Examinations: Comparative and International Studies

Edited by

MAX A. ECKSTEIN
Queens College of the City University of New York, USA

and

HAROLD J. NOAH
The University at Buffalo, State University of New York, USA

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Introduction to the Series

The Comparative and International Education Series is dedicated to inquiry and analysis on educational issues in an interdisciplinary cross-national framework. As education affects larger populations and educational issues are increasingly complex and, at the same time, international in scope, this series presents research and analysis aimed at understanding contemporary educational issues. The series brings the best scholarship to topics which have direct relevance to educators, policymakers and scholars, in a format that stresses the international links among educational issues. Comparative education not only focuses on the development of educational systems and policies around the world, but also stresses the relevance of an international understanding of the particular problems and dilemmas that face educational systems in individual countries.

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I wish to acknowledge the assistance of a distinguished editorial advisory board including:

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PHILIP G. ALTBACH

Foreword

This volume contains the papers and prepared comments given at four sessions entitled "Comparative and International Research on Examinations," which were arranged under the auspices of the VIIth World Congress of Comparative Education Societies, Université de Montréal, Montréal, Canada, 27 and 28 June 1989.

Examinations have been with us for a long time, at least a thousand years or more, if we think of the use made of them in Imperial China to select the highest officials of the land. Even in modern times, the use of examinations to select for education and employment dates back at least three hundred years. Examinations were seen as ways to encourage the development of talent, to upgrade the performance of schools and colleges, and to counter in some degree nepotism, favoritism, and even outright corruption in the allocation of scarce opportunities. If the initial spread of examinations can be traced to such motives, the very same rationales appear to be as powerful as ever today. Rare indeed is the country that does not have a well-developed system of examinations for its school youth, particularly for those coming to the end of their secondary school careers.

Nevertheless, examinations come in for a lot of criticism, and there is much casting about for alternatives that might avoid the alleged problems—irrelevance, bias, discrimination, academic overloading, and the marking of a significant number of youngsters as "failures"—for which examinations are so often blamed. However, in spite of all the criticisms levelled at them, examinations continue to occupy a leading place in the educational arrangements of most countries, and their time seems to be far from past.

In Chapter 1, introducing the idea of the cross-national study of examinations, the editors provide a description of previous comparative and international work in this field, together with an overview of the current status of secondary school leaving examinations in eight countries. The subsequent papers (Parts I–IV) deal with four different aspects of these examinations. Part I contains case studies of two countries in which examination results have become singularly important determinants of life chances: Japan (by Peter Frost) and China (by Huang Shiqi). Part II,

"Beyond Examinations," provides a paper by Patricia Broadfoot, reviewing European initiatives to develop profiles of achievement in place of examinations; and a paper by Ingemar Fägerlind, who analyzes the special Swedish experience in abandoning one-shot examinations in favor of continuous assessment. Both papers are discussed by Joan Knapp.

Part III deals with examination issues and policies in the Third World (Thomas Kellaghan concentrates on Africa, and Stephen P. Heyneman and Angela W. Ransom range widely across Africa and Asia). Philip J. Foster and Angela Little each discuss both papers.

Part IV presents a comparison by Juan M. Moreno Olmedilla of the examination characteristics of three Mediterranean countries and three "Anglo-Saxon" countries. This is followed by the editors' paper discussing the several ways in which examination systems present "two faces" to the world, being at once potentially powerful instruments of educational change, and obstacles to further change.

The editors wish to acknowledge the valuable assistance given by Mark Ashwill, Juan Moreno, and Jeanne Weiler in the many research tasks associated with this project.

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Introduction

CHAPTER 1

Comparing National Systems of Secondary School Leaving Examinations

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Examinations and Comparative Education

A vast literature deals with examinations in particular countries, spanning the entire range of examination-related topics: psychometrics, mechanics of examinations, standards of achievement, the effects of examinations on the rest of the education system, various kinds of biases (social, cultural, and gender) in examinations, and (to a lesser extent) the effects of examinations on social status, employment opportunities, individual life chances, and the like.[1] Reports about secondary school examinations in other nations appear from time to time in the popular press, although usually in the context of news, typically describing outbreaks of student protest over examination practices or policies.[2] By contrast, relatively little systematic cross-national comparative work has been done, and the comparative study of examinations seems to have been a largely neglected aspect of comparative education.

In the 1930s, an International Examinations Inquiry was undertaken at Teachers College, Columbia University, under the direction of Paul Monroe, who enlisted the talents of I.L. Kandel.[3] This project led to the publication of three volumes as direct outcomes, plus many country studies by scholars associated with the project. In 1938 and again in 1969, *The Year Book of Education* and its successor publication, *The World Year Book of*

* Reprinted from *Emergent Issues in Education: Comparative Perspective* by Altbach, Kelly and Arnore by permission of the State University of New York Press (1992).

Education, turned their attention to secondary school examinations in an international perspective.[4] Valuable descriptive material and analysis were presented in these two volumes, particularly in the later *Year Book*.

Some elements of secondary school completion examinations in particular subjects have been incorporated into the specially devised achievement tests of the International Association for the Evaluation of Educational Achievement (IEA).[5] In both their form and their content, the IEA tests were required to be internationally uniform and acceptable, to make possible comparison of levels of cognitive achievement across nations. However, in meeting this perfectly proper aim for an *international* test of school achievement, IEA tests may omit important elements of the curriculum taught and examined in particular nations. Although some countries have added their own national items to the common international test, specifically national elements necessarily take second place to those with wider international currency. Moreover, IEA work has not been concerned with the consequences and implications of examinations.

