AN INSTITUTIONAL HISTORY OF THE GED

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2.1 Introduction
This history of the General Educational Development (GED) credential was originally requested as one of a series of studies conducted by the University of Wisconsin-Milwaukee Employment and Training Institute in the late 1980s for then Wisconsin Superintendent of Public Instruction Herbert J. Grover. As part of his statewide initiatives to improve students' preparation for the world of work and to expand educational programming for teens identified as “at risk” of dropping out of high school, Grover sought data on the experience of teen and adult high school noncompleters who had secured GED credentials in the state. He asked the Institute researchers to analyze the growing use of the GED by 16- and 17-year-old dropouts and in-school youth, the low success rates of Wisconsin GED recipients (of all ages) in postsecondary education, and the issuance of GED credentials to candidates with grade school reading levels. The history was requested to help explain why a program requiring minimal educational coursework should be targeted toward those teens and adults who had unsuccessful school records, often resided in low-income neighborhoods, and showed serious behavioral problems.

The story of the GED’s founding was not what the Institute researchers had expected, and this history is far more critical of the GED test publisher than a “house history” typically provides (Stewart, 1992, 6). It does help explain the role of the American Council on Education (ACE) and its GED

1. The author is indebted to the members of her 1990 dissertation committee, who provided critical insights throughout her research on the history of the GED: Margo Anderson, Ann Lennarson Greer, the late Scott Greer, Michael Barndt, and Frank Cassell. The work of John Pawasarat, the late Philip E. Lerman, and former Wisconsin State Superintendent of Public Instruction Herbert Grover in assessing the use of the GED credential in Wisconsin and recommending reforms was invaluable. Kathy Van Hecke provided very helpful editing suggestions. The history draws on original source materials from the National Archives (NAB), the University of Iowa Blommers Measurement Resources Laboratory (Blommers Library), the American Council on Education archives (now at the Hoover Institute at Stanford University), and the University of Chicago Presidents’ Papers and Ralph W. Tyler Collection.
Testing Service in promoting the GED as “equivalent” to four years of high school and state department of education awards of high school diplomas to GED recipients who have not met their state-mandated course and competency test requirements (see Chapter 8). At the same time, the research studies in this book document the many negative aspects of the GED: the low payoff for the GED in the workplace (Chapter 5), the poor performance of GED recipients in the military (Chapter 6), the negative impact of GED policies on high school completion rates (Chapter 7), and the need for improved noncognitive skills among lower-achieving youth (Chapter 9).

This history of the GED explores how a multiple-choice test (along with a short general topic essay) became recognized as “equivalent” to high school completion by federal and state education officials. The GED was first introduced in 1942 during World War II as a college entrance exam for wounded servicemen, and then at the war’s end it was promoted as a substitute for states’ previously issued “wartime diplomas” for veterans returning to the states (Hess, 1946b). The test’s emphasis on reading, writing, and arithmetic derived in large part from the minimalist general education life-adjustment curriculum advocated by the American Council on Education in the 1930s and 1940s and the evolution of the Iowa Tests of Educational Development, the first GED test. This chapter explores the early years when the GED was presented as a vehicle for awarding high school degrees to returning war heroes and then was encouraged for use by high school dropouts who lacked military service but were able to pass the tests at the minimal standards set. At key periods in the 1960s and 1970s, decisions were made to lower the test’s reading requirements for use with younger teens, to market the test to school-age youth, and to distance the test’s subject matter away from Carnegie unit requirements, which were being imposed by legislators on the states’ traditional high school graduates. Finally, this history examines the responses of the ACE test publisher to state and national educational initiatives to improve high school instruction since the 1980s.

2.2 Origins of the “General Education” Curriculum: From Taylorism to “Tylerism”

Debates over appropriate curricula and standards for secondary education (whether college preparatory, vocational, or “general education”) have a relatively short history. At the end of the nineteenth century elite colleges interested in enrolling students with classical education backgrounds developed a common college-preparatory high school curriculum. In 1892, the National Educational Association convened a Committee of Ten, headed by Charles W. Eliot, president of Harvard University, that
endorsed four alternative tracks of college-preparatory study. All tracks included four years of foreign languages (Latin, Greek, German, French, or Spanish), four years of English literature and composition, three years of mathematics (algebra, geometry, and trigonometry), three years of science (including physics and chemistry), three years of history, and a limited number of electives. The committee recommended that all students, whether or not college bound, meet the same coursework expectations; the rationale was that this would give them “four years of strong and effective mental training” (Tyack, 1967, 385).

Initially, adoption of Eliot’s high school “unit” measurement—defined as a course offered five periods weekly for one academic year—was vigorously promoted by the Carnegie Foundation for the Advancement of Teaching, whose board of trustees was also headed by Eliot. The Carnegie Foundation used the clout of its pension fund to promote this system of recording school credits by mandating that college teachers would be eligible for Carnegie pensions only if their institution adopted freshman admissions standards requiring 14 high school “units” (Lagemann, 1983). Although the foundation soon embraced the development of college admissions tests as a more efficient technique for holding secondary schools accountable to college-determined standards, high school units continue to carry the Carnegie name. Meanwhile, rather than leading to a standardized curriculum, the “Carnegie unit” measure has allowed local school districts to offer a broad range of high school courses, including vocational training, while imposing a uniform amount of “seat-time” per course as necessary for high school graduation. The coursework measure persisted even after the National Education Association formally abandoned its support for the Committee of Ten’s college-preparatory curriculum and advocated that high schools offer both academic coursework and “practical” subjects, including business education, household arts, agriculture, art education, industrial arts, music, and physical education (National Education Association of the United States, 1918).

The so-called general education curriculum, which formed the underpinning philosophy of the GED test, was developed by progressive educators as a reaction against the college-preparatory track. Its minimalist approach was explained in large part by its origins in the scientific movement of the 1910s. Franklin Bobbitt, an education professor at the University of Chicago, advocated that the scientific management principles and time motion studies used by Frederick W. Taylor and his colleagues to increase worker productivity in manufacturing should also be applied to decisions about what to teach students in high school (Callahan, 1962). Rather than
relying on past traditions to determine the high school curricula, Bobbitt (1924) urged curriculum planners to conduct task analyses to identify the knowledge and competencies needed for specific work activities and to then measure attainment of the skills identified. Using the model of the factory, Bobbitt (1913) envisioned the student as the raw material, the teacher as the worker, and the ideal adult as the finished product. The curriculum expert would determine the skills a student needed, while the teacher's job would be to meet the expert's prescribed outcomes as quickly and efficiently as possible. Bobbitt expected all high school students to acquire only “general education,” which he defined as “that portion of the training, both foundational and functional, which is of general need, whatever be one's occupation or station in life.” Subjects not needed in daily life would be taken only by students pursuing specific occupational training (Bobbitt, 1924, 66). He argued, for example, that “activity-analysis” indicated that trigonometry was needed by engineers, but not by “typists, physicians or milliners,” and therefore should not be prescribed as a course for general education (Bobbitt, 1924, 67).

In the 1930s and 1940s, two men responsible for creating the GED testing program held particular prominence in the general education movement: Ralph W. Tyler, a dominant force in the field of curriculum evaluation, and E. F. Lindquist, who became the foremost authority on multiple-choice testing. Tyler's applications of “activity analysis” for his doctoral dissertation at the University of Chicago led him into the field of educational evaluation and helped shape his thinking on appropriate methods for determining the high school curriculum. Tyler's views on secondary education were likely also influenced by the short time that he had spent in high school. Tyler entered ninth grade at age 12 and was soon expelled for a school prank: adding skunk secretions to the paint used to coat the school radiators. Tyler's father, seeking to occupy the highly energetic and intelligent youth upon his reinstatement in school, arranged for him to attend high school in the mornings and to work afternoons and evenings in a local creamery. Although Tyler was employed nine hours a day seven days a week, he managed to graduate from high school at age 15. He went on to earn his undergraduate degree at age 19 while working 56 hours a week as a telegraph operator (Tyler, 1987).

In 1934 Tyler attained national prominence as a spokesman on high school reform when he was made research director for the evaluation staff of the Eight Year Study, a Progressive Education Association project supporting curriculum changes at 30 mainly affluent schools (Krug, 1964; Tyler, 1935). The initiative was supported with over one million dollars—a
staggering sum during the Great Depression—in grants from the Rockefeller General Education Board, which was committed to applying business management principles to schools and moving high schools away from the traditional college-preparatory curriculum. (Midway through the project, Tyler and most of his staff moved from Ohio State University to the University of Chicago, where Tyler was named university examiner and chairman of the Education Department.)

While Tyler collaborated with classroom teachers on development of course objectives, he and his staff prepared their own quantitative instruments to measure the students’ outcomes. As Tyler and his group explained, they distrusted the ability of the classroom teachers to be objective in scoring essay tests. They criticized teachers’ usage of short-answer questions as limiting “the number of principles which could be sampled because of the time required by the student to write out the answers” (Smith, Tyler, and the Evaluation Staff, 1942, 85). The multiple-choice tests designed by Tyler and colleagues—the experts—were heralded as providing objective assessments of student progress. Writing skills and creative thinking were not concerns since students would not be expected to share their own ideas on the new-style tests. The Eight Year Study’s quantitative measures also helped attract media attention and continued financial support. A *Time* Magazine cover story in October 1938 reported that one school’s pupils “came through with flying colors” on “the most searching [tests] of their kinds ever made” and included examples of the quantitative “test results”:

From Lincoln School in Manhattan, perhaps the top-ranking Progressive school in the U.S., which is subsidized by Rockefeller money and had two Rockefeller boys as students, groups of pupils last year went to visit coal mines, steel mills, farms, TVA. This experiment was financed by the Alfred P. Sloan Foundation. Last week, after careful tests, Ohio State’s Dr. Louis Rath, an evaluator for P.E.A., reported that in a ten-day trip and six weeks of related classroom study, high-school juniors gained 15% in consistency of their thinking, became markedly more liberal, [and] matured two years in thinking power. (Time, Editorial, October 31, 1938, 33–34)

The Eight Year Study brought Tyler support from the American Council on Education, one of the national groups championing the general education curriculum and a publisher of new-style tests. The council had been organized during World War I to involve the national associations of higher education in the war effort. One of its first objectives was to prevent college-educated men from being used on the battle lines in order to avoid “destroying
the reservoirs for the production of experts” and “the reckless waste of irreplaceable talent” (Capen, 1940, 42). Toward that end, ACE had developed tests for use in selecting, training, and assigning World War I military personnel. ACE continued its testing work after the war and maintained a membership of national education organizations, colleges and universities, state departments of education, city school systems, and private schools (Dobbins, 1968; Tyler, 1987). After World War I, ACE experimented with psychological examinations for college freshmen (supported by a grant from the Commonwealth Fund) and sponsored a Cooperative College Study in General Education (financed with Rockefeller and Carnegie money) to encourage colleges to develop new-style tests for appraising student outcomes in general education studies (Dobbins, 1968; Fosdick, 1962). By 1939, ACE was drawing income from annual sales of over two million copies of its new-style measurement tests. ACE used these financial resources and its national position to advocate for educational policies related to testing and curricula (American Council on Education, 1939).

