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**THE DIVERSIFICATION OF SECONDARY EDUCATION:
SCHOOL CURRICULA IN COMPARATIVE PERSPECTIVE**

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The Diversification of Secondary Education:
School Curricula in Comparative Perspective (*)

by

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Introduction

Secondary education continues to expand rapidly worldwide. Over one-half billion students were enrolled in secondary schools in 2004, an increase of more than 60 million students in just five years (UNESCO, 2007). While gross enrolment ratios in secondary education were already high among advanced industrialized countries by the 1970s (around 80%), they have increased dramatically in much of the developing world since then (see Table 1). Undoubtedly, national strides towards universal primary education have intensified the demand for secondary schooling; so too has the prolongation of compulsory schooling and the establishment of a 'basic education' sequence consisting of primary and lower secondary education. Training sufficient teachers for expanding primary school classrooms is another reason for the increased demand for secondary schooling.

Table 1: Gross enrolment ratios, Secondary Education, 1970-1995
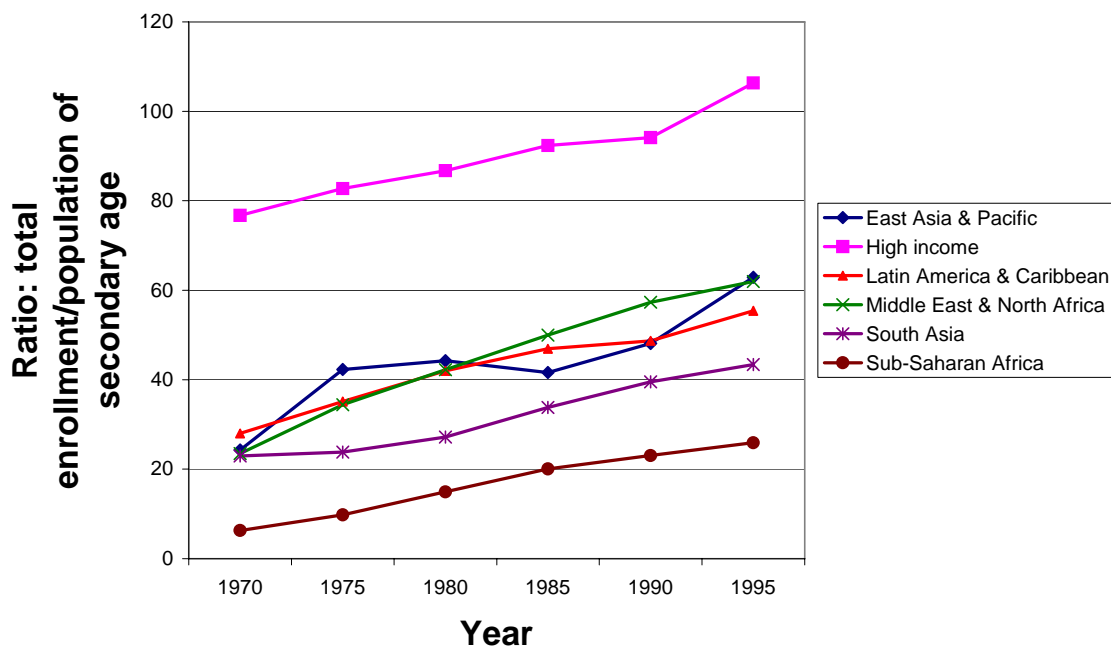
Source: World Bank, *World Development Indicators* 2002.

Equally important to the expansion of secondary education is its *diversification*. Both within and across countries, the purposes, programmes, financing and curricula of secondary education are considerably more varied than in the past. In particular, the historically elitist nature of secondary schools—namely, preparing students for higher studies, credentialing an administrative class, nurturing industrial entrepreneurship—has been transformed as countries pursue policies of open access and universal coverage and establish programmes offering broader curricular subjects, greater options and stronger ties to labour market demands. To be sure, the historical timing and sequencing of this diversification process have varied by region and national context (see below). And, it is worth noting, elitist models of secondary education still remain dominant in many countries.

The present paper contends that the diversification of secondary education, while acknowledged, is not well studied. Despite the widespread expansion of secondary education in different world regions, the information available to researchers—and policy makers—for informed comparisons of secondary education systems has been, and remains, rather superficial and limited (Holsinger and Cowell 2000). Apart from measures of overall participation (enrolment ratios) and compulsory attendance in secondary education, almost all existing data revolves around two simple dimensions: one hierarchical (i.e., lower vs. upper secondary education) and one programmatic (general vs. technical-vocational). [1] Cross-national analyses based on these two dimensions provide, at best, a rather partial picture of the diversity of secondary school systems worldwide.