Other international projects have been devoted at least in part to the question of secondary school examinations. In the early 1960s, an International Study of University Admissions was conducted under the joint auspices of UNESCO and the International Association of Universities (International Study of University Admissions, 1963, 1965). During the latter part of the 1960s, individuals representing institutions interested in the development of an international baccalaureate examination met to examine national curricula and examinations. Their goal was to provide a credential that would be acceptable to universities in many countries for purposes of matriculation. In the course of devising curricula and examinations for the international baccalaureate, attention was given to the contents of the secondary school leaving examinations in a number of major European countries (Peterson, 1972; Mayer, 1986). More or less at the same time, the Council of Europe considered the equivalence of school and university qualifications among the European nations. But, like the IEA, these efforts were concerned with the common elements of the several national examinations, and particularly with legal equivalences for the purpose of regulating university entrance, rather than with differences among them, or with the effects and implications of those variations (Egger, 1971; Peterson, 1972; Halls, 1971, 1973, 1974).

More recently, the World Bank has investigated examination practices in a number of industrialized and developing countries, in order to promote the improvement of examination procedures, especially in the latter group of countries. Representatives of the Bank have argued that it may not be a bad thing at all for teachers to "teach to the test," as long as the test is well constructed, covers material relevant to the candidates, and provides systematic feedback to the schools and to teachers on the errors that their candidates are making (Heyneman and Fägerlind, 1988, 11–12).

Why Focus on Examinations?

The World Bank is not alone in suggesting that examinations can play a major role in raising educational standards.[6] Indeed, comparative study of examination systems finds its strongest justification when nations seek ways to bring about educational change, especially when the concern focuses on raising the level of school achievement. Whether justified or not, there is a tendency to believe that certain foreign models (for example, the Soviet Union in the 1960s, Japan in the 1990s) merit close attention, and possibly even emulation. Foreign examination systems may be viewed as doing a better job of stimulating student achievement, defining the curriculum for teachers, providing taxpayers and administrators with indicators of school quality, and preparing school graduates for subsequent education and work.

While examinations exert a powerful influence on schooling arrangements, social and educational developments, in turn, affect examinations. The advent of mass education, especially at the secondary level, has profoundly altered the nature and purpose of secondary school completion examinations. From being almost exclusively directed at regulating credentials for entry into higher education, examinations have become increasingly multipurpose, certifying completion of the upper secondary level of schooling, and controlling access to a variety of further education and training opportunities far beyond the traditional institutions of higher education. If only because they now touch the lives of so many more young people, secondary school completion examinations fully merit our close attention.

There are other, more general justifications for concern with these examinations in contemporary society. As economic and social life becomes more formalized and bureaucratized, schools are drawn to fit their procedures to the surrounding society. Certificates of completion of a course of study become valuable pieces of property, and examinations are a way to ensure that such certificates reflect degrees of learning, rather than simply attendance. What each nation considers to be the most desirable opportunities after the end of secondary school are necessarily limited relative to the demand for them. Thus, examinations are accepted as a politically and ethically defensible way of deciding which high school graduates to reward, and which to deny.

From time to time, nations have tried to abandon examinations at the end of secondary school, but have then been forced to backtrack. China offers a contemporary example. During the Cultural Revolution, China broke with its well-established tradition of reliance on examinations to control admission to higher education and further training. Certification of political activism and "correctness" of social origin took their place. But when Mao's widow and her colleagues fell from power in 1976, one of the first changes made by the new regime was to return to using examination results for allocating university places. The Soviet Union also tried to do away with

such examinations in the 1920s, but under Stalin they were reintroduced and they are now a well-entrenched feature of Soviet education.

Indeed, with the notable exception of the United States and Sweden, it is difficult to name a modernized or modernizing nation that does not rely on secondary school completion examinations in one form or another to certify completion of secondary education, to allocate opportunities for further education/training, or to regulate hiring.

Alongside these manifest functions of examinations are some equally significant additional functions. Examination results can be used to evaluate (with greater or lesser validity) the "quality" of a teacher or a school. They can be used to establish preferential treatment in the allocation of money for salaries, buildings, materials, equipment, and the like. Examinations can serve to motivate teachers and students, stimulating teaching and learning efforts by specifying in detail the system's expectations of students' learning. In consequence, examination requirements can lead to undue concentration on the material to be examined, to the exclusion of other elements in the school curriculum. Indeed, examined subjects can drive unexamined subjects out of the school timetable entirely. Above all, examinations can serve as a way of legitimizing knowledge, signalling the acceptance of a new school subject. For these reasons, examinations are expected to serve as influential means of implementing new school practices and educational reform programs.

Examination systems in particular countries demonstrate different ways of fulfilling these functions. They illustrate how changing social circumstances create pressures to change examinations, both directly, and indirectly via changes in educational arrangements. In addition, they provide illustrations of the different patterns of intended and unintended effects examinations have on school systems. Eight national systems (Japan, France, the Federal Republic of Germany, the Soviet Union, England and Wales, Sweden, China, and the United States) have been selected for discussion, because each illustrates at least one important feature of the relationships among examinations, schooling, and society.

Japan

Japanese society and schooling place extraordinary emphasis on scholastic success, as measured by examinations. Educational practice appears to give wholehearted support to the thesis that education is primarily about examination success. In 9th grade, at the end of lower secondary school, a fiercely competitive set of examinations regulates admission to upper secondary schools of high prestige. Although nearly all lower secondary graduates go on to upper secondary school, admission to the "right" school is extremely important in determining future academic opportunities and eventual employment, for the hierarchy of upper secondary schools is well defined and widely recognized. In 12th grade, at the end of upper secondary school,

comes the second stage of the selection process, the university entrance examinations. Performance in the examinations is once again absolutely critical to a young person's subsequent chances for education and, as a consequence, employment. "More than any other single event, the university entrance examinations influence the orientation and life of most Japanese high school students, even for the many who do not go on to postsecondary education" (US Dept. of Education, 1987, 44).