To advance fundamental changes in high school curricula, in 1940 ACE published a report, *What the High Schools Ought to Teach*, authored by an ACE committee that included Tyler (Graham, 1940). The book recommended that schools prepare youth for the daily activities they would encounter in adult life through “general education” coursework in subjects such as personal problems, physical and mental health, family life, and social studies, along with paid and unpaid work experience programs. The book attacked the college-preparatory curriculum of English composition, algebra, science, history, and foreign language as “the vicious aspects of ninth grade” (Graham, 1940, 31). It went on to recommend that youth be taught to persist at work largely through part-time volunteer or paid work experience rather than vocational classes, arguing that a large portion of American workers held jobs requiring little skill or training.

### 2.3 The Basis for the GED Test Battery: Testing What Iowa High Schools “Ought” to Teach

E. F. Lindquist, a faculty member at the University of Iowa and one of Tyler’s fellow test writers for ACE projects, was the author of the first statewide tests written to measure “general educational development.” It was the need for speed in grading tests that had first led Lindquist to develop expertise in the new-style tests approach used for the Iowa testing program and adopted for the GED test—speed and the popularity of a statewide academic contest. Lindquist’s work in standardized test development began in 1929 when the University of Iowa initiated a contest,
the “Iowa Academic Meet,” to provide an incentive for academic achievement in high school. University faculty explained the need for the testing competition:

Accounts of dinners given to reward heroes of the gridiron, the track, the basketball floor, constitute a large feature in our high school papers, together with extended accounts of such games portraying in graphic detail the fine teaching or coaching because of which the contestants vied so fiercely. However, we look over these high school papers in vain for accounts of dinners in honor of pupils of outstanding achievements in English, mathematics, science or other activities that are presumed to furnish the basic activities by which high school pupils are educated. (Kirby, 1928, 1)

The first tests for the meet focused on Carnegie unit subjects taught in the Iowa high schools and drew upon state “courses of study,” commonly used textbooks, and classroom materials. In addition, Lindquist and his staff published “subject matter circulars” to guide teachers in preparing for the contests. Under Lindquist’s direction, the University of Iowa developed tests in 12 high school subjects: first-year algebra, plane geometry, English mechanics for grades nine and ten, English and American literature for grades eleven and twelve, general science for grade nine, physics, American history, world history, fourth-semester typewriting, and stenography. The tests were 45 minutes in length in order to fit into the normal class period and were later lengthened to 60 minutes (Peterson, 1953).

The academic contests were an immediate success, and within three years over half of the high school students in Iowa were participating. Local school winners competed at district contests, with a thousand students progressing to a state contest in Iowa City, dubbed the “Brain Derby.” The top two winners in each subject were announced at an awards banquet (Lindquist, 1930, 1970).

The first Iowa tests included a variety of matching, fill-in-the-blank, true-false, and multiple-choice questions. The English mechanics test required students to mark grammar corrections directly in their test booklets; some algebra and geometry items were computational and required open-ended responses. The typewriting test featured an actual typing demonstration, and the stenography exam included dictation exercises, but these two vocational tests were soon dropped. Given the popularity of the contest and the number of participants, the speed of scoring became increasingly important to question design. Consequently, during the early years of the competition, Lindquist converted many of the questions to multiple-choice
items that could be marked on separate answer sheets and graded quickly by staff and volunteers. Julia Peterson, one of Lindquist’s colleagues, described the advantages of the testing format in her 1953 history of the Iowa testing program:

Local school staffs administered and scored the first set of tests, computed local averages, and reported their results to Iowa City in nine days. Administration and scoring of the district tests were also done locally under supervision by the superintendent of the host school and assistants from nearby schools, duly approved by the central office. With up to 24 pupils qualifying from each school, 2,000 “whiz kids” might assemble in a single district—quite an invasion for the smaller towns to handle. The tests had to be scored the same day—or night—so that results could be announced promptly to anxious contestants. In the final contest in Iowa City, test scoring was done by the chairman’s colleagues and staff; again, scoring was virtually curbside, to permit announcement of all winners at the banquet on the second evening. (Peterson, 1953, 5)

The university provided staff time for development of the tests and supervision of their use, with schools paying for the test booklets and administration at the local level. This modest beginning provided the University of Iowa with test scores from thousands of students in the state and laid the basis for what would become a national testing industry. After Lindquist was named program director in 1931, he discontinued the district contests, renamed the event the State Scholarship Contest, and relabeled the test battery the Iowa Every-Pupil Achievement Tests. Lindquist required school districts entering the competition to test their entire student bodies so that he could develop statewide norms for each course area, conduct “postmortem” test item analysis, and experiment with improvements in test questions and format. In 1935, Lindquist began reporting school rankings to each school in confidential summary reports (Lindquist, 1970; Peterson, 1953).

Lindquist and his staff constantly strove to improve the scoring of the tests at the lowest possible cost. Over the years they invented everything from a device for normalizing the moisture content of answer sheet paper to a high-speed electronic scoring and recording machine. After developing the separate answer sheet, Lindquist introduced a scoring procedure to discourage students from guessing on their test answers (Peterson, 1953). Lindquist also worked to change the type of test questions used, efforts spurred by his association with Tyler and others in the general education movement.

During his collaboration with Tyler on test development for ACE, Lindquist came to view the Iowa contest tests as extremely limited in their
approach to knowledge, placing too much emphasis on memorization and the competitive nature of the “Brain Derby.” He resolved to revise the Iowa testing program by experimenting with test items used by his ACE colleagues in order to advance those educational objectives he viewed as most important. In 1938, Lindquist sought university funding to develop a new high school testing program “that would very significantly improve the quality of educational guidance in Iowa schools, [and] that would counteract the ‘subject matter consciousness’ which now permeates high school teaching.” Echoing the themes of the Eight Year Study, Lindquist argued to his dean that the Iowa high schools’ ninth- and tenth-grade instruction in mathematics was “futile, if not worse” (Lindquist, 1935). Lindquist also tried to eliminate the academic contest. Campus administrators, however, refused to drop the event, given its great popularity throughout the state and its importance in recruiting academically talented high school graduates to the state university (Lindquist, 1970).

In an October 1941 address to school administrators, Lindquist openly voiced his concern about the limitations of the Iowa Every-Pupil Tests and other course-oriented examinations: “The selection of content of the tests used has been based on an analysis of the things now being taught in the school subjects, not on our or anyone else’s notion of what ought to be taught in these subjects” (Lindquist, 1941, 14). What were needed, Lindquist (1942a) contended, were tests of general educational development that would force teachers to redirect their focus to skills not emphasized in their current classes.

America’s entry into World War II provided the climate in which Lindquist could permanently discontinue the spring testing contest and introduce his new test battery, the Iowa Tests of Educational Development (ITED). “We had spent five years developing the materials and planning procedures for a new high school program,” Lindquist later explained, “and thus were all set to go when the time seemed opportune” (Lindquist, 1970, 11).

The ITED had nine subtests in the battery and required about seven and one-half hours to complete. The ITED test questions were unrelated to specific high school coursework, and Lindquist (1942b) initiated new practices of administering the same test battery to students in all four grade levels and at the beginning, rather than the end, of the school year. Consistent with the progressive educators’ emphasis on teaching reading in high school, three ITED reading tests equated high school performance with the ability to understand reading passages in the social sciences, natural sciences, and literature. These tests, which Lindquist viewed as the heart of his ITED battery, provided paragraphs for students to read and interpret through a series of
multiple-choice questions. The approach was considered avant-garde since it had not been used previously in published standardized tests (Peterson, 1953). As Lindquist explained, “There are many different kinds of situations in which a person has occasion to use his education, but that which lends itself most readily to testing is the reading situation—that in which he interprets, evaluates critically, and employs in his own thinking, information and ideas which are presented to him in print [emphasis added]” (Lindquist, 1944, 367). The math test focused on practical problems in arithmetic, the only math Lindquist thought the majority of students needed. Accordingly, the ITED did not test knowledge of high school algebra, plane geometry, solid geometry, or trigonometry, but instead measured “the ability to deal with numbers, and . . . problems on such things as estimating expenses on home repairs, handling simple business transactions, figuring out costs on your own insurance, taxes, investments, installment purchases, and so on” (Lindquist, Van Dyke, and Yale, 1948, 34–35). Consistent with the ACE’s tract What the High Schools Ought to Teach, the test excluded composition exercises, questions on foreign languages, and measures of outcomes from vocational education and other elective courses.

2.4 Advocating Educational Changes during the War Years

Like Lindquist, other educational reformers seized upon America’s entry into World War II as an opportune time to promote their new-style multiple-choice tests, general education curriculum, and testing-for-credit alternatives to the Carnegie unit system. Within two weeks after the bombing of Pearl Harbor, the College Entrance Examination Board announced suspension of its College Board essay examinations in favor of the Scholastic Aptitude Test (SAT), which the board had been trying to promote since 1926 (Lemann, 1999). Six months after the Pearl Harbor attack, Robert Maynard Hutchins (1942) announced that the University of Chicago would begin awarding Bachelor of Arts college degrees in general education to students completing only two rather than four years of college. In an article in the Educational Record defending his position, Hutchins rationalized that

the [bachelor's] degree is universally recognized as something everybody ought to have if he can scrape up the time and money to get it. It is time-honored in the sense that people have wanted it for a long time. It is not universally recognized as meaning anything except graduation from some kind of college. (Hutchins, 1942, 570–571)

The credential, Hutchins maintained, had served to “thwart the national reorganization of American education.” Hutchins therefore proposed “to
give it meaning and function and to use the recognition and honor in which it is held for good educational ends” (Hutchins, 1942, 571–572). Similarly, the American Council on Education began using foundation funds to prepare a one-year high school general education program to introduce as a response to the federal government’s reduction in the military draft age (American Council on Education, 1943a; Zook, 1943).

The vehicle Tyler, Lindquist, and the ACE staff used to further their general education curriculum and tests was a civilian panel appointed to help the military plan for the off-duty entertainment of U.S. troops as America prepared for war. In early 1941, the military established a Joint Army and Navy Committee on Welfare and Recreation to address soldier morale by focusing on entertainment programs, motion picture schedules, Red Cross services, and control of prostitution and venereal disease. Its Subcommittee on Music coordinated musical entertainment at the military camps. Its Subcommittee on Education, for which ACE offered to provide staff, was charged with arranging discussion groups, library services, correspondence course programs, visual education, and pamphlet materials for use by military personnel in their leisure hours (Advisory Council of the Joint Army Navy Committee on Welfare Education, 1943; Aiken, 1942; Subcommittee on Education, Welfare, and Recreation, 1942).

When the War Department established the Army Institute of Correspondence Study (later renamed the United States Armed Force Institute, USAFI) at the University of Wisconsin in Madison in April 1941, ACE used the center as a focal point for promoting both its new-style testing and its curriculum changes (Aiken, 1942; Keppel, 1943; Zook, 1943). ACE successfully lobbied the Army Institute to pay for creation of new-style tests for military courses as well as for correspondence courses being offered to service personnel—even though the correspondence courses that the University

2. Reaction to Hutchins’s announcement was almost universally negative. The president of Allegheny College criticized the so-called reform as short-changing students and denounced Hutchins’s excuse of the war to promote his changes. The plan was prepared, he charged, “as a coldly calculated, cleverly timed, permanent change” (Trolley, 1942, 596). The president of the University of Texas disagreed with Hutchins’s claim that the contemporary bachelor’s degree lacked a clear definition. College, he maintained, “required fifteen good Carnegie units to enter, and it took four years and 120 semester hours of good solid content to get out with its degree” (Rainey, 1942, 586). He urged other schools to ignore the University of Chicago’s action, observing that any school willing to drop intercollegiate football, as Hutchins had recently done, had nothing left to fear from public criticism. In 1950, the University of Chicago, finding that its “bachelor’s degrees” were not generally accepted, returned to the traditional four-year college degree program (Wechsler, 1977).
of Wisconsin was collecting from around the country already had final exams (Aiken, 1942).