The present paper compares the programmatic foci and contents of secondary education systems. It seeks to move beyond existing characterizations of secondary education, by reporting initial results from an IBE-sponsored, cross-national study of secondary level programmes, tracks and curricula. This study, while mainly limited to academic-oriented tracks, provides an empirical basis for comparing the diversification of secondary education systems. Previous analyses of the organization of secondary education have demonstrated the important impact of changing historical contexts, which have shaped both the development of secondary education in Europe and North America, but also the adoption and diffusion of different models of secondary schools in other regions of the world (Kamens, Meyer and Benavot 1996). The next section provides a brief overview of the historical evolution of secondary education.

Historical antecedents of diversity in secondary education[2]

The traditional European forms of secondary education—for example, gymnasium, lycée, "public," or grammar school—provided a classical humanistic education and a narrow gateway to higher social and occupational statuses. Throughout Europe, academic secondary schools began as institutions serving universities, with the purpose of preparing upper-class youth for study in higher education. Access to secondary education was firmly entrenched in rigid selection mechanisms, which provided distinctive advantages to the children of wealthy families, landowners, high administrative officials and other members of the upper classes. These produced bifurcated structures: on the one hand, a variety of academic-oriented secondary education systems, including preparatory classes attached to secondary schools, were mainly reserved for children of elite families or those who could afford to pay tuition fees; on the other hand, short-term and typically terminal programmes provided access to primary and post-primary education for the children of the popular classes.

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[1] In the 1970s, with the establishment of the first International Standard Classification of Education (ISCED), UNESCO collected statistical information on secondary education according to two stages (1st and 2nd stage), which were typically combined in published Statistical Yearbooks. To capture gross programmatic differences at the secondary level, enrolment statistics were reported three categories: academic, vocational and teacher training. The revised ISCED system adopted in 1997, continued to differentiate between lower (level 2) and upper (level 3) secondary education, but dropped teacher training programmes and concentrated on a basic distinction between general secondary education, on the one hand, and vocational technical education and training (TVET), on the other, usually at the upper secondary level. For more information, see: http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm

[2] This section draws extensively from a comparative historical study of universal basic and secondary education (Benavot and Resnik 2006).

From a historical perspective, the shift from elitist to more inclusive secondary education systems involved several, not always sequentially organized, transformations. Many countries made an early transition by broadening access to primary schools while simultaneously increasing the number of traditionally elitist secondary schools. In some contexts, selective secondary schools, which had exclusively served the aristocracy, began providing opportunities to the children of the bourgeoisie and urban middle classes (Collins 1979; Mueller, Ringer and Simon 1987). Another transformation involved the alteration of entrance examinations to secondary schools, with the purpose of strengthening meritocratic criteria with academic or IQ-like elements. Pupils who passed these exams were allowed to enrol in elite secondary schools, while other pupils either remained in school for several additional grades before dropping out or enrolled in vocational programmes or tracks. Both alternatives were considered less desirable.

In the United States the comprehensive high school that emerged in the late nineteenth century and flourished in the post-World War I era embodied a uniquely American vision of secondary education. By combining the principles of small, often private, college-preparatory academies with a broad set of occupationally relevant curricular offerings, the comprehensive high school sought to encapsulate democratic values and pragmatic educational principles (Commission on the Reorganization of Secondary Education 1918; Dewey 1916). The model of the comprehensive high school not only reflected an anti-elitist, egalitarian ideal in which academically and socially diverse students studied a common core of curricular subjects, but also fostered the "elective principle," which allowed students to choose from a range of course offerings (Vaizey 1965). In addition to Latin, biology, history, and physical education, high schools offered "practical" subjects such as industrial arts, home economics, typing, or accounting (Ulich 1967). This curricular structure, better adapted to the heterogeneity of pupils' talents and abilities, called into question the relevance of the predominantly humanities-oriented programmes found in European schools (Sutton 1965). It also problematized the practice of channelling students into separate academic and vocational schools (or streams) at a relatively young age.

In quantitative terms, the expansion of secondary education in the United States was unprecedented: enrolment ratios increased from 7 percent of the youth population in 1890 to 80 percent in the 1960s (Ulich 1967). The United States high school became the first entirely free secondary school in the world (Green, 1990). While comprehensive high schools contributed to the unprecedented growth of secondary education, they continued to act as powerful mechanisms of social stratification (Kerckhoff 1995). Overall, secondary education in the United States confronted much weaker elitist traditions and considerably less intellectual opposition to vocational education than in England (Cummings 1997). The comprehensive high school provided a pragmatic, instrumental approach to education in which vocational subject matter could be integrated in an expanding array of course offerings (Kleibard 1999). Thus, comprehensive schooling "softened", but did not eliminate, the sharp distinction between academic and vocational studies. Between-school hierarchies were transformed into intra-school ones.

After World War II, especially with the ascendance of the United States as the major economic and political superpower, intergovernmental organizations such as UNESCO and OECD lent their support to principles of equal educational opportunity. The use of highly selective entry examinations came under severe criticism as an obstacle to the "democratization" of secondary education. Countries began to adopt observation and

counselling procedures, which were intended to replace pupil selection methods, by strengthening the classification of pupils according to their abilities, interests, and achievements at the conclusion of compulsory education. The meritocratic ideal—that individuals, whatever their origins, should be given opportunities to carry their talents to full realization through education—was relatively late in coming to Europe (Ringer 1979; Maynes 1985).