About three-quarters of university students attend private universities. Some of these are quite prestigious, but most of them enjoy a lower reputation than the national (public) universities attended by the remainder. (There is a small local public university sector, with about 3 percent of total enrollment.) To gain admission to a public university in Japan, it is normally necessary to take two examinations. The Joint First Stage Achievement Test (JFSAT) is a nationwide, centrally administered, governmental, public examination. The results of the JFSAT are used to steer students to apply to a university likely to accept him/her. The JFSAT is followed by an examination set by the university to which the high school student has applied. These examinations are very highly competitive. In a typical year there are about four candidates for each public university place, so the university entrance examination results serve as a way of rationalizing allocation of high school graduates to a sharply defined hierarchy of higher education institutions, ranked explicitly in quality and reputation (Rohlen, 1983).

One of the side effects of the intense competition generated by the examination system has been the development of the minor industry of *juku*, private cram schools, to improve a candidate's chances. Another side effect has been the emergence of a large group of overage candidates (*ronin*), who have failed to gain entrance to the university of their choice the first or second time around, and are studying at specialized *juku*, termed *yobiko*, to retake the entrance examinations.

Serious concern has been expressed about the intensity of student competition, and about testing that stresses recall of isolated fragments of information, while neglecting comprehension. The term "examination hell" has been applied to the last couple of years of high school leading up to the JFSAT. On the other hand, there is strong support in Japan for the present system that, it is claimed, rewards those who are prepared to work hard and serves the interests of the Japanese nation. A movement to reform the school curriculum and to reduce the examination load on students was instigated in the mid-1980s by no less than the Prime Minister, but came to nothing.[7]

France

The French invented the device of a certificate gained through national, non-competitive examination and designed to be both the necessary and

sufficient condition for entry into higher education. Since then, forms of the *baccalauréat* in a multitude of variations have been adopted in scores of countries. For this reason alone, France has a strong claim for inclusion in a cross-national survey of secondary school completion examinations. In addition, the significant changes that have been made in the *baccalauréat* since the 1960s, together with the implications of those changes for schooling and employment, heighten the significance of France in the realm of examinations.

The French educational system is probably even more centralized than Japan's. Control by the national Ministry of Education ensures that for each school subject, the *baccalauréat* examination is uniform in timing, content, and structure across the entire nation, as well as in France's remaining overseas dependencies (Ministère de l'Education Nationale, 1985). However, what used to be a single *baccalauréat* examination and credential has over time diversified into more than thirty lines, all built on a strong base of academic study in the humanities, mathematics, and the natural sciences, and providing a moderate degree of specialization, especially in the final year of secondary education. The diversification of the *baccalauréat* has been a powerful instrument for widening the curriculum of French secondary schools, and for undermining the privileged position of the academic *lycées*, which formerly enjoyed a monopoly in preparation for the *baccalauréat*.

In contrast to the Japanese practice, passing the *baccalauréat* examination confers legal entitlement to university entrance anywhere in France (some restrictions apply in some popular faculties, such as medicine, dentistry, and engineering). In 1986, overcrowding, especially at the University of Paris, and a decline in physical and academic conditions of study and standards of work led to government proposals for greater differentiation of standards within and across the universities, and for granting some autonomy in admission decisions to individual institutions of higher education. However, the draft legislation intended to introduce such changes provoked such widespread student protest and political opposition, in the form of mass demonstrations on the streets and outside the National Assembly, that the responsible minister was forced to resign and the government withdrew its legislative proposals entirely. These events called seriously into question the government's ability to institute changes in higher and secondary education.

To some extent the proposed legislation would have merely given formal recognition to changes that have been growing over past decades. The *baccalauréat* has become less and less an automatic passport to the higher education of one's choice. Instead, there has developed what has been termed a *université à deux vitesses* (a two-speed university). Admission to the ordinary university (the slower track) is still open to all *baccalauréat* holders. But admission to the fast-track institutions is restricted. Approximately 10 percent of the students in French higher education attend the

specialized *grandes écoles*, access to which is determined by highly competitive examinations (the *concours*), run separately by some individual *grandes écoles*, and in groups by others. To prepare for the *concours*, students are admitted to the preparatory classes attached to *lycées*, on the basis of their *baccalauréat* results and their record of school work. Preparation normally lasts for two years. There are several science specialties, leading to a common *concours* for such *grandes écoles* as Mines et Ponts and Saint-Cyr, a special examination for entrance into the veterinary schools, a special literary examination for other groups of *grandes écoles*, and so on. Successful candidates for entry into one of the most prestigious of the *grandes écoles*, the Ecole Nationale d'Administration, are offered cadet appointments in government service, together with salary while studying, and in return must sign on for ten years' service in a specific government appointment on graduation.

While admission to a university in France has become much more open during the past 20 years (the proportion of the age-group in university-type education has quadrupled since 1955, from about 5.5 percent to well above 20 percent), the *grandes écoles* remain very restricted. Compared to the universities, they enjoy immensely superior facilities and staffing ratios. Graduation from them opens the door to the highest levels of responsibility and reward in government, the professions, and business in France. In addition to the *concours* for the *grandes écoles*, there are other highly competitive examinations to regulate access to particular fields of study in the universities (for example, medicine, pharmacy, and dentistry). For these segments of higher education, in particular, the make-or-break features of the French examination system closely parallel those of Japan.