Accordingly, in May of 1942, the military contracted with the University of Chicago, whose examination staff was headed by Tyler, to develop subject matter exams in specific fields of study. They rewrote 700 end-of-the-course tests for existing correspondence courses, replacing the colleges’ essay examinations with new multiple-choice questions promising “greater comparability and less danger of error” (Detchen, 1947, 467). In short order, a three-man team of testing experts—Tyler, Lindquist, and E. G. Williamson (a psychology professor from the University of Minnesota)—gained authority through the Army Institute/USAFI to review the teaching materials for all correspondence courses, to broker with colleges and universities for recognition of college credits for military courses, and to “appraise the comprehensive examinations developed to measure the competence of the soldier” (American Council on Education, 1943b; Subcommittee on Education, Welfare, and Recreation, 1942, 8–9).

Throughout the war, the testing experts pressed for civilian educational reforms, including greater emphasis on general education, an end to Carnegie unit coursework standards, and adoption of tests alone to measure the educational advancement of military personnel. The singlemindedness with which Tyler and his colleagues promoted multiple-choice testing to the exclusion of other measures of achievement is evidenced in the minutes of their meetings with the military, which are now stored at the National Archives. The experts objected strenuously in the summer of 1942 when they learned of the Navy Department’s proposals to give credits for specialists’ courses and for “character and leadership shown by ratings and promotions” (Advisory Committee to the Army Institute, 1942a, 1). They charged that such credits violated ACE’s positions that credit recommendations should be made only by civilian educators and that only norm-referenced tests be used for credit determinations. The experts even objected to the issuance of certificates for completing military courses, warning that the service personnel might later present these certificates to colleges for credit. When a military officer proposed issuing certificates that would report competence demonstrated in major course objectives, Lindquist protested that the military could distribute coursework certificates only if his evaluation team had first developed civilian norms for each objective. A counter-suggestion was to issue soldiers papers upon their completion of military training programs, which would state that they were “ready” to take examination. The military rejected the idea as insulting to the service personnel (Advisory Committee to the Army Institute, 1943b).
The testing experts spurned job performance as a measure of course competence. They turned down a proposal to develop tests to allow college credit for foreign language skills that service personnel were acquiring in Turkish, Dutch, Moroccan, Arabic, Japanese, Russian, and other languages not typically offered in American colleges. The experts dismissed these skills as “scarcely of the quality that merits consideration for credit” (Advisory Committee to the Army Institute, 1943a, 2). They opposed recommending credits for Army training in radio maintenance, for one example, unless end-of-course tests were developed and first given to samples of high school and college students, ignoring the obvious alternative measure of successful performance on the job (Aiken, 1942). In another case, the experts described tests that might be considered appropriate for a military course in contemporary European history. Here, the ACE experts, with their life-adjustment curricular emphasis, advised the military that they could test the student’s knowledge of events along with true-false attitudinal questions, calculating “the degree to which the student accepts current prejudice and the degree to which he is open minded” (Aiken, 1942, 6).

2.5 Testing General Educational Development in the Military

Going well beyond the Subcommittee on Education’s original purpose of encouraging off-duty educational programming, the testing experts recommended that for-credit exams be made available to all service personnel. They thought that even those who had not enrolled in military courses, taken correspondence courses, or used self-instructional materials should be included. They urged USAFI to finance this new testing work to appraise the level of “general competence” reached by personnel through any type of experience while in the armed forces. To spur this work, Tyler, Lindquist, and Williamson began searching for what they described as “a battery of tests of general educational competence; to enable the school or college to effect an appropriate educational placement of the applicant in terms of his indicated educational maturity and the extent to which he has met the general educational requirements of the school or college” (American Council on Education, 1943b, 13). The meeting minutes of the testing advisers acknowledged that “there might be some search made for a body of common experiences which would be typical for the men who will have undergone the Army ‘culture’ ” (Army Institute Project Staff, 1942, 3), but this approach was never pursued. Instead, the group moved quickly to identify an existing test battery that met their list of criteria: immediate availability, ease of administration, availability of existing norms, usefulness for counseling, minimum overlapping of tests, and the extent to which the tests recognized
skills and knowledge resulting from “maturity” rather than mastery of traditional high school content. Two intelligence tests, the Army’s General Classification Test and the American Council on Education Psychological Examination, were considered and rejected. Tyler’s comprehensive exams used by University of Chicago students were deemed too “indigenous” to that school except for use as subject matter tests. The Eight Year Study tests on logical reasoning, interpretation of data, and social sensitivity were recommended for use in granting college credit rather than for admissions purposes. (The group suggested that colleges could grant a year’s work, 32 semester hours of credit, based on measures of “social maturity.”) The experts agreed that the best tests for reading, general information, and English were the Iowa Tests of Educational Development (ITED).

The Iowa tests had features that were of critical importance to Tyler and Lindquist. The ITED reflected the progressive educators’ agenda for practical coursework that downplayed both the classical and vocational high school curricula and emphasized what the progressives believed high school ought to teach rather than current course offerings. The multiple-choice test battery appeared to be “objective,” thus avoiding subject matter debates that would inevitably arise from essay exams, the commonly used tests of the day. The ITED tests had the added advantage that staff with little or no education in test taking (or knowledge of high school subjects) could grade them. They had already been normed on high school students in Iowa (Lindquist, 1944, 1970). Lindquist proposed that USAFI use his Iowa test battery for the first GED test battery in order to implement the testing program as quickly as possible (Lindquist, 1970; Peterson, 1953). While the Iowa tests were totally unrelated to military life or to the war experience, they would allow the testing experts to compare veterans on the same scales used to rank high school students in Iowa.

At its October 1942 meeting, the three-man advisory team selected five of the nine Iowa tests to use for their test battery (Special Committee of the Army Institute, 1942). Williamson, in particular, wanted the Iowa tests shortened so that time would be available to counsel each veteran. For his part Lindquist supported shorter tests to simplify the scoring and to encourage more service personnel to take the exams. The group concluded that the three Iowa reading tests, the general mathematics test, and the grammar (“Correctness and Effectiveness of Expression”) test, altogether requiring 265 minutes, would constitute a suitable time frame for their proposed “general educational development” (GED) test battery. Lindquist opposed the addition of essay exams, regardless of whether the essays were evaluated by military personnel or forwarded to the colleges for review. He
urged that he be allowed to keep the high school GED test battery as nearly correlated as possible with the current ITED so that his staff could concentrate on writing questions for a college-edition GED test battery (Feister and Whitney, 1968).³

Tyler suggested that the new testing program be introduced during the war, and that the first to be tested should be injured service personnel who were being discharged or transferred into veteran rehabilitation programs. The advantages of using early war casualties were laid out in the minutes of his meeting with the Army Institute Project staff:

1. The way will be led by certain prestige institutions. 2. It will be considered a patriotic duty to help in the situation. 3. With high school and college enrollments depleted as they are, and with the great possibility that the government will subsidize the education of these men, institutions will be happy to cooperate for economic reasons. (Army Institute Project Staff, 1942, 1–2)

At this stage, the GED test was offered as one of several tools for guiding school administrators in student placement (American Council on Education, 1943b), and ACE held meetings around the country to lobby for its acceptance. ACE distributed a civilian version of the high school-level GED test, which it encouraged colleges to use with their current students and civilian applicants. The idea behind this test was to develop local campus norms for admission of veterans who had not completed high school or who had poor high school records (Zook, 1944). ACE assembled representatives of the regional college accrediting associations, all of whom subsequently endorsed the concept of using the GED test for college admissions and credit. ACE held meetings for college administrators where it warned that some colleges might repeat the post–World War I

³. Other civilian consultants to the military recommended using the Iowa Tests of Educational Development on a temporary basis and expressed concern that colleges would be dissatisfied if the battery were continued indefinitely (Advisory Committee to the Army Institute, 1942–1943; Special Committee of the Army Institute, 1942). They recommended that the mathematics test be “stepped up in difficulty and include a bit more of formal high school mathematics”; that the literature section include more references to significant “classics”; that the social sciences reading test include more environmental concepts; and that the natural sciences reading test provide more evaluation of data used to support conclusions (Advisory Committee to the Army Institute, 1942–1943, 3). These changes were not made, however, even though Lindquist worked with Tyler’s USAFI examination staff at the University of Chicago for two years constructing additional forms of the high school and college-level GED test (Lindquist, 1970).
“indefensible practice of liberal blanket credit for military experience” (Zook, 1944, 206), tempting students to “shop around” for the school or college where they could obtain the largest number of credits. Ralph Tyler (1954) later explained that his opposition to “blanket credit” stemmed from concerns that many veterans admitted into college after World War I and granted college credits based on their wartime records were unprepared for college-level work or were enrolled directly in advanced coursework that they could not handle, causing them to drop out of college altogether.

By mid-1943, ACE reported that over 400 colleges and universities had officially endorsed its recommendations for the GED entrance test and awarding of end-of-the-course test credits (American Council on Education, 1943b; Zook, 1943). Using funds from the military, ACE distributed 50,000 booklets describing its course credit recommendations and hired staff to stump the country arguing for accepting the testing programs. At first, the ITED/GED test battery was presented not as a credentialing device but solely as a tool for placing returning war veterans in school and for determining how these men and women compared to the student populations traditionally enrolled at each institution. Thus, Lindquist and Tyler offered the fruits of the Iowa “Brain Derby” to save veterans from wasting time back in high school and to allow those with sufficient “general educational development” to advance directly to college.

2.6 Using the ITED/GED Test as an Alternative to High School “Wartime Diplomas”

While the colleges were debating policies to use for injured war veterans and future GI enrollees, local school districts were faced with the immediate problem of high school students enlisting or facing the draft into military service. Within months after the United States entered World War II, the U.S. Office of Education War-Time Commission (U.S. Office of Education War-Time Commission, 1942) urged high schools to provide accelerated education for teenagers desiring to enlist. The Commission recommended summer school, longer school days, and special scheduling to allow part-time attendance by students who farmed or secured jobs in wartime industries. Schools also were encouraged to permit students to graduate early so that they could enter the military or college in the spring. When the draft age was lowered from 20 to 18 in November 1942, local educators debated whether to encourage their students to seek deferments or to grant them diplomas before they left high school. In December of 1942,
Wisconsin passed a law requiring high schools and teachers colleges to grant diplomas to all seniors who went into the armed services (Advisory Committee to the Army Institute, 1942b). By October 1943, at least 11 states were providing diplomas for youth who had enlisted during their junior or senior year of high school (Elicker, 1943). Delaware “war diplomas,” for example, were given to veterans who had completed their junior year and entered the service before graduation, and read, “Serving with the colors; diploma on completion of eleven (or eleven and one-half, as appropriate) years” (Hess, 1946b, 102). Iowa allowed local high schools to issue a “Special Veteran’s Diploma” for two years of high school, provided that the veteran had taken American history and civics. One high school principal who favored this approach for enlistees with satisfactory high school records wrote in the National Association of Secondary-School Principals (NASSP) Bulletin, “If your conscience balks, your conscience needs education. . . . No harm can possibly come from the issuance of a diploma under such conditions. The candidate will have the equivalent before he is through, so that the spirit will be satisfied, though the letter may be lacking” (Hill, 1943, 40).