During the 1960s and 1970s many European countries passed legislation prolonging compulsory education by two to four years, which was meant to universalize access to (lower) secondary education. New forms of secondary schooling emerged in large part to meet the increasing demand for secondary education. Moreover, the traditional curriculum of grammar schools, lycées, and gymnasiums, which stressed classical languages and academic subjects, was criticised for not being responsive to the needs and interests of heterogeneous student populations. Initiatives to transform and diversify secondary education systems gained momentum, including the revamping of various types of vocational and technical education (Resnik 2006).

Significantly, the post-World War II transformation of secondary education occurred during a particularly activist and dynamic period in European political history. The move to ensure greater educational opportunities and reduce social inequalities corresponded to political developments in Western Europe, in particular the ascension of democratic socialist parties (Wittrock et al. 1991). Led by cadres of political leaders imbued with a strong sense of solidarity and modernizing visions, many European governments launched large-scale educational reforms to establish and expand more inclusive secondary schools. Although the pace and outcomes of these changes varied from country to country, the transformation of secondary education became an important target of reformists' struggles. The shift from elite to mass forms of secondary education also involved a major structural change. States that had created sharp institutional (and class) divisions between primary and secondary education began constructing more integrated and less stratifying transitions between primary, lower-secondary, and upper-secondary education.

In the wake of these reform initiatives, three basic types of secondary education systems emerged in Western Europe (Schneider 1982):

- The Scandinavian comprehensive school model (Norway, Denmark, Sweden, and Finland), in which primary and middle schools were joined into a nine-year basic (and compulsory) programme. This system consisting of nine years of primary education and three to four years of post-primary education was legally institutionalized in Sweden (1962), Finland (1970) and Denmark (1975).
- The mixed systems found in Great Britain, France, and Italy. Specific equivalents to the comprehensive schools were legally implemented without, however, relegating the compulsory education of all pupils to one type of basic school.
- The traditional systems found in Austria, Belgium, the Netherlands, and in most German lander and Swiss cantons. Legislated reforms created a less comprehensive integration of secondary schools and specific national patterns of subdivided systems dominated these countries. The tripartite system usually included the classic, modern, and technical secondary schools, which formed separate tracks.

Education in the Soviet Union and the Eastern Bloc

Key principles of Soviet education, established in 1918, influenced educational patterns in Eastern Europe and elsewhere, until the break-up of the Soviet Union. In particular, Soviet authorities established and expanded mass educational institutions to improve literacy levels, enhance meritocratic principles, and pursue industrial development (Matthews 1982; Cummings 2003). The structure of Soviet education followed highly rational, hierarchical, and bureaucratic lines of authority, which extended from the central ministry through various regional and district levels until they reached school directors and teachers. As part of an explicit strategy of national development, the education system expanded to support collective state objectives. Given these ideological concerns, the state fully subsidized education. Public authorities prepared detailed plans for human resource development and manpower utilization. Central planning, which accentuated the needs of the national economy and the state above those of individual pupils and local communities, permeated the system (Grant 1979; Whittacer 1991; Eklof and Dneprov 1993).

The Soviet model strongly influenced the education systems of Communist block countries, many of which adopted substantial features of Soviet ideology and practice. For example, newly established socialist governments in Cuba, Vietnam, and China borrowed heavily from the Soviet model (Noah 1986), even though the Soviet presence itself was less pervasive. Unlike most western countries, where major educational transitions resulted from complex and drawn-out historical processes, communist countries often imposed decisive educational reforms in the wake of successful regime change (Carnoy and Samoff 1990).

At the secondary level, socialist institutions tended to blur the traditional hierarchy between academic and professional studies as well as the separation between school life and the work world. Soviet "factory-run schools and school-run factories" and Chinese work-study programmes that encouraged individuals to "work every day and study every day" exemplified the ideal integration of education and labour. China highlighted scientific and technological subjects, especially their application outside the classroom, often carrying out lessons at factories and farm sites (Cheng and Manning 2003). The polytechnical model, established in the late 1950s and 1960s in the Soviet Union and Eastern Europe, forged links between school and work by integrating general and vocational education. At the upper-secondary level, schools sought to balance theoretical knowledge and practical training in production activities (UNESCO 1961: 139-40). In some cases, educational reforms were abruptly reversed in the wake of unmet economic goals and objectives. In the 1930s, for example, the Soviet Union passed a series of decrees that restored aspects of the previous system with the aim of more effectively training technicians, engineers, and administrators.

Following the break-up of the Soviet Union, central and eastern European countries initiated major educational reforms, closely aligned to democratising political movements. States and governments, which had been the sole provider and distributor of educational services, increasingly served as regulators and arbiters of provision. Secondary education was the object of considerable restructuring: in many cases, the upper limit of compulsory schooling was *reduced* to 15 or 16, students were given greater choice in secondary programmes and granted more curricular options, new examinations were prepared to certify completion of secondary programmes, and vocational schools were revamped. Despite considerable diversification, many secondary school systems in this region came to reflect dominant patterns in other European educational systems. This was especially true of countries that subsequently became members of the European Union (Catlaks 2006).