Federal Republic of Germany

The FRG offers a major variant on the basic French model, which has relied so heavily on standardization and control from Paris to maintain academic standards. Instead, the Federal Republic has secured a relatively high and uniform degree of academic quality at the end-point of secondary education, while according a large measure of regional and local control of the examinations.

The credential at the end of upper secondary school (the *Hochschulreife*), or "certificate of readiness for higher education", is commonly known as the *Abitur*, literally "exit credential." Like the French *baccalauréat*, the *Abitur* has national currency. It, too, is at once a necessary and sufficient qualification for admission to higher education. However, unlike French practice, the examinations are locally set and administered (by the examination board of the secondary school), though arrangements are subject to criteria established by the provincial Ministry of Education.

There are two types of *Hochschulreife/Abitur*, "general" and "specialized", plus other certificates that are awarded to those who have completed other secondary school courses that are shorter than the full course at the *Gymnasium*, or academic high school. The general *Abitur* certificate is acquired through study and examination in the *Gymnasium*, following 13 years of education. In the late 1980s, just over 20 percent of the age group was enrolled in the *Gymnasium*, preparing for the *Abitur*. A further 10 percent were in other secondary schools, preparing for a vocational/technical form of the examination. As most students who prepare for the examinations pass them, the last few years have seen about 30 percent of the age group receiving their *Abitur* certificate. The certificate serves both as evidence of completion of academic secondary school, and as an entitlement of entrance to higher education. The specialized certificate is awarded after examination in a more limited number of subjects, and entitles the holder to entry into higher education in the related specialty (for example, agriculture, engineering, technology, or computing). The specialized *Abitur* can be converted into a general certificate by sitting a supplementary examination in a second foreign language.

In the past, a holder of the *Abitur* was entitled to admission to study in virtually any faculty, under any professor. However, the numbers of those achieving the *Abitur* increased to quite unprecedented and unexpected levels, from a mere 57,000 in 1960 to almost 300,000 by 1986 (of whom some 66,000 received the specialized certificate, which did not even exist in 1960) (Bundesminister für Bildung und Wissenschaft, 1988). In consequence, a progressive erosion of this entitlement has occurred in the last 15 years. Many institutions and faculties now impose limitations on entry (the so-called *numerus clausus*) into some oversubscribed fields, such as medicine and dentistry. As part of these changes, a measure of performance during the course of secondary school is added to examination results, to arrive at the applicant's total score. In addition, the percentages achieved in the *Abitur* examination, rather than the simple fact of passing, have become important for obtaining entrance to the popular faculties and institutions.

Changes have taken place in the structure of German education that could scarcely have been foreseen in the 1960s. The *Gymnasium* has become differentiated, and is no longer restricted to the single model based on classical languages. Enrollments in these academic high schools, and in the scarcely less academic *Realschulen*, have burgeoned. Between 1965 and the late 1970s and early 1980s, the number enrolled in the *Gymnasium* jumped from 860,000 to about 2,000,000; in the *Realschulen* from 600,000 to 1,350,000. During the 1980s the absolute numbers have fallen off, as the size of the age-group has declined, but the proportion of the age-group attending either *Gymnasium* or *Realschule* has kept increasing. This, in turn, has had implications for the *Abitur*, which is no longer considered exclusively as a ticket to higher education. Instead, a growing fraction of *Abitur* holders

(now reaching about 10 percent) are choosing to enter the "dual system" of apprenticeship training. For Germany, this is an astonishing development, showing that the function of even the most firmly entrenched examination credential can change in the face of severe social pressures, in this instance rising unemployment among those with solely academic education (von Hentig, 1980).

Union of Soviet Socialist Republics

The Soviet Union combines features of the German, French, and Japanese approaches to high school completion examinations. A substantial degree of local administration of the examination provides the parallel with the FRG; as in France, there is a strong framework of central directives; and, as in Japan, applicants for higher education admission must compete in a second-stage entrance examination specially arranged by individual institutions. Thus, the high school completion certificate in the Soviet Union is a necessary, but not a sufficient condition for admission. Indeed, relatively few applicants will be accepted into full-time higher education; most will have to be content with part-time or correspondence study (Kuebart, 1986, 367–69).

Each of the fifteen Union republics exercises formal control over its schools, although in practice there is considerable uniformity of educational structure, content, and procedures across the entire USSR. A de facto national curriculum with a strongly academic bias has been established, with only minor variations to take care of republic and local differences (mainly of language). Moreover, the curriculum offers very few elective subjects and, within subjects, very little discretion over the material to be studied. However, despite this high level of uniformity, there is no central school examination authority, and no secondary school completion examination at the level of either the Union or the republics.

As in the Federal Republic of Germany, each school examines its own students for graduation, even continuing the older German tradition of oral examinations. The candidate appears before a small board of examiners, and chooses from among a number of face-down question cards. A little time is then allowed for the candidate to prepare an appropriate answer which he/she is then invited to present orally. Supplementary questions may then be posed by the examiners.[8]

Secondary school completion is certified by the award of the "certificate of maturity" (*attestat zrelosti*), based upon satisfactory completion of courses during the previous two (now three) years of senior secondary school and satisfactory performance at the oral examinations. The quality of the *attestat* is an important datum for admission to higher education, but is not the only factor considered: letters of recommendation as to character, community service, and political reliability are also taken into account. But most important of all are the applicant's results in each university's or higher

technical institute's entrance examination (Alekseeva and Gorodnicheva, 1986).