ACE cited the argument it had used against “blanket” college credits for war veterans’ military service as its primary reason for opposing state and high school issuances of “wartime diplomas” to teens leaving for war and to GIs returning to the states from the battlefield (regardless of whether they were interested in college). The numbers involved were considerable. According to later military estimates, nearly 10 million World War II veterans had not completed high school, although half had some high school education (Lynde, 1945). Since neither the military nor the federal government could grant high school credentials, ACE staff worked to convince the various state departments of education of the value of using their GED test as the basis for awarding high school degrees. ACE actively lobbied to discourage states from awarding high school “wartime diplomas” to returning veterans. It also successfully thwarted a wartime attempt by the Marine Corps Institute to provide high school accreditation through the New York State Board of Regents; this would have allowed development of an alternative high school credential that more closely mirrored traditional high school requirements (Advisory Committee to the Army Institute, 1943b).

In early 1943, Lindquist prevailed upon the War Department to ask over 1,000 high schools to participate in a GED norming study, announcing: “In the near future these tests will be given primarily to men being discharged because of wounds or illness—at the time of general demobilization the
tests will be given to a much larger group.” In all, 35,000 high school seniors from around the country were given one of the GED subtests for the norming study—thus providing Lindquist with a national database for his testing work.

Given ACE’s aversion to granting high school “wartime diplomas” to young recruits who entered the military before completing their senior year, one might have expected that the standard set for passing the GED test at a score deemed “equivalent” to high school would be quite high. On the contrary, ACE’s Committee on Accrediting Procedures selected the **seventh percentile** as the recommended cut score for passing each GED subtest—that is, the score higher than only 7% of high school seniors tested for the norming study but lower than the other 93% of the high school population tested (United States Armed Forces Institute, 1944). Lindquist also decided not to penalize test takers for guessing, a procedure he had introduced in the ITED. As a result, for most of the GED subtests the seventh percentile required answering only one or two questions above that which could be achieved by random guessing (Spaulding, 1943). Only on the grammar test were candidates required to answer well above chance (i.e., to answer 15 questions above chance out of 100) to pass (United States Armed Forces Institute, 1944).

Because the Iowa test’s content served as the basis for the GED test, the questions were geared toward the interests and knowledge base of traditional Iowa school students rather than veterans. According to a contemporary reviewer, *none* of the reading passages on the social studies test related to war, geography, or military strategy, and nearly 40% of the items on the

4. Lindquist did not sample those schools most likely to enroll the largest number of adults—evening, technical, vocational, or continuation schools. Nor did he sample two-year high schools or Negro schools.

5. The “Tables for Converting Raw Scores to Standard Scores” indicate that the raw score required to pass the GED mathematics test at the seventh percentile (a standard score of 35 on the GED’s 20-to 80-point scale) was 11 questions correct out of 50. Since each question on the mathematics test had five multiple-choice stems, a student guessing on all 50 questions would on average answer 10 correctly, and the ACE-recommended score required only one question correct above chance. In fact, the seventh percentile on the mathematics tests marked the lowest possible score above the chance score that could be achieved by random guessing on all test items. In the GED test of reading in social studies, the candidate again was required to answer only one question above chance—out of 73 questions. In the GED test of reading in the natural sciences, the candidate was required to answer only 2 questions above chance out of 65. In the test of reading in literature, the candidate was required to answer only 3 questions above chance out of 85.
grammar test related to punctuation, “with a heavy concentration on the use of quotation marks for indicating conversation” (Conrad, 1949, 41). Later, Lindquist would begin describing the GED test as measuring the “lasting outcomes” of a high school education, even though he had designed the ITED to help teachers measure academic progress during not after high school. Ignoring the GED’s origins as a test for Iowa high schoolers, Lindquist (1944) also began citing a whole series of wartime experiences (i.e., international travel, exposure to foreign languages and social customs, technical training) that presumably were being quantified through the ITED/GED test. These wartime concerns were notably missing from the Iowa test questions and subsequent test batteries based on the ITED. Given the ITED/GED test’s emphasis on the three R’s rather than on knowledge more likely acquired through military experiences or in the current high school-level courses, many elementary school completers could pass the test, as evidenced by the Iowa test scores for students entering their freshman year. Test score data from the Iowa Tests of Educational Development indicate that the cut scores recommended for passing each GED subtest were achieved by a majority of Iowa students at the beginning of high school. Since the GED test did not reduce test scores for wrong answers, the percentages of Iowa freshmen passing would have been, if anything, even higher.

While Lindquist had provided percentile ranking scores to Iowa students for the ITED, none of the early GED test manual materials identified the seventh percentile as the recommended cut score. Nor did they discuss why such a low norm was selected as the appropriate passing score. Instead, three years into the program the ACE staff (Detchen, 1947) announced that only 80% of the seniors tested could pass all five tests, even though none of the high school seniors in the 1943 norming group actually took more than one subtest (Bloom and Statler, 1957; United States Armed Forces Institute, undated). Early high pass rates for the GED test among veterans tested also appear to refute this claim (as discussed below).

6. Lindquist (1946) provided ITED test scores comparable to the norms recommended for passing the GED test battery to the coordinator of the Veterans School in Dubuque. See also the norming tables in College of Education, “Grade Percentile Norms for the Iowa Tests of Educational Development” (1943). Published grade-percentile norms for the ITED at levels comparable to the GED pass scores showed that even when penalized for wrong answers 81% of freshmen entering Iowa high schools could pass the mathematics test, 70% could pass the reading test in the natural sciences, 60% could pass the reading test in literature, 57% could pass the correctness and effectiveness of expression test, and 55% could pass the reading test in social studies.
2.7 Promoting the General Education Curriculum

A less successful initiative of ACE and its testing experts during the war was their promotion of the general education curricula. The primacy of the experts’ interest in general education was seen in an argument at a December 1942 advisory committee meeting with the military. Even with Russia under siege and most of the European continent under Axis control, Lindquist expressed regret that the testing staff had to devote its major attention to technical courses. He was anxious to develop general education programs. In reaction, a school superintendent from Michigan observed that he “thought the primary job of the committee was to promote the work of the Army Institute in winning the war and not to promote any particular type of education” (Advisory Committee to the Army Institute, 1942b, 3).

In spite of pressure from the ACE advocates, the Army Institute refused to finance coursework planning for general education; the Institute’s position was that such courses should be developed at university, rather than military, expense (Advisory Committee to the Army Institute, 1943a). At one Advisory Committee meeting, the principal of the Milwaukee Vocational School questioned whether the testing experts’ own colleges would accept the general education curriculum they were promoting for the military. He was told that “acceptance of the accreditation principle based on tests was a powerful first step” (Advisory Committee to the Army Institute, 1943b, 3).

In June 1944, the month of the Allied invasion of Normandy, the American Council on Education (1944) issued a detailed outline for a general education curriculum for the last two years of high school and first two years of college. Vocational education was downplayed, and the only math recommended was high school algebra. A single, nondiversified curriculum was proposed that would lead the graduates to a “common set of ideals” and “common outlook on life.” Among the life-adjustment courses recommended were personal and community health, problems in social adjustment, marriage and family adjustment, and development of American thought and institutions. ACE claimed that this curriculum would address the “war emergency” and was also necessary to guide colleges in redesigning higher education after the war (Zook, 1943). This curriculum and the “general education” test supporting it garnered little interest, however, at the college level (as seen below).

2.8 Institutional Support for GED Testing at the War’s End

The American Council on Education’s success in furthering its testing-for-credit program at the war’s end was due in no small part to the considerable financial support it received from the Rockefeller General Education
Board and the Carnegie Corporation. Both of them were eager to champion the expanded use of the new-style multiple-choice testing (Zook, 1946). In addition, ACE had secured copyrights for the GED, subject matter, and end-of-the-course tests prepared for USAFI by the Examination Staff at the University of Chicago. ACE sold its test booklets at cost to the military and at competitive prices to educational institutions and signed a contract with the University of Chicago to serve as its publishing agent for the tests.

The accrediting associations and several other national agencies provided financial support for developing a 900-page ACE guide (Tuttle, 1944), listing courses provided in the military along with credit recommendations. The Veterans Administration purchased 25,000 copies for free distribution to high schools and colleges (Zook, 1946, 1947). USAFI carried on a voluminous correspondence with educational institutions answering their specific concerns and clarifying the content of coursework and also provided transcripts to service personnel summarizing the extent of their military training. At the same time, USAFI guidelines emphasized the military’s “hands-off” policy toward determining which military activities were deserving of college or high school credits (Sims, 1974).

To facilitate GED testing outside the military, in 1945 ACE established the Veterans Testing Service (VTS) at the University of Chicago to distribute GED tests for use in credentialing war veterans as high school graduate equivalents. In January 1946, Tyler reported that the VTS had contracted with 58 civilian institutions, including high schools and colleges, to handle GED testing for discharged personnel (Advisory Committee to the United States Armed Forces Institute, 1946). Three years later, ACE President Zook was able to announce, “Notwithstanding the many questions which may properly be raised with respect to the GED tests, it seems to me clear that we shall not again return to a system which requires actual attendance in class as an indispensable element in receiving academic credit” (Zook, 1948, 241).

### 2.9 Acceptance of the ITED/GED as a College Entrance Exam for Veterans

The task of selling the GED as a college entrance exam was greatly facilitated by the enthusiastic reception war veterans received upon their return to the states and by federal legislation that supported their enrollment in colleges and universities. The Servicemen’s Readjustment Act, nicknamed the GI Bill of Rights by an American Legion ex-newspaperman, was unanimously passed by Congress in the summer of 1944. In all, over two million World War II veterans would attend college under the GI Bill (Olson, 1974).
Given postwar patriotic sentiments, the maturity of veteran college applicants, and the GI Bill funding, it is not surprising that whenever possible, campuses sought to accept veterans who had dropped out of high school to fight in the war, but who possessed sufficient academic skills to handle college-level work. Procedures for admitting high school noncompleters varied widely; most surveyed colleges accepted the GED test as a basis for admitting veterans, and about half indicated no restrictions other than a passing score on the tests (National Association of Secondary-School Principals, 1948). Most schools gave veterans preference over nonveterans for admission and praised their seriousness in college, noting their maturity and stronger motivation (Atkinson, 1949) as well as their determination in spite of having fewer high school prerequisites (Roeber, 1950). Several studies, however, raised questions about the long-term efficacy of using the GED testing route for college. A study at Indiana University attributed veterans’ higher grade point averages to their age rather than their military service. The study warned that the quality of veteran students was declining because “the present entering veterans are simply younger, and, therefore, more like the non-veteran students” (Shaffer, 1948, 205). A second Indiana study reported that GED-certified veterans earned poorer grades and had higher attrition rates, and recommended raising the total GED test score required for college admission and limiting GED testing to persons over age 20 (D’Amico, 1953). Another study of 16 colleges found that veterans who never left the States generally earned better grades than those who served overseas, with or without combat duty (Olson, 1974).