Secondary Education in Postcolonial States

During the colonial era, educational frameworks in Africa and Asia were institutionally segmented, elitist, and racially divided. Most were enlisted to support, directly or indirectly, Western domination over native populations. In many African colonies, for example, indigenous children learned rudimentary skills in mission or village "bush" schools, but few passed the rigorous examinations for entrance into upper-elementary or secondary grades. At the same time, colonial authorities actively developed modern academic and technical education for the children of European settlers. Such schools nurtured an elitist, racially exclusive group with a shared culture and ideology, who held a monopoly over high-level skills taught in academic schools (King 1990).

Following independence, African and Asian governments were exposed to two types of pressures: the commitments of their leaders to weaken or dismantle the educational vestiges of colonial rule and the push by international agencies to expand education as a key condition for socioeconomic development. Certain educational structures were democratized—massive efforts were undertaken to promote free and compulsory primary education (UNESCO 1958). Nevertheless, few governments altered the underlying principles and policies that had historically governed secondary education. In former French and Belgian colonies, for example, authorities were reluctant to break away from established educational policies and practices (Johnson 1987). Literary and academic education continued to be emphasized over practical training or labour market skills. Rote learning continued to dominate classroom interactions; and teaching continued to be driven by examinations (Khan 1981). To be sure, most newly independent regimes lacked the necessary resources to implement serious changes to secondary curricula and syllabi. Still, as others have argued, the maintenance of the educational status quo clearly served the interests of newly empowered elites (Gauhar 1981). In short, the elitist character of secondary education changed very little following independence.

In Latin America, as elsewhere, secondary education mirrored European institutions. The educational standards of former imperial powers cast long shadows over the curricular contents and requirements of secondary education. Due to the politicization of education and the historical emphasis on higher education (both public and private), Latin American countries developed extremely unequal educational structures in which university sectors flourished, while primary education languished. Secondary schools mainly served as highly selective institutional channels for university entrance and elite status. Parties representing middle classes called for an extension of secondary education and greater access to higher education, even though inequalities in elementary education were rampant (Rama 1983).

In the post-World War II period, social science experts, as well as intergovernmental organizations, were instrumental in the circulation of emergent "democratic" conceptions of secondary schooling and meritocratic principles of pupil selection. During the 1970s and 1980s, international agencies encouraged developing countries to adopt educational policies and practices based on human capital models and neo-liberal approaches. These included: the expansion, restructuring and diversification of secondary education; greater curricular emphasis on practical education; an upgrading of teacher training and qualifications; encouragement of non-public financing of post-secondary institutions; and the introduction of new technologies and pedagogical approaches. Initially rejected by many national educational authorities, especially in Francophone Africa, these policy 'innovations' were

perceived, by some, as "neo-colonial" attempts to impose new forms of "second-class" education. Over time and in some countries, however, attempts to diminish the elite character of secondary education gained momentum. These included the establishment of programmes in agricultural, craft and technical education, and some experimentation with new teaching methods and the use of indigenous languages (Johnson 1987).

In sum, postcolonial states have increasingly committed themselves ideologically to the transformation of secondary education, pursuing a more diverse array of educational, social, and economic purposes. In reality, the restructuring of secondary education systems has been partial and uneven, despite improvements in access. Enrolments in private secondary schools began increasing to satisfy unmet demand among certain social classes. More often than not, the expansion of secondary education has had only a marginal impact on improving social mobility prospects and reducing socio-economic disparities. Instead of increased democratization, the partial transformation of secondary education has often resulted in the segmentation of different social strata (Braslavsky 2001).

Analysis of the diversification of secondary education

Analytically, the historical transformation of secondary education involved at least four interrelated shifts:

1. a broadening of the aims and purposes of secondary education;
2. the differentiation of secondary education into lower and upper cycles;
3. the establishment of new selection mechanisms—or the discontinuation of old ones—to ease the transition between primary education and (lower) secondary education and thereby increase access; and
4. the development of new school types and/or the diversification of programmes and curricular offerings within existing school types to address the perceived interests and needs of increasingly heterogeneous student populations.

A recent study by Fiala (2006) examined changes in the official purposes of national education systems and provides evidence related to the first shift. Historical trends concerning the second shift are reported below using data compiled by the UNESCO's Institute for Statistics (UIS) and the EFA Global Monitoring Report (UNESCO 2007).[3] Comparative historical information on the third shift has yet to be compiled.