In general, the Soviet authorities have made only cautious changes in their secondary school structure and curricula, and in the regulations governing admission to higher education and other education/training opportunities. An exception was provided by Khrushchev, who enthusiastically supported the introduction of labor training in the secondary academic schools, and set a work experience requirement for admission into higher education. These innovations were quickly abandoned on his downfall, although the labor training requirement is now being reintroduced, characteristically quite cautiously under the Gorbachev regime. Underlining the slow pace of change in the Soviet educational system, the regulations and procedures for high school graduation, especially the emphasis on the cumulative grade record in the courses taken in high school, have remained unchanged, as has the necessity to sit for a particular higher education institution's entrance examination. The Soviet system thus provides an example of exceptional stability of examination structures, content, and credentials, in a society that has also been constricted by a powerful ideology and a strong state apparatus.

The Soviet Union has carried over into a socialist society many of the goals and methods of earlier non-socialist European systems of academic secondary education, with the important exception that it has sought to make access to complete secondary education universal across the entire nation. As a consequence, the numbers receiving the *attestat zrelosti* have far outstripped the capacity of Soviet higher education to accommodate them. Competition for admission has elevated the significance of the university examinations, and this has reinforced the already strong academic emphasis in the Soviet school curriculum. It has also led to the creation of a large network of postsecondary, non-higher education institutions, to accommodate those who could not gain a coveted place in higher education.

Over and above these questions of educational structure and articulation is the much larger question of the dynamics of a society in which the state and the Party have for decades sought to maintain tight control on public information, attitudes, and action, while the population at large has been endowed with ever-increasing amounts of secondary education and the credentials that go with it. Gorbachev's current slogan, *glasnost'*, and the ferment of opinion and political activity in the Soviet Union and Eastern Europe is some evidence that the tradition of state and Party monopoly on information cannot for ever withstand the critiques of a better educated and more credentialled citizenry.

England and Wales

England presents a set of secondary school completion examinations and higher education admission procedures quite unlike those of other Western

European countries. In England and Wales, the college or even the academic department chooses the students it wants, on the basis of criteria it sets for itself. If this is familiar to the American reader, it is quite different from Western European practice, where it is the student who chooses the university to attend and the faculty in which to study.

The customary examinations taken in England and Wales toward the end of secondary schooling provide a credential that is neither legally necessary nor formally sufficient for entrance into higher education. Until recently, in practice, a candidate with the "correct" choice of subjects and a good set of scores could expect to find a college place. This is no longer so, since the Thatcher government has taken the quite unprecedented step (for Britain) of setting an upper limit to the number of places that can be offered. The imposition of an across-the-board *numerus clausus* has transformed what was a largely non-competitive set of examinations into an implicitly competitive one.

Consistent with the British tradition of decentralized education, about a dozen regional authorities have provided the examinations normally taken by students toward the end of secondary schooling. Beginning in 1950 and until 1988, the major examination has been the General Certificate of Education (GCE). The GCE Ordinary Level examinations were normally taken at age 15 or 16, in four to eight subjects, and were intended to certify completion of a standard, academic, five-year general secondary education. The GCE Advanced Level examinations were taken after an additional two years of specialized study, either in the humanities, the natural sciences, or the social sciences and business related subjects (Mortimore, 1984). Because college education in England and Wales is typically highly specialized (a student goes to college to read English Literature, or German, or History, etc.), there has been great pressure to offer a combination of A-Level subjects that is closely related to the desired course of study at college. Most candidates offer not more than three Advanced Level subjects, and the results have been very important, though not decisive, in determining university admission.

In the early 1970s an additional examination, the Certificate of Secondary Education, was introduced. It was designed for students leaving comprehensive secondary schools at age 16, and was much less dominated by university entrance interests than the GCE. The CSE was developed as part of the mounting effort to reduce inequalities of esteem among different types of secondary schooling and categories of students. However, since 1978, a reformed national system has been promoted under the title General Certificate of Secondary Education. It is designed to integrate the older, predominantly academic university entrance examination (GCE) with the more general purpose examination (CSE). While the GCSE will be administered through regional boards, and will continue to be strongly influenced by university interests and the teaching profession, it was the central govern-

ment's Department of Education and Science that took the initiative in instituting the new arrangements. The examination may include locally (school) determined components, but the Department of Education and Science has moved to reduce sharply the number of examining authorities, and to take more power to determine the structure of the examinations, and the levels of grading. The intent is to have a single major examining system for all students. Candidates will be awarded passes at different levels, and papers in different subjects can be taken over a period of years, with a student accumulating a series of passes at different levels in different subjects. Thus, the newly instituted GCSE examination is to cover the widest possible student population, and is intended to serve all three common functions of secondary school examinations: as a diploma of completion; as a device to assist employers in hiring decisions; and as a guide to institutions of postsecondary education in their admission decisions (Gipps *et al.*, 1986; Kingdon and Stobart, 1988). The first administration of the new examination took place in 1988, to many complaints that not enough time had been provided to prepare the new curricula and that grading standards had not been established fairly. These early problems seem to have diminished.

The examination system that has developed to satisfy the university entrance requirements has led secondary school students into exceptionally early and intense subject-specialization. The British are quite divided about this feature of their upper secondary schooling. The persistence of GCE A-Level examinations, despite reform efforts, suggests that a majority still judges the high level of specialization in Sixth Form (grades 12 and 13) to be a most positive feature, leaving only a minority to deplore the fact that English youngsters can (and typically do) abandon the sciences and mathematics, or the humanities, or the social sciences by age 16, to concentrate on their Sixth Form studies. England and Wales thus provide an example of an examination system that has made little or no effort at the upper secondary level to ensure some equivalent of the French *culture générale*, or the German *allgemeine Bildung*, let alone the Soviet polytechnical ideal.