2.10 States Adopt GED Credentials: Giving Veterans “the Benefit of the Doubt”

Most state departments of education supporting the GED test as the basis for veterans’ high school diplomas preferred passing scores set low enough to ensure credentials for nearly all veterans tested. After all, these applicants were soldiers, sailors, marines, and airmen who would have been offered state high school “wartime diplomas” had it not been for ACE’s opposition. In 1946, ACE staff held conferences for state departments of education staff around the country to promote the GED test, and the NASSP published two surveys of the policies evolving in each state to grant equivalency certificates (Hess, 1946a, 1946b). Several states awarded credits for military activities using Carnegie unit course-completion standards, and a few still gave “wartime diplomas.” Minnesota recognized credit for courses in special military service schools, considering 160 hours of class work equivalent to one high school credit, whereas Mississippi recognized
military coursework as one high school unit for each 180 clock hours or five weeks of attendance.

But such “seat-time” requirements were the exception. A total of 25 states granted high school credentials using the GED test, and 30 states allowed their local high schools to grant diplomas to veterans on the basis of the GED test. Commonly, the state credential was called a High-School Equivalent Certificate. Local schools were often allowed to award high school diplomas, usually based solely on the GED test scores. Some states, however, also required specified courses (typically, American history and civics) and a minimum number of Carnegie units (usually equaling one or two years of high school). Most states followed ACE’s recommendations for setting low passing scores. By the fall of 1946, all but four states were issuing high school certificates or diplomas to veterans based on the GED test (Hess, 1946b). The importance of the candidates’ veteran status to the public’s acceptance of the GED high school equivalency testing program was acknowledged by a test reviewer, who in an article for the Third Mental Measurements Yearbook identified the critical limitations of the GED test:

There are . . . fundamental questions regarding accreditation by examination which the authors of the Tests of General Educational Development have apparently failed to face. First, written examinations fail to cover adequately the laboratory or field experiences, which practically all good courses provide. Second, written examinations fail to cover such intangibles as the social and other benefits from class discussion, the favorable emotional orientation toward a subject-matter field created by an alert, stimulating instructor, and the moral and ethical values flowing from a qualified teacher successfully leading an interested classroom of students. To deny such intangibles is to deny most of the usefulness of face-to-face teaching. Finally, there is the question whether it is desirable to permit an A-student to “get by” with a barely passing performance on an academic examination, when he might well have done distinguished work, had he taken the course. (Conrad, 1949, 36)

The reviewer went on to expose the generally unspoken rationale for acceptance of the GED credential: “However, the war has created special circumstances; and we may be entitled to give the veterans ‘the benefit of the doubt’ ” (Conrad, 1949, 36).

7. Four states had high school equivalency certificates based on comprehensive exams predating the GED: New Jersey since 1914, Connecticut since 1935, New Hampshire since 1937, and Maryland since 1941 (Hess, 1946a).
Data were not published on the number of GED credentials issued in the early years, but the director of USAFI later estimated that 586,000 military personnel were tested. The Veterans’ Testing Service (VTS) staff estimated that from the war’s end to the summer of 1947 about one million tests were administered to persons who had been released from the services (Dressel and Schmid, 1951). The number of VTS agencies established throughout the United States by state departments of education and educational institutions to conduct testing totaled over 560 by 1948.

Not surprisingly, given the low cut scores established and the levels of reading, grammar, and math skills tested, the rate of veterans passing the GED test was exceedingly high. In the first years of the program, VTS reported that 92% of veterans taking the GED test met the recommended standard for a high school diploma. At the Chicago Public Schools testing center, where 6,600 veterans were tested from June 1945 to November 1946, the pass rate on the GED test was 86%. The three reading tests proved the easiest for veterans, with a staggering 98% passing each of these subtests; 95% passed the general mathematics test. Pass rates were lowest (87%) on the grammar test (with its heavy emphasis on use of commas and quotation marks), the only subtest that required a passing score well above chance.8

In Los Angeles a breakdown of 3,000 veterans tested failed to reveal any relationship between the percent passing the tests and their years of schooling. ACE argued that the lack of correlation between GED scores and high school units completed was to be expected since the GED test was designed to measure long-term educational outcomes gained through war experience as well as schooling (Dressel and Schmid, 1951). Another study, however, of soldiers tested upon entry to the service before they had received any training or military experience found only a gradual increase in mean GED scores for each year of high school completed, with the standard deviation of such size that scores could not discriminate among years of schooling. After citing high correlations between GED test scores and the Army General Classification Test, the study concluded that “there is very little evidence for the validity of the GED, High School Level, as a measure of educational development apart from general mental ability” (Mosel, 1954, 133).

In 1947, the American Council on Education scored a major marketing advance by securing the support of the New York Education Department to issue GED credentials to high school dropouts who had not gone to war

8. Nearly all of the veterans tested were former students at Chicago public high schools, although a few had only completed elementary school (Engelhart, 1946).
or served in the military. New York was the last state in the union to issue GED credentials for veterans and the first to issue credentials to nonveterans (Zook, 1948). Within a year 22 states were using the GED as the basis for offering high school credentials to civilians. In an apparent move to prevent current high school students from taking the GED test, most states established minimum ages for testing of nonveterans, ranging from 18 to 22 (Hess, 1948).

2.11 ACE and USAFI Studies of the GED in the 1950s

In the 1950s, ACE commissioned two studies of its GED test program. A report by Paul Dressel and John Schmid (1951) summarized existing research on the GED and analyzed data on university students admitted through the GED exam. The authors reported that applicants admitted to college with GED scores above 275 were able to successfully complete their first years of college, but that students with lower GED scores often showed heavy course failures and dropout rates. They reasoned that completion of high school in itself demonstrated a measure of persistence and drive needed for success in college. The authors recommended that the GED test be improved by including writing exercises; broadening the exams in techniques used and in content to cover other educational objectives; restricting testing dates to specific times of the year; and raising the standard for passing to the fiftieth percentile, the average score of high school seniors in the norming group. These changes, they contended,

would insure more all-around performance and would obtain greater prestige and security for the recognition program. The person who truly merits the recognition would be able to qualify, but the higher standards would rule out some who reflect discredit on the award of diplomas or the granting of college admission by examination. The result should be that the recognition would be much more meaningful and much more respected. (Dressel and Schmid, 1951, 50)

Finally, while supporting continued use of the high school-level GED test, the authors called for studies of the relative performance of students at the ninth-, tenth-, eleventh-, and twelfth-grade levels, as well as norms comparing student performance on the GED test before entering high school to scores of seniors at the time of graduation.

In a second GED study, this one authored by Ralph Tyler himself, the test publisher rebutted the need for higher standards for the GED credential and test improvements. Tyler dismissed the call for higher passing scores for the GED, arguing, “Many persons have expressed concern over
the ‘low scores’ recommended as ‘passing’. . . . If the scores are low it is because students actually graduating from high school or actually completing successfully a general college course make low scores” (Tyler, 1954, 28). In fact, Tyler's review of data on a thousand GED applicants tested by USAFI showed that 62% of examinees who had never attended high school could pass the GED test, as could 70% of examinees with only one year of high school (Committee on Evaluation of the Tyler Fact-Finding Study, 1956). Tyler acknowledged that military staff considered the GED test as requiring academic achievement at approximately the eighth- or ninth-grade level rather than 12 years of school. As he observed in his report, “[A]t one Air Force base if the individual passes the USAFI Achievement III Test at the 8th grade level, or if he has finished the 9th grade and has had varied training and work experience, he will be advised to take the high-school level GED Tests immediately” (Tyler, 1954, 56–57). Further, Tyler catalogued a whole series of current high school objectives for English, social studies, and science that were “broader than the abilities, skills and knowledge which are appraised” by the GED (Tyler, 1954, 12, 14, 15). In spite of these limitations, Tyler asserted that the GED test satisfactorily measured the equivalence of high school and could be applied to civilians as well as veterans.

To gain greater acceptance of Tyler’s study, ACE assembled a committee to actually release Tyler’s report. The committee chairman, a former dean at the University of Chicago, explained that “it was . . . felt that the conclusions derived from the study would be regarded as more impartial and would, therefore, carry more weight with the educational public if they were drawn by educators who had no part in the Fact-Finding Study” (Committee on Evaluation of the Tyler Fact-Finding Study, 1956, ix). The committee chose not to include Tyler’s lists of the contemporary objectives for English, social studies, and science, which would have called attention to the many limitations of the GED test in measuring expected academic outcomes of high school. One committee member recommended that the final report exclude Tyler’s data showing that GED recipients performed less well in college than high school graduates (American Council on Education, 1955). In the end, the group decided to reference the data and to emphasize that young people should be encouraged to complete high school. They wrote,

First, the committee was in general agreement that passing of the Tests of General Educational Development should not be interpreted as an adequate substitute for the completion of a formal high school education. The demonstration of educational achievement by means of the GED tests constitutes an alternative avenue into college or into positions
in business, industry, or government, but should not be interpreted or portrayed as the full equivalent of a high school education. (American Council on Education, 1955, x)

The group then introduced a theme that would be echoed for years to come by the American Council on Education:

[The committee recognized that the GED tests do not measure all characteristics essential for success in college or employment. At the same time the committee recognized that the completion of high school, as evidenced by the granting of a high school diploma, does not reflect all the qualifications and characteristics essential to success in college or employment. Both constitute significant data that colleges or employers may use in combination with other pertinent items of information. (American Council on Education, 1955, x)]

The GED proponents began to argue that while the GED was not equivalent to high school, high school graduation was not necessarily all that it had been purported to be either. And even though the Tyler study evaluated the performance of war veterans with GED credentials, his conclusions were extended to civilians with no similar training or experience.

While the high school-level GED test continued to gain acceptance, ACE had little success promoting Lindquist’s college-level GED test. ACE had recommended that colleges grant 24 semester college credits in social studies, English, science, and literature based on passage of four GED college-level subtests using cutoff scores appropriate to their institution. Most schools, however, appeared unwilling to grant “general education” college credits on this basis. Dressel and Schmid found little use for the college-level GED test. “College officials,” they observed, “do not think in terms of the generalized outcomes measured by the [college-level] GED tests, but rather in terms of specific course content. Judged on this basis, the tests are naturally considered unsatisfactory” (Dressel and Schmid, 1951, 12–13). According to Tyler’s report, less than 1,600 college-level GED test batteries were administered in 1953, compared to 40,000 high school-level tests used in civilian testing centers. In 1961, ACE discontinued distribution of the college-level batteries of the GED test (American Council on Education, 1981).

In the later 1950s, the staff at the United States Armed Forces Institute began to express reservations about continuing the GED testing program, particularly after 45 faculty members from Ohio State University conducted a comprehensive review of the USAFI exams. The faculty encouraged USAFI to consider replacing the GED test with subject matter tests (thus enabling
the Institute to introduce coursework instruction for persons needing to complete high school) and recommended that USAFI “reserve the right to appraise the adequacy of the [GED] test norms and to adjust them, if needed, without the expressed consent of the original test maker(s)” (American Council on Education, 1958c).