This paper concentrates on the fourth shift: the diversification of secondary-level institutional tracks, study programmes and curricular offerings over time. The analyses reported below draw extensively on cross-national information on the structure and curricular organization of secondary education compiled by UNESCO:IBE. This information derives from reports filed with IBE by national education officials, usually in conjunction with the International Conference on Education, or from country-specific curricular timetables sent to the IBE as part of its on-going global observatory of educational systems. The present study mainly focuses on academic sector tracks—namely, those enabling graduates to continue to post-secondary institutions, some of which are technologically oriented. Tracks belonging the technical-vocational sector of secondary education have yet to be analysed. Curricular information for the most recent period (2000) comes from IBE

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[3] See also: UNESCO Institute for Statistics (2005).

sources, while information for the 1980s and the 1960s combines data from IBE archives and several additional sources (see Kamens, Meyer and Benavot 1996). In general the data for the 2000 period are of higher quality than for the earlier periods.

The expansion of lower secondary education and the establishment of a compulsory 'basic education' cycle have, in most countries, reduced various forms of institutional differentiation (i.e., distinctive programmes of study within and between schools). Today, such differentiation mainly occurs at the upper secondary level. Thus, for the analytically purposes, official curricular timetables establishing the educational programmes of the lower secondary grades provide a fairly good indication of the structuring of pupils' learning opportunities at this level. For upper secondary education, however, more detailed information is needed. Since upper secondary systems can be either single-track (general or comprehensive) or multi-tracked (e.g., modern language, mathematics and science, humanities, social sciences), it is necessary to examine information concerning:

- *school sector* (i.e., academic, vocational/technical, teacher training, religious);
- *track type* or the names of the streams or programmes in each sector;[4] and
- *official curricular policies for a given track or stream.* (For further information on the analysis of upper secondary education systems, see: Kamens, Meyer and Benavot 1996; Kamens and Benavot 2006).[5]

In principle, official policies concerning the school curriculum encompass several components: a list of subjects to be taught; the quantities of instructional time (per day, week or year) allocated to subjects; authorized textbooks to accompany classroom instruction; authorized lesson plans or syllabi delineating the topics to be covered; and official directives or guidelines concerning pedagogy and assessments. The present study focuses solely on the first two components: intended subject areas and time allocations found in official timetables.

The reported analyses draw from a compilation of hundreds of such timetables, which were divided by historical period and coded according to standard rules and procedures.[6] Instructional time for each curricular 'subject' or educational activity was classified by grade level into a scheme of 32 (lower secondary) or 45 (upper secondary) subject areas. At a subsequent stage, lists of detailed subjects were re-classified into 10 general curricular categories (see below).

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[4] There are several issues this study does not (and cannot) address. We do not examine *instructional tracking*, i.e., actual course offerings and how they are sequenced in different systems or the actual enrolments in these different sequences. Nor, as previously noted, do we deal with institutional tracks belonging to the vocational education and training sector. The organization of vocational schools, or specific vocational tracks, while important, is beyond the scope of the present paper.

[5] As shown in the analysis section, the structure and duration of upper secondary education vary considerably across education systems. In most countries upper secondary education begins in grade 9, 10 or 11 and lasts between 2 and 4 years. Such variation creates few problems for the classification of tracks and programmes at this level, although it does affect the analysis of intended subjects to be taught and subject emphases. To partially obviate this problem, curricular emphases should ideally be reported for countries with similar upper secondary structures (e.g., for systems spanning grades 9-12 or 10-11). Existing data limitations preclude this possibility and so results are aggregated over different secondary cycles. Future analyses will investigate whether specific upper secondary cycles are linked to distinctive track types and curricular offerings.

[6] These rules specified, for example, the coding of subjects listed as combined subjects, interdisciplinary subjects or electives, as well as timetables specifying regional, linguistic, cultural or religious differences. Examples of 'combined' subjects include: '*Pensamiento, acción social e identidad nacional*' or '*Histoire, éducation civique et géographie*'.

Findings

A. The expansion of secondary education

Worldwide, an average of 65% of the relevant age group is enrolled in secondary schools as of 2004 (see Table 2 below). At the regional level, North America and Western Europe have achieved almost universal secondary education, with an average net enrolment ratio (NER) exceeding 90%. In other regions—namely, Central and Eastern Europe and Central Asia—the average NER is between 82% and 85%. In the remaining regions the NERs are considerably lower: Latin American and the Caribbean (67%), East Asia and the Pacific (69%), Arab States (56%), South and West Asia (45%) and sub-Saharan Africa (24%). To be sure, such averages hide important within-region disparities. For example, secondary education is more developed in Anglophone Africa, particularly in the South, than in Central and West Africa.[7]

During the 1999-2004 period, the gross secondary enrolment ratios rose in 117 out of 150 countries with data (see UNESCO 2007). In about one-third of these cases, increases were considerable, exceeding ten percentage points. Despite this general tendency, some countries—for example, Malawi, Republic of Korea, Ukraine, United Arab Emirates and Zimbabwe—recorded decreases in their coverage of secondary education during this period.

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[7] As this paper draws on data from different international organisations—namely UNESCO and the World Bank—different regional classifications of countries are noted in each table.