Sweden

A preoccupation with fairness and equity in access to higher education led to a gradual change in Swedish government policy with regard to secondary school examinations. In considerable contrast to the FRG and France, Sweden today relies on a nationally provided, but locally administered, system of regular assessment of individual student achievement. Sweden has abandoned the *studentexamen*, once equivalent to the *Abitur* and the *baccalauréat*. In the 1950s, as part of its larger goal of secondary school reform, the Swedish government began to introduce exceptions to the traditional practice of university selection by examination results alone. By

1972 the new system was in place. Since that time, no school leaving examination has been required, only certification that a given program of study has been satisfactorily completed. However, locally administered assessment of achievement on the basis of tests sent out from the Swedish National Board of Education is mandatory in the final years of secondary school. The system is not without its problems. Minimizing variation in grading standards from one high school to another requires a good deal of interschool consultation, and there is a complicated system for weighting some school subjects more than others in computing a final grade point average (National Swedish Board of Education, 1985).

Sweden has gone further than the other nations we have considered in being willing to tailor curricula to suit individual choices, and to relate them to employment. It now possesses a highly differentiated upper (post-compulsory) secondary school system, from grade 10 on. Many of the 27 tracks defined as alternative programs of study at the upper secondary school level are avowedly vocational. All, in theory, are of equal status and, with regular testing, lead to equal rights to enter higher education and further training. In practice, a hierarchy of prestige and opportunity continues to exist.[9] However, Sweden's decision to abolish the final examination and replace it with in-school assessments has noticeably attenuated the importance of simply achieving success in leaving examinations in determining future study opportunities (Marklund, 1988).

The People's Republic of China

China is the birthplace of the first and most influential of all examination systems, by means of which individuals were selected for high office and public responsibility. Instituted in A.D. 909, the Imperial Examination System was retained through successive regimes until the overthrow of the Qing Dynasty in 1909 (Hu, 1984). Advancement to postsecondary education continued to depend upon examinations in subsequent decades, but the very idea of this unique, highly centralized, nationwide procedure was rejected after the Cultural Revolution, which in fact closed down the universities entirely between 1966 and 1971. While admission tests continued to exist, acceptance into higher education was determined largely by class background, work experience, and recommendations concerning political reliability. Academic examinations were rejected both as a symbol of traditional oppression and a powerful means of maintaining social differentiation (Unger, 1984).

However, in its recent moves to improve educational efficiency and quality, the Chinese government has reintroduced examinations as a means of rationalizing the distribution of scarce resources. Examinations at the end of the nine-year compulsory period of schooling now determine entrance to

the various forms of upper secondary education: general academic schools, "key" schools (designated for selected, superior students and receiving superior resources), and vocational/technical schools. A subsequent examination at the end of upper secondary school determines university entrance. Standards of passing are very much influenced by availability of places, and quotas are related to overall plans for institutional and economic development (State Education Commission of the People's Republic of China, 1986).

Control of the systems for testing and admission to various types/levels of schooling differs. The central government's Ministry of Labor and Personnel prepares a nationwide entrance examination for the skilled worker schools (though authorities in the major cities of Beijing, Shanghai, and Tientsin prepare their own). The national State Education Commission prepares an examination for prospective students of technical schools and the universities. However, this is administered by the provincial Higher Education Bureaus, which in turn assign candidates to schools based on their scores and specialties, and the places available. Entrance examinations for the various forms of upper secondary schooling are prepared by the provincial education bureaus and administered on a citywide basis.

Examinations were reinstated in China to help deal with the nation's labor market and educational deficiencies, especially the low overall quality of the teacher cadre, severe shortages of high level personnel in many sectors of society, and constraints on opportunities for advanced education. Deficiencies of personnel and facilities have led to great pressures on selection devices, and the problematics of selection are further complicated by ideological considerations, which place emphasis on political correctness. Nevertheless, examinations are regarded as essential tools of technological, commercial, and educational modernization. Their reinstatement marks an important victory for those who place efficiency and academic quality above the rhetoric of egalitarianism.

United States of America

The USA has no official, national system of examinations at the point of graduation from high school. Regulation of the requirements for graduation is largely in the hands of the education authorities of the 50 states, and differences among the states in their minimum requirements can be quite substantial. Only a few states (notably New York and California) provide statewide achievement tests to validate the award of a high school graduation certificate. Moreover, as many states control their local school districts quite loosely, there are important variations in standards and requirements within states, as well as among them. For most young people, the high school diploma is awarded after satisfactory completion of a required number of

courses, distributed in accordance with state regulations, and with no public examination necessary to validate the grades awarded during high school.

What the USA lacks in terms of official national examinations is in part balanced by the development of a system of tests that are essentially privately organized, developed, and administered, and are designed to assess achievement in school subjects toward the end of secondary school, as well as aptitude for college-level studies. Two organizations dominate in providing these tests the Educational Testing Service (which provides the Scholastic Aptitude Test, or SAT, and "regular" Achievement Tests and "Advanced Placement" Tests in individual school subjects), and the American College Testing Program (which provides the American College Test, or ACT). Most, though not all, colleges and universities ask applicants to supplement the record of their high school work with the results of a test of scholastic aptitude, administered by one or other of these private testing agencies. Applicants to the more prestigious colleges and universities will also submit scores on achievement tests provided by these agencies.