In 1956, USAFI had also entered into a contract with the University of Chicago for Benjamin Bloom to develop and field-test an alternative format to the GED test battery. Bloom, who had studied under Ralph Tyler at Chicago, was experimenting with a taxonomy of educational objectives and wanted to prepare new GED exams in English grammar and mathematics based on his experimental sequential item test forms. In addition, Bloom offered two extra studies for USAFI:

1. An analysis of the present GED Tests in relation to current educational objectives of the secondary schools which are relevant to the areas in general education, to determine specific gaps, particular objectives which are adequately sampled and objectives which are only partially sampled and to arrive at a set of recommendations for the further development of the GED Tests.

2. An analysis of the relationship between performance on GED Tests and such variables as over-all school grades, level of scholastic aptitude, interest in particular subjects, curriculums followed, plans for future education, and extent to which they have studied in particular areas relative to the GED Tests to obtain further evidence of validity for the GED Tests.9

Bloom (1956a) had conducted the 1955 renorming study of the GED test for ACE and shared the concerns of other researchers that the tests were normed exceedingly low and failed to measure many aspects of high school. In his proposal to USAFI, he wrote,

The Tests of General Educational Development were first constructed in 1942. Since that time parallel tests have been developed along the lines of this initial form with only changes in content being permitted. . . . It would be possible to rest content with these tests in their present form and hope that few critics will arise in the future to question the value and use of these instruments. (Bloom, 1956b, 1)

Improvements were necessary, Bloom argued, because of changes in curricula and new developments in the field of testing and because of deficiencies in the GED testing instrument that he had already observed:

There have been a number of critics who have raised serious questions about the appropriateness of these tests for accreditation purposes and additional critics are likely to further attack this program if the tests are to continue to be used in their present form. Furthermore, we ourselves are aware of a number of limitations in these tests. For example, the passing score on one form of the Mathematics test is below the chance level, the reliability of some of the tests is not as high as we would desire, the relationships between the test scores and measures of scholastic aptitude are higher than we believe desirable, the number of items used to sample an individual’s level of achievement in certain aspects of mathematics and science are lower than appears defensible, whole areas of the humanities, such as art and music, are not sampled, etc. (Bloom, 1956b, 1)

When the American Council on Education learned about the Bloom study nearly a year after the contract was signed, ACE staff and commissioners expressed concerns that USAFI might deem the GED test inadequate and consider using another testing instrument or approach. Cornelius Turner of the ACE staff expressed his fears that publicity on the Bloom study research would jeopardize public confidence in the GED testing program. Turner noted that several states did not wholeheartedly support the GED test and that Bloom had published articles on the 1955 norming study that ACE had not approved prior to publication (American Council on Education, 1957). After ACE representatives met with several top military officers, the military terminated the Bloom study and notified the director of USAFI that any subsequent USAFI proposals “concerning modification of the GED testing program” would need to be submitted to the president of the American Council on Education (American Council on Education, 1957, 1958a, 1958b).

Meanwhile, the GED testing program enjoyed a steady growth, and Bloom’s criticisms had little apparent impact. The eruption of the Korean conflict (1950–1955) brought several states that had dropped out during the postwar period back into the GED veteran testing program. California,
Kansas, Ohio, Oklahoma, South Dakota, and Washington all began allowing the new Korean War veterans to obtain GED certificates, although as of 1954 none of these states were granting GED credentials to nonmilitary civilians. The expansion of the GED testing program to the general population continued slowly, with 24 states allowing the testing of nonmilitary civilians and 24 states still restricting the GED certificate to veterans and military personnel in 1954 (Commission on Accreditation of Service Experiences, 1954). Reaching a milestone in 1959, the American Council on Education reported that the number of civilians taking the GED test had surpassed the number of veterans tested. In 1963, to emphasize the civilian nature of the program, ACE changed the name of its Veterans Testing Service to the General Educational Development Testing Service (GEDTS) (Stewart, 1992).

2.12 “Teaching to the Test”

In spite of the availability of the GED test, over three million World War II veterans used the GI Bill (which included living allowances for veterans and their dependents as well as support for tuition and books) to return to high school after their discharge from the service. As of 1949, more than half of the public school systems in urban areas were operating continuation or evening schools (Elicker, 1944; Kempfer and Wright, 1949; U.S. Senate Committee on Veterans’ Affairs, 1973). Some institutions, however, embraced teaching to the GED test as an alternative that could allow veterans to bypass the time required for completing high school. An Ohio State University educator reported, “All around us we hear of men who started back to high school and ‘dropped out’ after a few weeks or a month” (Ramseyer, 1945, 83). His solution was to set up 12 weeks of individualized instruction in math, reading and discussion, and science, after which his adult students took the GED test in order to earn a high school credential. In his 1954 review of military uses of the GED, Tyler acknowledged evidence of the GED “teaching-to-the-test” mentality that is common today. Tyler’s report included the example of a military center that offered “a GED preparatory course of two months’ duration in which a systematic covering of the five areas is attempted” (Tyler, 1954, 58). The low level of academic skills required to pass the GED test facilitated this approach, as Tyler reported: “Oftentimes the applicant will be advised to brush up on elementary mathematics at the eighth or ninth grade level and to study an English grammar text at about the same level” (Tyler, 1954, 70–71). Tyler noted that several agencies offered “special refresher courses” for persons planning to take the GED test and that these “courses” required only 10 to 15 hours
of instruction. Tyler also described agencies that advised unsuccessful GED test-takers to enroll in evening or part-time classes—not to earn high school credits, but to gain the knowledge needed to pass the GED test—suggesting that examinees were already permitted to retake sections of the GED to raise their scores.

During the 1960s, with the baby boomers approaching adulthood and new federal funding available for GED test instruction, the number of people taking the GED test increased nearly fivefold, from 61,093 in 1960 to 293,451 in 1969. The number of GED testing sites increased from 658 to 1,566 (GED Testing Service, 1978). The development of GED instructional programs in which students are coached in test taking and offered coursework loosely modeled on the GED test item groupings emerged during the War on Poverty in the 1960s under the Johnson administration. (See Chapter 3.) The Economic Opportunity Act of 1964 provided federal funds for basic education for adults who had not completed eighth grade, and the 1970 Adult Education Act reauthorization expanded the program to include secondary education, although its priority remained persons with lower grade skills. Adult educators championed GED test instruction, which was far less costly than full-fledged high school completion programs and still capitalized on students’ motivation to secure high school credentials. In 1978, the U.S. House of Representatives Committee on Education and Labor estimated that over 900,000 adults had achieved a high school equivalency credential under the Adult Basic Education Act, even though state plans were required to place special emphasis on adult basic education, that is, instruction in skills below eighth grade. The committee criticized adult education programs for failing to give priority to the least educated adults. At the same time, it noted the appeal of the high school credentialing program, quoting the testimony of the director of the U.S. Office of Education Division of Adult Education that “the failure to attract the least educated adults is attributable in part to local adult education directors’ inclination to serve adults who are striving to earn their high school diploma and are demanding services. This goal is not often part of the motivation of those functioning at the fourth grade level and below” (United States House Committee on Education and Labor, 1978, 129).

One federal antipoverty program, the Job Corps, established in 1964, developed a curriculum for teaching youth how to pass the GED test. Moving completely away from the GED’s purported objective of measuring the “lasting outcomes” of high school that adults had already acquired through their life experiences, the Job Corps developed a set of self-paced units of
instruction based on the GED test items for use with school-age youth. According to Sar Levitan and Benjamin Johnston’s 10-year history of the Job Corps, the GED credential offered “the high school ‘education’ demanded by a credentials-conscious society” (Levitan and Johnston, 1975, 62). The GED’s appeal rested in no small part on the Job Corps experience that even youth testing below the sixth-grade level on the Stanford Achievement Test could be taught to pass the GED through a 200-hour preparatory course. The authors concluded: “An expanded GED program promised great rewards for all concerned: the goal was achievable by many in a reasonable period of time and obviously valuable in the outside world” (Levitan and Johnston, 1975, 62).

The time required to prepare high school dropouts (whether unemployed workers, mothers receiving welfare, or Job Corps teens) to pass the GED was substantially reduced in 1978 when the American Council on Education released officially sanctioned “GED practice tests.” Prior to 1978, many adult educators offering GED classes had focused instruction on reading comprehension, vocabulary skills, grammar, and math, often using a variety of textbooks designed for the GED “student” or even the “pre-GED student.” It was difficult to predict, however, when students were ready to pass the test battery, although many adult education programs would only begin GED test-taking drills after students had reached a seventh- or eighth-grade reading level on other standardized tests available. With the publication of the GED practice tests, adult educators could use the practice tests to help predict the level of skill required to pass the GED. Then they could limit their instruction to the exact types of questions on the exam in order to shorten the time students needed for their GED test instruction (Musgrove, 1981; Pawasarat and Quinn, 1986).

2.13 GED Testing of School-Age Youth
Starting in the 1970s, ACE initiated a series of policy changes to accommodate the federal government’s interest in financing GED testing for disadvantaged teenagers. Each year since 1955 ACE had required a minimum age of 20 or 21 for obtaining a GED credential. The Council later explained this policy, stating, “While this seems rather conservative by today’s standards, it clearly represented a concern that the program not be seen by young people as an attractive alternative to a regular high school program of study” (Whitney, 1985b). A request by the Job Corps to provide educational credentials for school-age high school dropouts led to exceptions to the age requirements. In the mid-1970s, the American Council on Education lowered the age allowed for taking the GED test and commissioned the Educational Testing Service (ETS) to revise the 1978 GED test questions to
ensure that they could be used for youth as young as 14 years of age. The ETS outlined the rationale for the requests in a project paper:

In one state the minimum age for compulsory education had been already lowered to 14 years. It was therefore decided to conduct test administrations of the new forms at grade 9 (the grade during which most youngsters attain the age of 14 years), and also at grades 10 and 11, in addition to the grade 12 reference group. . . . In fact, the new GED tests were found to be only slightly difficult for grade 9 students, with the middle difficulty for all five tests in the battery occurring at about grade 10, or a little higher [emphasis added]. (Educational Testing Service, 1978, 12–13)

ACE requested that the difficulty level of the GED test be reduced in a number of specific areas. ACE instructed ETS to shorten the test reading passages, simplify the language of the math questions, and reduce the total time required for GED testing. According to the ETS, the GED program had “received complaints that too much higher level mathematics was being required” (Educational Testing Service, 1978, 3) and so the ETS agreed to develop math problems with practical applications and to adapt the reading level of math problems “to the GED population” (Educational Testing Service, 1974, 16). The test writers indicated that they would continue to include a small number of higher level math items, while acknowledging that “many of the concepts . . . which were classified as algebra and/or geometry were concepts that most pupils were exposed to during or prior to 9th grade” (Educational Testing Service, 1978, 3). They also noted that these test items were not significant in determining whether candidates passed or failed the math subtest.