Table 2: Gross and net enrolment ratios in secondary education (2004), by region and development status

| | 2004 | |
	Gross Secondary Enrolment Ratio	Net Secondary Enrolment Ratio
World	65.0	57.7
Countries in transition	91.6	83.9
Developed countries	101.1	91.1
Developing countries	59.1	52.2
Arab States	66.3	56.0
Central and Eastern Europe	90.5	82.1
Central Asia	89.9	85.0
East Asia and the Pacific	72.9	68.8
East Asia	72.4	68.8
The Pacific	103.9	68.3
Latin America and the Caribbean	85.7	66.6
Latin America	86.6	67.4
Caribbean	57.5	41.3
North America and Western Europe	101.3	91.0
South and West Asia	51.3	45.3
Sub-Saharan Africa	29.9	23.9

Source: UNESCO 2007 (UNESCO regional classification.)

B. The distinction between lower and upper secondary education

The vast majority of the countries in the world (over 80%) have established two relatively distinct levels of secondary education. *Lower secondary education* (ISCED level 2), often compulsory, seeks to maintain and deepen the educational aims of primary schooling.[8] In some countries it is provided in the same institutions and taught by the same teachers as primary education; in others it is institutionally distinct from primary education and shares more in common with upper secondary education (UIS 2005). The onset of *upper secondary education* (ISCED level 3) usually marks the end of compulsory schooling and consists of diverse structures, tracks and programmes (see below) and a more specialized teaching staff.

Based on profiles of national educational systems (UNESCO-IBE 2003; UNESCO various years), Table 3 reports regional and longitudinal variation in the extent to which secondary schooling is divided into lower and upper secondary levels.[9] Comparative evidence suggests that countries are more likely to demarcate a line between lower and upper secondary education when:

- the official duration of primary education is reduced—say, from 8 to 6 years;

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[8] Lower secondary education is compulsory in all of Western Europe, North America, and Central and Eastern Europe. This is also the case in about 80% of the countries in Latin America, the Caribbean, East Asia and the Pacific, and in about 75% of the Arab States. In South and West Asia and sub-Saharan Africa, lower secondary education is compulsory in less than 40% of countries (UNESCO 2007).

[9] This table is not based on constant cases, but such analyses point to the same regional trends.

- a 'basic education' cycle is established by extending compulsory schooling into the lower secondary level; or
- access to secondary levels institutions significantly expands.

Table 3: Percentage of national education systems in each region that differentiate between lower and upper secondary education (number of cases in parentheses)

Region	Percentage of national education systems in each region that distinguish between lower and upper secondary education		
	Historical period		
	1960s	1980s	2000
Latin America & Caribbean (LAC)	**91** (22)	**74** (34)	**71** (34)
East Asia and Pacific (EAP)	**92** (12)	**79** (24)	**76** (21)
Sub-Saharan Africa (AFR)	**80** (30)	**80** (44)	**81** (47)
Middle East & North Africa (MNA)	**87** (15)	**100** (18)	**83** (18)
South Asia (SAS)	**100** (4)	**100** (8)	**100** (8)
Eastern Europe and Central Asia (ECA)	**50** (8)	**33** (8)	**85** (27)
Advanced Industrialized Countries (AIC)	**73** (26)	**92** (26)	**97** (29)
World Totals	**81** (117)	**81** (163)	**82** (184)

Sources: UNESCO-IBE 2003; UNESCO various years (World Bank regional classification.)

Given these realities, international agencies have begun to report enrolment figures for lower and upper secondary education. Table 4 reports worldwide and regional trends for lower and upper secondary education and indicates that:

1. Lower secondary education has significantly expanded in most of the world, with the exception of sub-Saharan Africa. The average gross enrolment ratio (GER) in 2003/04 is over 90% in North America, Western Europe, Latin America, Central Asia, East Asia and Central and Eastern Europe and somewhat lower in the Arab States (79%) the Caribbean (75%) and South and West Asia (64%). In sub-Saharan Africa the average GER is considerably lower (37%).
2. At the upper secondary level, only half of the relevant age group is enrolled: the global GER increased from 47.4% in 1999 to 51.2% in 2004. During this period, changes in access to upper secondary education increased only slightly in most regions.
3. Regional variation in upper secondary education is quite significant: whereas GERs are over 75% in North America and Western Europe, Central and Eastern Europe, the Pacific and Central Asia, they are less than 45% in the Caribbean, South and West Asia, and sub-Saharan Africa.

Table 4: Gross enrolment ratios in lower and upper secondary education, 1999–2004

	Lower secondary 1998/99	Lower secondary 2003/04	Upper secondary 1998/99	Upper secondary 2003/04
World	72.1	78.1	47.4	51.2
Sub-Saharan Africa	28.3	36.5	19.0	22.6
Arab States	72.1	79.4	44.7	52.3
Central Asia	89.5	94.5	76.6	78.4
East Asia and the Pacific	80.2	93.4	46.1	51.2
East Asia	*80.0*	*93.5*	*45.0*	*50.3*
Pacific	*88.0*	*88.0*	*139.4*	*131.5*
South and West Asia	59.4	63.8	33.8	40.0
Latin America and Caribbean	95.4	99.7	62.0	68.7
Latin America	*96.3*	*100.4*	*62.8*	*70.1*
Caribbean	*67.4*	*74.6*	*41.3*	*41.9*
N. America & Western Europe	102.5	103.1	108.4	99.3
Central and Eastern Europe	92.4	92.3	78.0	88.1

Sources: UIS database and UNESCO 2007 (UNESCO regional classification.)