In conformity with so much of the within-school examining and testing in the USA, these aptitude and achievement tests are predominantly multiple-choice and machine-scorable. (The Advanced Placement Tests are a notable exception, but less than 5 percent of all high school graduates take these tests.) This contrasts with the more traditional format for the examinations: a German, French or Soviet student will spend most of the examination time writing out lengthy prose answers, or detailing each step of a mathematical proof or computation. These requirements send a strong signal to teachers and students that the ability to provide answers framed in a connected, literate manner is very important.

Criticism of the US practice of multiple-choice testing has not been lacking (Resnick, 1985). The tests have come under increasing criticism for their alleged undesirable effects on what and how teachers teach, on student learning, thinking, and their ability to write acceptable prose, and for the message they convey to students about the nature of academic skills and knowledge. The criticisms appear to be having some effect. The American College Test now advertises itself as more than an aptitude test; and the Educational Testing Service is reported to be working on an extensive revamping of the SAT. This will entail two major changes: moving the SAT away from its claim that it is primarily a test of "aptitude" for college-level work, toward being a more explicit achievement test; and introducing more items requiring extended prose responses, in place of the checking-off of alternative answer boxes that the present format permits and indeed requires.

The contrast with the more formally organized and nationally regulated systems described above is striking, especially the reliance on nonofficial, private agencies to provide nationwide reference points for college admissions officers. The US approach both reflects and reinforces its bias

toward a highly decentralized school system (Valentine, 1987). For this reason, although many reports on reform of secondary schools have recommended the strengthening of examinations, in the hope that this will raise the achievement levels of high school graduates, state action to impose examination requirements along the lines of Western European countries is nowhere in sight (e.g., National Commission on Excellence in Education, 1983, 19, 28).

Conclusion

Viewed in cross-national perspective, secondary school completion examinations share a largely common set of functions, but they differ substantially in their modes of control, clientele, and implications. Examinations can be set by national or regional, governmental or nongovernmental authorities, involving participation by quite different sets of interest groups. They may be uniform across the country, or vary by region, and even by school or higher education institution. The examination system can be concerned largely or exclusively with promotion to more advanced academic study, but it can be used also for regulating entry into various opportunities for work in business and industry.

The credential gained may be both necessary and sufficient in order to proceed to further education (as in France and Germany). It may be a necessary, but not sufficient, condition (as in Japan, China, and the Soviet Union). It may be neither legally necessary, nor sufficient (as in England). It may be conventionally necessary, but sufficient only for entry into some higher education institutions (especially the state colleges and universities), but not for others (as in the United States, where the high school diploma can be acquired in most school districts without formal final examination). Finally, a nation may abolish entirely the formal final examination for the secondary school completion credential, and award it on the basis of satisfactory performance on tests and course work done during the last few years of school (as in Sweden).

Rising enrollments at upper secondary school levels have had a powerful effect on examinations. In the space of thirty years or so, the percentage of the relevant age-group completing upper secondary education has more than doubled in virtually all the countries we have studied. As the number of candidates for the end-of-school examinations has increased, pressures to diversify the examination have become difficult to resist. In France, the *baccalauréat* used to offer little choice of subjects and levels of difficulty; the examination now has a long menu of alternatives; to a somewhat lesser extent, Germany has followed the same route. The Soviet Union continues to hold out against such diversification, though political changes may lead to substantial differentiation in what until now has been a remarkably undifferentiated system of examinations.

Another aspect of the changes overtaking examinations is change in the way achievement is assessed. In the PRC multiple-choice questions are increasingly being used, while in the USA alternatives to such convenient, yet suspect, techniques are under serious consideration. Most importantly, reliance on the one-shot, one-style examination is coming more and more into question, whether for validating graduation from high school, or for determining university entrance. The quality and range of schoolwork are heavily weighted as part of the final score in Germany, and also in England in some subjects. In Europe, in particular, attention is being given to replacing examination results with profiles of achievement. These would combine records of achievement and activities in school and out of school, based on tests, examinations, self-reports, and portfolios of work.

It is also important to note that examinations may prove to be obstacles in the way of changes in education in one country, while being used as levers of change in another. Thus, although the JFSAT appears to remain a very strong impediment to relaxing the pressures placed on Japanese schoolchildren, in England the government has placed great store on the power of a new set of examinations to shift curriculum emphases toward a national pattern and to raise levels of academic achievement in general.

Last, pressures to change national examination systems come not only from within the school system, but from outside. Prospective employers, government paymasters, parents, and the public at large express their views about what the schools should "produce" in order to serve better the civic and economic needs of the nation. In addition, important questions of equity, fairness, and relevance of examinations are perennial topics of debate (and even litigation), helping to shape changes in examination systems. While there is little evidence that the nations under study are moving towards congruence in their examination practices, it is clear that in many instances they are moving away sharply from past forms and practices.

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Notes

1. See J.L. Brereton, *The Case for Examinations: An Account of their Place in Education with some Proposals for their Reform* (Cambridge: Cambridge University Press, 1944); and Sir Philip Hartog and E.C. Rhodes, *An Examination of Examinations* (London: Macmillan, 1935) for early discussions. A recent bibliography of mostly British items in J.C. Mathews, *Examinations: A Commentary* (London: George Allen and Unwin, 1985) lists about 250 titles. References to US published sources may be found in the back notes to Robert Klitgaard, *Choosing Elites* (New York: Basic Books, 1985). See also: Robert J. Montgomery, *Examinations: An Account of Their Evolution as Administrative Devices in England* (London: Longmans, Green, 1965); R.A.C. Oliver, "Education and Selection," in Stephen Wiseman, ed., *Examinations and English Education* (Manchester: Manchester

University Press, 1961); John Oxenham, "Employers, Jobs and Qualifications," in John Oxenham, ed., *Education versus Qualifications?* (London: George Allen & Unwin, 1984).