Citing criticisms that too much emphasis was placed on reading in the science and social studies subtests, ACE recommended use of “concept” test items that would be “noncourse oriented, with the emphasis placed on information that the GED candidate may have acquired through mass media or general reading” (Educational Testing Service, 1974, 12). The reading passages preceding science questions were expected to minimize the actual knowledge of science required of the GED candidate. As the ETS explained,

Graphs, charts, and diagrams will be used to supplement the written material where appropriate. Although the majority of the test items will deal with the interpretation of information and ideas presented in the passages, some outside knowledge of basic principles of science may be required in order to answer some of the items [emphasis added]. (Educational Testing Service, 1974, 13)
ACE specified other changes as well: “Short, simple sentences free of unnecessarily abstract, difficult, or technical vocabulary should predominate. Pictures, graphs, or charts should also be used to help reduce the reading load” (GED Testing Service, 1974, 8). Similarly, ACE directed that the social science test include “reading comprehension items at a reduced reading level and pitched to issues of greater relevancy to the everyday life of GED candidates” (Educational Testing Service, 1974, 14). Finally, acknowledging the close proximity of the recommended GED passing requirements to scores that could be achieved purely by guessing, ACE asked the ETS to increase the number of multiple-choice stems to five for all questions. Upon completion of the new tests, ETS reported: “While the need to equate new tests with older forms through the use of common items has held this process back somewhat, the objective has essentially been realized, with ETS research showing that for virtually all the tests the cut score is now above the chance score [emphasis added]” (Educational Testing Service, 1974, 18).

Even with the reduced odds for guessing correct answers, a majority of the ninth-grade students tested in the spring of 1977 for the ETS equating study reached the standard score of 35, which ACE recommended as the minimum passing score on each subtest (Swineford, 1978). All but 9% of ninth graders (and all but 4% of twelfth graders) passed the science subtest with a standard score of 35 or better. Although U.S. history courses typically are not offered until the tenth or eleventh grade, the ETS found that all but 17% of freshmen in the high school equating study could pass the social studies subtest, as could all but 6% of high school seniors. In fact, the ETS equating study estimated that 73% of ninth graders could pass all five GED subtests at the passing scores recommended by ACE, as could 77% of tenth graders (Creech, 1978). The ETS paper on standardizing the 1978 GED test explained,

Ordinarily, questions considering the usefulness of a test with pupils at a particular grade/age level would also include a comparison of the content of the tests being investigated with the accepted curricula for the grade/age level of the pupils being tested. . . . The extremely broad range of performance of grade 12 pupils on survey tests such as the GED virtually requires that many items in such tests are closely related to educational concepts that are first learned at grade 9, or even earlier. The effort to develop tests that contain a large number of lower than average difficulty items for grade 12 students also results in the inclusion of a large number of items that reflect educational topics for levels
substantially lower than the grade 12 level. (Educational Testing Service, 1978, 14)

The extent to which marketing considerations rather than the standards for high school coursework influenced test construction can be seen in other ACE specifications that had directed the 1978 ETS test writers to avoid questions on the social studies test related to U.S. history and government—or even to an English-speaking heritage—so that it could broaden its market into Canada:

Since the GED testing program has achieved an international stature, it is imperative that the tests be developed with no intentional English speaking cultural, economic, or political bias. Particular efforts should be directed towards development of the social studies and reading tests to ensure no alienation of examinees of other countries, especially Canada. This concern may be alleviated by de-emphasizing concepts unique to the United States, and inclusion of some reading passages and problems commonly encountered in Canada and the U.S. (GED Testing Service, 1974, 9)

When Canadian administrators reviewed the 1978 “generic” social studies subtest, they declared it unacceptable and demanded a separate social studies subtest for Canada. Meanwhile, the “generic” social studies exam was used in the United States as well as for Canadian candidates requiring Braille, large-print, and audiotaped exams. A French version of the five GED subtests was prepared by the Canadian province of New Brunswick, using the Canadian social studies questions, and was promoted for use in Quebec. After the provinces of Quebec and Ontario declined to enter the GED testing program, extra copies of the printed “French-Canadian” test were used in Haiti and with Haitian immigrants to New York (Quigley, 1987). A Spanish-language GED test was introduced based on the high school curriculum in Puerto Rico and normed with Puerto Rican high school students, and yet used primarily in the continental United States (Baldwin, 1995; GED Testing Service, 1995).

After the GED tests were renormed in 1980, ACE reported that it was increasing its minimum passing score to 40 for each subtest (reportedly, to the sixteenth percentile for the high school norming group) because the standard score of 35 had fallen so close to chance (Spille, 1981a). Meanwhile, ACE encouraged increased use of the GED test among high school–age youth in 1981 when it eliminated its minimum age requirement for taking the test, leaving the establishment of age restrictions entirely in the
hands of state departments of education. By 1985, five states had lowered the minimum age for GED testing to 16, ten states to 17, and eight more states allowed exceptions for younger persons under particular conditions (Whitney, 1985a).

2.14 ACE Reacts to the Call for Higher Standards in High School

In the 1980s, while ACE was reducing the academic skills required to pass the GED test, national studies were calling for higher educational standards, more instructional time in school, more homework, and an increase in the number of Carnegie units required for high school graduation. In 1983, the National Commission on Excellence in Education released *A Nation at Risk*, which called for a tougher core high school curriculum, higher standards for high school graduation, and longer school days and years.

In response, Henry Spille, director of the GED Testing Service, issued a memorandum to state GED administrators and state directors of adult education regarding the study. He candidly explained: “You will probably be receiving questions from your superiors, legislators, and others regarding the GED tests and how well they address, or do not address, the recommendations made in the report *A Nation at Risk*. I will try to give you some assistance by responding, from our perspective, to each of the report’s recommendations” (Spille, 1984, 1). Several of Spille’s examples are illuminating. Spille noted that the *Nation at Risk* study recommended that significantly more time be devoted to higher level math and science either through more effective use of the present school day, longer school days, or a lengthened school year. His response:

> Because of prior learning that adults have acquired and bring to the teaching/learning process and setting, they often need less time, not more time, to learn the basics of reading, writing and computation. Availability of other than time-based assessment methods should allow adults to progress at their own pace. (Spille, 1984, 5)

Just how much time adults needed was explained in Spille’s reaction to the *Nation at Risk* recommendation that students in high school be assigned far more homework:

> The typical GED examinee spends 20 hours preparing to take the GED Test. Many of the examinees do not prepare by enrolling in classes; they study independently. Additional homework for them is probably not important; focused learning time is probably the key. (Spille, 1984, 5)
The heart of the *Nation at Risk* report was a recommendation that all high school students be required to complete four years of English, three years of mathematics, three years of science, three years of social studies, and one-half year of computer science. Additionally, college-bound students were encouraged to take two years of foreign language. Spille responded, “The five tests of the current battery measure the lasting outcomes of a high school program of study in all of the areas (English—Reading Skills and Writing Skills—Mathematics, Science, and Social Studies) except computer science” (Spille, 1984, 1). In fact, this response directly contradicted an earlier Spille Memorandum (Spille, 1981b) indicating that the entire GED test battery might equate to only four units of introductory high school subjects and not to the 13 units of English, math, science, and social studies recommended by *Nation at Risk*. In a September 1980 memo on “Awarding Carnegie units on the basis of GED test results,” Spille had informed state GED administrators that one credit (“or more”) in English might be awarded for candidates who passed the GED writing skills subtest and the reading subtest “except of course, that no composition exercises are included” and that three high school credits might be awarded for passing the other three GED subtests:

The award of a unit in general science, general mathematics and general social studies on the basis of scores of the Science Test, the Mathematics Test and the Social Studies Test respectively also may be appropriate, if the concepts and developed abilities measured on these tests are comparable to those normally acquired through successful completion of a high school’s or local school district’s “general” courses. (Spille, 1980, 3)

Spille warned against granting Carnegie unit credits for specific high school courses such as U.S. history, algebra, or chemistry on the basis of GED test scores. For example, he noted that an examinee could answer every U.S. history question incorrectly and still achieve a passing score on the social studies test.

During this period, the federal government’s Job Training Partnership Act (JTPA), passed in 1982, provided financial support for the GED shortcut to high school graduation. Under the JTPA, youth were considered successfully served (a “positive termination”) if they returned to school (which included enrollment in a GED class) or completed a level of schooling (which included graduation from a four-year high school—or earning a GED credential). Since the JTPA provided an average of only 18 weeks of instruction, the GED was an attainable goal for youth who had been unsuccessful
in school, and the instruction could be provided by minimally trained staff, particularly if the youth already had reading and math skills at the sixth- to eighth-grade level.

Meanwhile, in the wake of the *Nation at Risk* recommendations, state governments were increasing standards for the four-year high school graduates. Between 1980 and 1985, 38 states raised their minimum Carnegie unit course requirements for high school graduation, and 18 states established new minimum-competency testing programs (National Center for Education Statistics, 1987). When ACE developed its specifications for the 1988 GED test battery, the nationwide emphasis on increased Carnegie units and more math and science coursework was largely ignored. ACE, in an article entitled “Don’t Hurry to Take the GED Tests!” reassured its client base that pass rates for the test were expected to remain about the same. ACE explained:

While it is true that the revised tests will require a slightly higher level of problem solving and critical thinking skills than do the current tests, as well as the ability to write coherently, most of the changes represent only small adjustments to the levels of content mastery required to pass the tests. For example, the percentage of questions on the mathematics test that require the use of concepts from algebra will increase from 25% to 30%—but this is a difference of only 2–3 questions per test [emphasis in original]. (GED Testing Service, 1985, 8)

The *Nation at Risk* call for high school instruction in computer technology was addressed in the GED test, not by requiring students to be able to use computers or even to understand their use, but superficially by references to “computers” in questions. For example, a math item might ask the test taker to calculate how long it would take to print several pages of a computer document (GED Testing Service, 1995).

For the first time, in 1988 the GED test battery added a short essay test as part of the writing subtest. While continuing to maintain that its multiple-choice writing skills subtest provided an adequate indirect measure of writing, ACE was receiving pressure to include an actual writing requirement. The Council had noted that as of October 1985, 71% of candidates taking the GED test in the United States were in states requiring writing assessments of high school graduates, and in July 1986, New York State had begun requiring GED candidates to present a 200-word composition (Baum, 1986; Swartz, Patience, and Whitney, 1985; Swartz and Whitney, 1985). Accordingly, in 1988 ACE began requiring GED candidates to complete an essay, which was holistically scored and combined with the multiple-
choice test score on the writing subtest in order to provide an overall writing test score. The essay question was designed to measure the student's ability to write coherently on a topic of general knowledge and did not require a demonstration of competence in a high school subject area. As outlined in the GED technical manual,

The topic must be based upon information or a situation that is general enough to be familiar to most examinees. For example, a topic calling for a writer's views regarding the effect of automobiles on American life might well be appropriate, while one calling for an opinion of the space shuttle's value to the American economy would fail to meet this specification because it would require specialized knowledge. (GED Testing Service, 1995, 111)

By 1989, after all of its GED test changes had been implemented, ACE reported that GED candidates had increased their average study time preparing for the GED test to 30 and $\frac{1}{2}$ hours. This was only 10 hours above the average preparation time reported in 1980 (Baldwin, 1990; Malizio and Whitney, 1981).

