gives students a manageable description, a series of concise steps, through which to plan curriculum.

Although critics have judged Tyler's model to be inadequate, naive, overly lockstep, and technocratic, and have censured it for its oversimplifying view of curriculum making as the collection of small bits of behavior,[106] it still works for many. Because it is simple to grasp, it serves as a starting point for curriculum students (which was its original intention). Remember that Tyler did not attempt anything more than to provide a basic guideline for students; his contemporaries inflated the significance of the book. When a treatise in social science becomes popular, as this one did, it becomes fair game for analysis and criticism by others in the field—as this one did as well.

Perhaps the most important reason Tyler is so influential is that he worked closely with a number of influential colleagues, besides Taba, such as Paul Diederich, Harold Dunkel, Maurice Hartung, Virgil Herrick, and Joseph Schwab, who accepted many of his ideas and who also influenced curriculum. In addition, many of Tyler's students at Ohio State University, such as Edgar Dale, Louis Heil, Louis Raths, and Harold Shane, and at the University of Chicago, such as Elliot Eisner, Ned Flanders, Thomas Hastings, David Krathwohl, Malcolm Provus, and Louise Tyler were influenced by Tyler and also became prominent in the field. Most important, a number of Tyler's other students, including Ben Bloom, Lee Cronbach, John Goodlad, Ken Rehage, Ole Sand, and Herbert Thelen, were also his colleagues for many years.[107] With the exception of Eisner, these colleagues continuously praised Tyler's work in the professional literature. Like Tyler, these men and women were (or are) known for their scientific assumptions, systematic procedures, and traditional views on education. See Table 3-5.

CURRENT FOCUS

The Tyler model, despite its criticism, summed up the best principles of curriculum making during the first half of the twentieth century. The model has been utilized and adapted by many

TABLE 3-5 Overview of Curriculum Theorists 1918–1949

THEORIST	PURPOSE	PRINCIPLES	CONTENT	MAJOR BOOK
Franklin Bobbitt (1876–1956)	Curriculum as a science Emphasis on student needs Prepare students for adult life Clarify objectives Cost-effective education	Grouping and sequencing objectives with corresponding activities Clarifying instructional specifications and tasks	Basic three Rs in elementary schools Academic subjects in high school Subject matter and related activities planned by teacher	*The Curriculum*, 1918 *How to Make a Curriculum*, 1924
Werrett Charters (1875–1952)	Curriculum as a science Emphasis on student needs (and needs assessment) Bridging theory and practice in curriculum	Curriculum process, described as job analysis Listing of objectives and corresponding activities Verification of objectives through evaluation	Subject matter related to objectives Subject matter and corresponding activities planned by teacher	*Curriculum Construction*, 1923
William Kilpatrick (1871–1965)	School as a social and community experience Curriculum identified as purposeful activities Child-centered curriculum Child development and growth	Project method, a blend of behaviorism and progressivism Teacher and student planning, emphasis on the student Emphasis on pedagogy or instructional activities: creative projects, social relationships, and small-group instruction	Educating a generalist, not a specialist Integrated subject matter Problem solving	*Foundations of Method*, 1926

Harold Rugg (1886–1960)	Education in context with society Child-centered curriculum Whole child Curriculum specialist as an engineer	Statement of objectives, related learning experiences, and outcomes Teacher plans curriculum in advance	Emphasis on social studies	*The Child Centered Curriculum* (with Ann Shumaker), 1928
Hollis Caswell (1901- 1989)	Foundations of education (history, philosophy, etc.) influence curriculum development Relationship of three major components: curriculum, instruction, and learning Student needs and interests Curriculum organized around social functions (themes), organized knowledge, and learners' interests	Curriculum as a set of experiences Curriculum guides as a source of teacher planning Teachers coordinate instructional activities to implement curriculum	Subject matter organized in relation to student needs and interests Subject matter developed around social functions and learners' interests	*Curriculum Development* (with Doak Campbell), 1935
Ralph W. Tyler (1902–)	Curriculum as a science and extension of school's philosophy Clarify purposes (objectives) by studies of learners and contemporary life, suggestions from subject specialists, and use of philosophy and psychology Student needs and interests Relationship between curriculum and instruction	Curriculum as a rational process Using objectives to select and organize learning experiences Using evaluation to determine outcomes (whether objectives have been achieved) Vertical and horizontal relationship of curriculum	Subject matter organized in terms of knowledge, skills, and values Emphasis on problem solving Educating a generalist, not a specialist	*Basic Principles of Curriculum and Instruction*, 1949