2. See, for example, "Generation in Trouble: Spanish and Russians Find Their Young Alienated," *New York Times*, 16 February 1987, Section A, p. 6, which describes recent student unrest in Spain over university admission policies that are "based on a single examination, which many students see as an unfair throw of the dice." French student demonstrations against "la selection," focused on a *projet de loi* that would have permitted universities to exercise discretion in the use of *baccalauréat* results for admission, are described in "Class of '86 takes to the streets" and "Violence mars students' victory," *Times Educational Supplement*, 5 December 1986, p. 17, and 12 December 1986, p. 17.
3. See the several volumes of the (Teachers College) International Institute Examinations Inquiry. This major project, under Paul Monroe's direction, was conducted in the 1930s, and was funded by the Carnegie Corporation and the Carnegie Foundation. Collaborators were drawn from the United States, England, Finland, France, Germany, Norway, Scotland, and Sweden. The work was summarized in three volumes reporting papers and discussion at three international conferences: Eastbourne, England (1931); Folkestone, England (1935); and Dinard, France (1938). See: International Institute Examinations Enquiry, *Essays on Examinations* (London: Macmillan, 1936); Paul Monroe, ed., *Conference on Examinations* (New York: Bureau of Publications, Teachers College, Columbia University, 1936); and Paul Monroe, ed., *Conference on Examinations* (New York: Bureau of Publications, Teachers College, Columbia University, 1939). For a short description of the inquiry, see I.L. Kandel, "The International Examinations Inquiry", in *The Education Record* **17**, Supp. No. 9 (January 1936), pp. 50–69.
4. Harley V. Usill, ed., *The Year Book of Education* (London: Evans Brothers, 1938) described the nature of examinations in several countries of the British Commonwealth and in other English-speaking nations, without attempting comparative analysis. In 1969, Joseph A. Lauwerys and David G. Scanlon, eds., *Examinations: The World Year Book of Education* (New York: Harcourt, Brace & World, 1969) covered a far wider range of countries, and the organization of the book offered a comprehensive framework for comparative study. While proceeding mainly by juxtaposing descriptions of the purposes, organization, and structures of examinations in different countries, the 1969 study made use of a number of cross-national themes, for example, the economic and social effects of examinations, and the effects of examinations upon teachers and pupils. In addition, in the 1970s, the Commonwealth Secretariat (London) engaged in a review of secondary school examinations in a number of Commonwealth countries. See: Commonwealth Secretariat, *Examinations at Secondary Level* (London: Commonwealth Secretariat, 1970), and *Public Examinations, Report of the Commonwealth Planning Seminar. Accra, March 1973*, in Education in the Commonwealth, No. 8 (London: Commonwealth Secretariat, 1973).
5. For overviews of IEA purposes and projects, see: *Comparative Education Review*, **18**(2) (June 1974), "What Do Children Know?"; and *Comparative Education Review*, **31**(1) (February 1987), "Special Issue on the Second IEA Study."
6. Thus, under a heading, "Provide quality assurance in education," the Task Force on Education for Economic Growth of the Education Commission of the States recommends: "Student progress should be measured through periodic tests of general achievement and specific skills." *Action for Excellence* (Denver, Colorado: Education Commission of the States, 1983), p. 11. And, in *A Nation At Risk*, the National Commission on Excellence in Education stressed the central role of examinations, as follows: "Such expectations [of the level of knowledge required] are expressed to students in several different ways: . . . by the presence or absence of rigorous examinations requiring students to demonstrate their mastery of content and skill before receiving a diploma or a degree." The National Commission on Excellence in Education, *A Nation at Risk: The Imperative for Educational Reform* (Washington, D.C.: US Government Printing Office, 1983), p. 19. The Commission went on to say: "Standardized tests of achievement . . . should be administered at major transition points . . . particularly from high school to college or work. The purposes of these tests would be to: (a) certify the student's credentials; (b) identify the need for remedial intervention; and (c) identify the opportunity for advanced or accelerated work. The tests should be administered as part of a nationwide (but not Federal) system of State and local

standardized tests." The National Commission on Excellence in Education, *A Nation At Risk: The Imperative for Educational Reform* (Washington, D.C.: US Government Printing Office, 1983), p. 28.

7. "A New Entrance Examination System," *Monthly Journal of Ministry of Education, Science, and Culture* (Tokyo, 1988). Japanese anxiety over the negative personal and social effects of the so-called "examination hell" has been expressed forcefully in reports from the National Council on Educational Reform. See "Summary of Second Report on Education Reform," 23 April 1986.
8. The topics for the oral examinations at the end of secondary school are published each year by the central education authorities of each Soviet republic. In the Russian Republic the topics are to be found in: *Bilety dlia vypusknykh ekzamenov za kurs srednei shkoly* (Tickets for the Secondary School Leaving Examinations).
9. New provisions for admission to higher education will go into effect in 1991. "In the new selection system, marks from the upper secondary school . . . will assume major importance. At least one-third and, at most, two-thirds of the applicants will be admitted on the basis of such marks. Those who do not have sufficiently high marks will have the possibility to sit a proficiency test at the earliest one year after having completed the upper secondary school. This test will count for more in the selection process than experience from working life." "Sweden: Access to Higher Education," *News-Letter/Faits Nouveax*, 2/88, Strasbourg: Documentation Centre for Education in Europe, 1988, p. 27.

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