Most GED candidates are no longer war veterans, and neither the GED test preparation time nor the GED “curriculum” is persuasive evidence for considering the credential equal to high school completion. The American Council on Education uses its internal norming program with high school seniors as justification that this test measures the outcomes of four years of high school. ACE argues that if GED candidates can score as well on a norm-referenced test as many high school seniors, they must have acquired an education equivalent to that of high school graduates. Unlike the ACT, SAT, and the Armed Forces Qualification Test that attract test takers with strong motivation for entering college or the military, the GED test has no apparent value to high school students in the norming group. Nor are they typically offered coaching instructions on how (or why) to improve their scores or opportunities to retake tests after additional study as are actual GED test candidates. Two GED norming studies conducted by ACE in Wisconsin suggested serious problems with student motivation and quality control (Quinn and Pawasarat, 2011). Of the 1,112 high school seniors who began the testing process for the first study, only 38% finished their tests. In the second study, 85 schools were asked to participate, but only 39 agreed to do the testing and no replacement schools were drawn. ACE first reported in 1988 that for the passing score selected by Wisconsin (i.e., minimum subtest scores of 40 and a total score of 250) 81% of Wisconsin seniors could pass the test. Later ACE notified the state that it had
“made systematic errors in developing the conversion tables” and claimed that only 67% of Wisconsin seniors could pass. Six years later, based on its second norming study, ACE reported that barely half (52%) of Wisconsin seniors could pass the same test (GED Testing Service, 1993; Quinn and Pawasarat, 2011). The wide differences in the Wisconsin results raised further questions about the integrity of the GED norming procedures.

### 2.15 Blurring the Distinction between High School Graduation and the GED

With government funding for GED instruction firmly in place through adult basic education, public assistance, and job training programs, much of the GED marketing in the 1970s and 1980s focused on labeling the GED credential as a “diploma” and blurring the distinction between high school graduation and attainment of a GED credential. At the 1989 GED administrators’ conference, Douglas Whitney, director of the GED Testing Service, urged the participants to promote measures that would label the GED credential as equal to high school graduation. Whitney advocated several measures to “build the credibility of the GED program” at the state level: “use the term ‘diploma’ to help GED achieve parity with other traditional diploma programs; seek legislation to recognize the GED diplomas as the legal equivalent of a traditional diploma . . . ; stop the GED Test from being used as part of a credit-based diploma program; refer to the GED program as a ‘dropout recovery program’ ” (GED Testing Service, 1989, 6). Through its college loan requirements, the federal government also has encouraged the notion that skills necessary to pass the GED test are adequate for college work. A 1991 study for the U.S. Department of Education (Dynarski, 1991) reported default rates on Guaranteed Student Loans for postsecondary education of 56% for high school dropouts and 44% for GED recipients, compared to 14% for high school graduates. The response of the Department of Education was to tighten the “ability to benefit” provisions for high school dropouts, effectively encouraging more high school noncompleters to utilize GED testing as a means of securing federal funding for their education.

In 1994, a new National Education Goals Panel issued demands that U.S. students “be first in the world in mathematics and science achievement” and that all students leave grade twelve “having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history and geography” (National Education Goals Panel, 1994, 14). Even though most GED test takers have completed two years or fewer of high school, the 13-member National Education Panel on High School Completion (which...
included the policy research director for the GED Testing Service) inserted a provision in the National Education Goals that high school completion could be achieved either by completing four years in the newly improved American high schools or by passing the GED test.

The American Council on Education’s contradictory roles in representing colleges and universities while aggressively marketing a testing instrument for dropouts who rarely succeed in college may be explained in part by ACE’s heavy reliance on GED testing revenues. Bruce Murphy (2001) found that 27 of ACE’s 100 staff members were funded by and working on the GED program and that over 40% of its annual revenues appeared to come from the GED tests.

In 2002, when ACE released its latest version of the GED, it claimed that only 68% of graduating seniors nationally could pass the test at the recommended passing score levels. The testing manual noted, however, that the norming tests are “administered to high school seniors in a low-stakes setting” (GED Testing Service, 2009c, 67) and acknowledged concerns with lack of motivation among the norming population:

The low stakes associated with the administration of these tests may have affected the quality and integrity of the reported data. No measure of motivation or effort was obtained directly from the student during these studies. However, data records in which more than one third of the item responses were missing were excluded from analyses. (GED Testing Service, 2009c, 40)

The high school senior norming claims are further challenged by the “gaming” allowed under the GED test-taking policies whereby candidates can repeatedly retake any or all sections of the GED test to bring up their total and subtest scores. Data from Missouri (Jepsen, Mueser, and Troske, 2012) found that 70% of test takers near the pass–fail score levels retook portions or all of the GED test.11

As to test construction, like its predecessors, the 2002 GED testing series included five subtests with multiple-choice items from which the examinee must select the correct answer. (Eight of fifty math questions asked the test takers to supply their own numerical answer.) Half of the math

11. A presentation at the 2009 annual GED administrators’ conference offered tips on how to help students raise their math scores, observing that many examinees only needed to answer one or two more questions correctly to pass. The presentation reported that an analysis of missed questions showed that too many examinees were checking the item answer “not enough information is given.” It was suggested that another response should be chosen when guessing (GED Testing Service, 2009b).
test could be completed using a calculator, although the math questions in that section did not appear to require computation skills beyond grade school arithmetic.\textsuperscript{12} The writing exercise remained a single simple general essay, which the ACE graders spend an average time of only two minutes reading and scoring (Martz and Pearson, 2010). Students were not expected to prepare research papers, distinguish between reliable and unreliable Internet sources, develop a job resume, or demonstrate any of the other myriad writing skills expected in high school. In social studies, students were tested on their reading comprehension skills and comfort level deciphering (but not preparing) graphs. The distance between the 2002 GED test and the demands of high school coursework has been suggested by the popular GED test preparation guides available in book stores and libraries. In \textit{Cracking the GED}, the authors observed that the math test “does not cover most of the normal high school algebra curriculum” (Martz and Pearson, 2010, 378) and that the social studies test “does not require any specific knowledge of history, economics, or geography” (Martz and Pearson, 2010, 208).\textsuperscript{13}

The low standards in place for passing the 2002 GED test series are evident from reports of the minimal time low-achieving in-school teens spent opting out of their regular high school coursework under a program that ACE calls the “GED Option.” In Wisconsin, GED testing has come full circle away from the reforms initiated by State Superintendent Grover in the 1980s. As a result of studies of the GED in the state, Grover had barred school-age teens from receiving GED credentials, promoted alternative education programs for adult dropouts, and raised passing standards for GED credentials. Under the current state superintendent’s “GED Option” program, Wisconsin in-school teens at least two years behind their classmates in credit attainment now spend an average of 50 hours preparing for the GED test, yet the state counts them as “graduates” for No Child Left Behind and directs their high schools to award them regular diplomas at the same graduation ceremony given their classmates who have completed

\textsuperscript{12} Most of the problems in the portion of the test using a calculator require simple arithmetic calculation that is easily completed without a calculator. The calculator does appear to make decimal and percentage problems easier to solve for persons who have trouble determining placement of decimal points. See the “Official GED Practice Tests” for the 2002 Series, developed by the GED Testing Service and distributed by Steck-Vaughn Company.

\textsuperscript{13} Martz and Pearson (2010) noted that the geometry-type questions are particularly easy to answer since the figures are drawn roughly to scale and lengths can be easily estimated using a scrap of paper.
four years of high school (Evers, 2011; GED Testing Service, 2009a). The national record is little better. Students one to three years behind in their high school coursework and enrolled in the “GED Option” programs spend an average of 80 hours studying for their GED exams (GED Testing Service, 2009a; Chapter 6). At the school district level, New York City has spent nine years preparing thousands of school-age teens to receive high school credentials based on the 2002 series of the GED test, even though the mayor and chancellor of schools describe the GED passing scores as “only equivalent to an 8th grade proficiency level in reading and math,” and note that “students can pass the writing section with only a 6th grade level proficiency” (City of New York, 2010). With evidence mounting as to the low standards required by the 2002 GED test series, predictably the American Council on Education (along with Pearson, its new for-profit testing partner) is once again promising that the next GED test will be harder (American Council on Education, 2011).

2.16 Conclusion
In 1999, a half century after the conclusion of World War II, media coverage of a graduation ceremony held at Gardner (Massachusetts) High School for surviving World War II veterans sparked legislation in three dozen states authorizing the awarding of high school diplomas to veterans (living and deceased), including GED recipients, based on their wartime service. The organizer of the ceremony called it “a small, overdue gesture of our society’s gratitude for the sacrifice these individuals made in the name of freedom.”

States and local school districts would have issued high school “wartime diplomas” in the 1940s had such an option not been aggressively opposed by a small group of educational reformers promoting their multiple-choice test of “general educational development” and an end to the Carnegie unit high school. Not surprisingly, their attempts to dismantle the Carnegie unit approach to traditional high school failed, with nearly every state legislature now requiring specific Carnegie units for high school graduation.

The ACE group did have success in promoting its GED test, first as a college entrance exam for wounded veterans and then at the war’s end as a requirement for GIs to meet before they could be issued a state high school diploma.

14. ACE announced that it is partnering with Pearson in establishing a GED business that will market the GED tests and GED test-preparation programs.
diploma. The tests focused on reading, grade school math, and grammar rules, and pass rates among the early veterans tested were very high. The popularity of the GED was cemented during the postwar period when thousands of war veterans were given the test to gain admission to college under the GI Bill. During the 1950s, at a time when the Soviet launching of Sputnik led to new emphasis in American high schools on rigorous math and science coursework, the GED test was requiring students to answer only a few multiple-choice questions above the chance level and was available to civilians without military service or comparable life experiences. In spite of concerns raised by the United States Armed Forces Institute, ACE’s own studies, and Benjamin Bloom’s norming studies, the American Council on Education locked the GED test into its original Iowa Tests of Educational Development multiple-choice format for measuring basic reading, math, and grammar skills.

As the baby boom population came of age in the 1960s and 1970s, GED testing began a rapid increase. During the same period, the federal government provided substantial funding for GED test instruction classes under the Adult Basic Education Act and employment training initiatives, funding that still continues today. In the 1980s, reformers of public high schools demanded more rigorous course content, advanced studies in science and math, increased foreign language requirements, longer school days and school years, more homework, and minimum competency testing. Yet, these high school reform initiatives did not acknowledge the surge of GED credentials that was threatening to undermine their reform efforts. Instead, states began adopting credentialing policies that allowed GED testing for in-school teens. Furthermore, during this period the GED test was downgraded, requiring even lower levels of reading and math skills than for the earlier test versions, and the ability to use a computer remained untested as late as 2013.

Politicians continue to call for high-stakes graduation testing for four-year high school students, more challenging coursework, and longer time spent in school, while school districts are allowed to meet federal No Child Left Behind standards by counting GED recipients as high school “completers” and in some states as high school “graduates” (GED Testing Service, 2009a). With the GED test frozen in its World War II design, only high school dropouts are offered a non-Carnegie unit approach to education, encouraged to avoid both academic and vocational education courses, and asked to spend less rather than more time studying in school. Today, as they have for the last three decades, dropouts who have failed or skipped two or more years of high school coursework are enrolled in short-term
GED test-prep classes where they “study” the GED test, practice answering questions from the “Official GED Practice Tests,” and then test and re-test to raise their GED scores to the state passing levels. The evidence in this book and elsewhere finds that this GED testing program is not just producing teens and adults underprepared for college and the workplace, but also enticing other teens to leave school to seek the GED shortcut to a high school education. World War II is over. It is time to close the door on America’s GED “high school.”

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