curricularists, including some of Tyler's students, like Taba and Goodlad.[108] Although Tyler and his predecessors did a great deal toward outlining a science of curriculum, the major concepts and principles of the field remain ill-defined and open to dispute. According to Bruce Joyce, there are "no agreed upon concepts or modes which are known and used. . . . The curriculum field has no overarching 'metasystem,' known to most of its practitioners, which enables comparisons of and choices between all alternative approaches which are taken." In general, curriculum people still "do their own thing."[109]

On the other hand, Elliot Eisner points out that the "kind of science that has dominated educational research, . . . including [curriculum] development . . . uses knowledge provided by the social scientist as the primary bases for . . . management and control.[110] This has led to prescriptive models of curriculum and instruction, uniform methods of teaching and testing, and outcomes of learning that can be standardized and measured. This tendency toward scientific principles of curriculum making, and educational research in general, has resulted in nonexpressive and nonemotional forms of education, according to Eisner, and what he labels as "value-neutral," "technical," "cool," and "dispassionate objective."[111] The inference is that the Bobbitt-Tyler era, and its science of curriculum, has taken the joy, humor, and fun out of teaching and learning.

Although this analysis may be construed as an overstatement, especially by those who believe in behavioral, managerial, or systems approaches to curriculum, several curricularists today—like Mike Apple, Maxine Greene, Herb Kliebard, James Macdonald, Gail McCutcheon, and William Pinar—have lost faith in the ability of scientific principles and technical models to solve curriculum problems. Like Eisner, they have turned to various personal, esthetic, and linguistic concepts to formulate—or better yet, to reformulate—curriculum.

To some extent, the problem with curriculum is that its concepts and principles are abstract, not precise, and a good deal of subjectivity and inference is sometimes introduced in our curriculum discussions. Decker Walker feels that defining curriculum in abstract terms is a double-edged process: It "makes it harder to explain [its concepts and principles] to a person unacquainted with curriculum, but gives the serious student of the subject a more flexible and powerful concept." If we are to engage in curriculum dialogue and try to "improve it," we will have "to attend to wide ranges of interrelated processes."[112] However, the more processes or relationships we introduce, the more complex our discussion and the more we fall victim to our imprecision. But, then, we can argue that so much of education is already vague and fuzzy—and why should curriculum or more precisely the history of curriculum be any different?

Even though we cannot agree on the concepts and principles of curriculum, much less on a science of curriculum making, the field of curriculum is expanding, and certain trends are taking shape. During the 1980s, the notion of global competition has resurfaced, along with the cry for tougher standards and educational productivity. The academic curriculum is also being expanded and upgraded, and the idea of academic excellence is once more being debated in educational circles. The notion of a fourth R—computer literacy for students—is also being seriously considered (the authors would introduce a fifth R as well—Spanish because of our country's ethnic population trends), along with a renewed emphasis on science, mathematics, and foreign languages.

The field of curriculum is also maturing. It is moving beyond schools and including programs in business, industry, military, government, and health fields. It is also incorporating many disciplines, such as philosophy, psychology, sociology, and politics. Finally, the field is developing an international character, and curriculum specialists are adapting the tools of research methodology, computers, instructional technology, and systems analysis. In short, curriculum as a field of study is becoming more interdisciplinary, scientific, and qualitative.

CONCLUSION

From the colonial period to around World War I, curriculum was a matter of evolving subject matter. Some reform ideas concerned pedagogical principles, mainly as a result of European influence and the emerging progressive reform move-

ment of the mid and late nineteenth century. But these ideas were limited to theoretical discussions and a few isolated and innovative schools. The perennialist curriculum, which emphasized the classics and timeless and absolute values based around religious and then moral doctrines, remained dominant for the first 150 years of our nation's history.

The idea of principles and processes of curriculum began to take shape after the turn of the twentieth century, along with emphasis on scientific principles and progressive philosophy. Curriculum as a field of study, with its own methods and theories and ways of solving problems, has made real advances ever since the 1920s. Most of the advances have actually taken place since Tyler wrote his basic text on curriculum. Many of these advances are discussed elsewhere in this text.

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