Overall, while the universalization of secondary education is a near reality throughout Europe and North America, in other regions the coverage of secondary education is mainly limited to the lower secondary level. And, relative to other developing regions, access to lower secondary education in sub-Saharan Africa is quite limited. Finally, global differences in the coverage of upper secondary education are marked.

C. The changing programmatic composition of secondary education

Tracing the expansion of lower and upper secondary education captures only part of the on-going transformation of secondary education. Equally informative is the changing contents and composition of programmes of study offered in secondary schools. By drawing upon official descriptions of national education systems, it is possible to observe the relative prevalence of five major 'sectors' in secondary education—namely, academic/general, vocational/technical, teacher training, religious/theological, and specialized programmes in the fine arts, music or sports.

Obviously, every country includes academic programmes at the secondary level (see Table 5). A less-known trend is the extensive upgrading and 'professionalisation' of teacher training programmes, which were previously offered in secondary schools and are now mainly found in post-secondary institutions. Whereas over three-quarters of the countries in the world had secondary-level teacher training programmes in the 1960s, only 12% have such programmes today. A similar trend holds for distinctive programmes in religious or theological training: while about one-third of all secondary school systems had such programmes in the 1960s; only 6% offer them today. The main exception being Middle East/North Africa in which 40% of the countries still offer religious training programmes at the secondary level. Specialized secondary programmes in the fine arts and sports are found in about one of every seven countries worldwide. In many countries such specialized secondary school programmes have either been eliminated or integrated into the academic sector.

Table 5: Percentage of countries in each region offering secondary-level programmes of study in five educational 'sectors', by historical period

Secondary Education 'Sectors'	Academic/General Sector			Vocational/Technical Or Technological Sector			Teacher Training Sector			Religious/ Theological Training Sector			Other (*)
Period	1960s	1980s	2000	1960s	1980s	2000	1960s	1980s	2000	1960s	1980s	2000	2000
Region	(n=105 -116)	(n=141 -159)	(n=160 -162)										
LAC	100	100	100	96	85	93	86	38	17	20	3	0	10
EAP	100	100	100	92	86	87	67	36	7	25	29	13	7
AFR	100	100	100	100	98	84	93	54	13	29	9	0	8
MNA	100	100	100	100	100	94	93	53	12	43	56	41	29
SAS	100	100	100	100	75	75	75	38	0	25	50	0	13
ECA	100	100	100	100	100	96	88	44	4	0	13	0	15
AIC	100	100	100	92	96	85	46	15	19	39	23	4	19
Total	100	100	100	97	92	89	77	40	12	29	21	6	14

Source: UNESCO-IBE 2003 (World Bank regional classification.)
(*) This category consists, by and large, of specialized schools in the fine arts, music or sports.

The vocational/technological sector is more difficult to characterize since it reflects several on-going changes. First, there appears to be a movement away from institutionally distinct vocational/technical programmes at the secondary level, mainly in sub-Saharan Africa, South Asia and the more industrialized countries. Some programmes have been redefined as technological education and "upgraded" to the post-secondary level. Others have remained at the upper secondary level, and were merged into comprehensive schools (see below). Second, many vocational/technical programmes are losing their terminal character. Whereas vocational students were once channelled directly into the labour market, today graduates of technical/vocational education and training (TVET) programmes often have an option of sitting for national matriculation exams or entering post-secondary institutions.

Widespread attempts to transform and upgrade the status of TVET at the secondary level have had minimal impact on secondary enrolments. TVET constitutes less than one-fifth of all upper secondary enrolments. This share has recently declined worldwide except in Central Asia and Central and Eastern Europe (see Table 6), where it had historically been prominent (Benavot 1983). Overall, the continued prominence of secondary vocational/technical programmes belies important changes to their charter and links to higher education. Debates over the value of vocational education and training in today's globalised economies continue (Tillak 2003; Shavit and Muller 2000).

Table 6: Share of TVET enrolments in upper secondary education, 1998 and 2002

	1998	**2002**
World	22.9	19.2
Sub-Saharan Africa	11.6	11.0
Arab States	30.4	26.7
Central Asia	17.0	21.9
East Asia and the Pacific	46.8	33.8
South and West Asia	2.1	1.9
Latin America and Caribbean	22.3	19.6
North America & Western Europe	31.3	28.9
Central and Eastern Europe	44.3	44.2

Source: UIS database (UNESCO regional classification.)

D. The structure and duration of upper secondary education

As previously noted, upper secondary education typically marks the end of compulsory schooling and the onset of a diversified provision of specialized programmes of study. However, the exact grades comprising upper secondary education—to the extent this division exists—vary considerably across countries. As Table 7 shows, in almost half of the countries in the world (88/186), upper secondary education begins at grade 10. However, in large numbers of countries it begins at either grade 9 or grade 11. In addition, while the modal duration of upper secondary education is three years, the duration in many countries is either 2 or 4 years.

Table 7: The onset and duration of upper secondary education

	Grade level of onset of upper secondary education, 2003/04					
Grade level	**8**	**9**	**10**	**11**	**Totals**	
Number of countries	2	44	88	52	186	
	Duration of upper secondary education, 2003/04 (in years)					
Duration in years	**1**	**2**	**3**	**4**	**5**	**Totals**
Number of countries	1	58	81	43	3	186

Source: UIS database.

A detailed depiction of upper secondary systems can be seen in Table 8, which lists the frequency of specific structural arrangements of ISCED level 3. This table shows that five patterns (i.e. consisting of grades 10-12, 11-12, 9-12, 10-11 and 11-13) characterize 80% of the world's education systems.

Table 8: The frequency of structural arrangements of upper secondary education

Structural organization of upper secondary education		Number of countries (out of 186) in which specific structural arrangement exists
Starts in grade:	Duration in years	
10	3	49
11	2	30
9	4	26
10	2	24
11	3	20
10	4	14
9	3	11
9	2	4
Other patterns (8-3; 8-4; 10-1)		3

Source: UIS database.

Structures of upper secondary education vary across (and within) regions. Several 'models' of secondary schooling, some reflecting earlier colonial structures, have emerged over time (World Bank 2005).

E. The number and composition of tracks in upper secondary education

Historically, both the academic and vocational sectors of secondary education contained multiple tracks (or streams) into which students were channelled or from which they could choose. This section examines evidence on the changing number and composition of tracks available in the academic sector. Data limitations preclude comparing such information for the vocational sector.

A key distinction in upper secondary education is between systems with multiple academic tracks, and those with a single, general or comprehensive track. Table 9 reports global and regional changes (since the 1960s) in the percentage of countries with a single academic track at the upper secondary level. Over time there has been an increase in single-track secondary systems: from 30% of the 113 educational systems in the 1960s with data to 51% of the 161 educational systems in the 2000s with data. At the regional level this trend is apparent in almost all regions except for the Middle East and North Africa. In Eastern Europe and Central Asia, the break-up of the Soviet Union resulted in a significant increase in single-track upper secondary systems. Further analyses indicate that single-track systems are more prevalent in Anglophone Africa than in Francophone Africa.[10]

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[10] The Francophone countries include Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Côte d'Ivoire, Gabon, Guinea-Bissau, Guinea, Madagascar, Mali, Mauritania, Mauritius, Niger, Senegal, Sudan and Togo. The remaining countries are Anglophone, with the exceptions of Equatorial Guinea (Spanish), Angola, Mozambique, Cape Verde, Sao Tome and Principe (all Portuguese-speaking).

Table 9: Percentage of countries in each region that organize upper secondary education according to a single track, by time period (number of cases in parentheses)

Region	Percentage of countries with a single academic track in upper secondary education		
	Historical period		
	1960s	1980s	2000
Latin America & Caribbean (LAC)	**36** (22)	**44** (27)	**52** (29)
East Asia and Pacific (EAP)	**50** (12)	**40** (15)	**73** (15)
Sub-Saharan Africa (AFR)	**39** (28)	**55** (33)	**47** (38)
Middle East & North Africa (MNA)	**14** (14)	**6** (16)	**6** (18)
South Asia (SAS)	**25** (4)	**0** (7)	**75** (8)
Eastern Europe and Central Asia (ECA)	**50** (8)	**25** (8)	**65** (26)
Advanced Industrialized Countries (AIC)	**12** (25)	**20** (25)	**52** (27)
World Totals	**31** (113)	**34** (131)	**51** (161)

Source: UNESCO-IBE 2003 (World Bank regional classification.)

Table 10 examines the changing names of upper secondary tracks between 1930 and 1985.[11] Based on official information for 450 academic tracks, the results show that classical and semi-classical programmes/tracks have declined in all world regions since the 1930s. The one region where they remain relatively prominent--albeit less so than in the past--is Europe. By contrast, the prevalence of comprehensive/general tracks as well as those specializing in mathematics and sciences and, to some extent, in the humanities and the social sciences has increased. Supplemental analyses show that track labels reflect real differences in contents and in the time allotted to particular subjects. For example, mathematics and science tracks usually contain about twice as many class periods devoted to the study of these subjects as compared to other tracks. Humanities and modern language tracks also differed substantially from comprehensive ones in the amount of time devoted to the curricular domains of language and literature and in the number of such courses that are required for completion of the programme (Meyer, Kamens and Benavot 1996).

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[11] The data for this table are based on compilations and analyses in Meyer, Kamens and Benavot (1996).

Table 10: Distribution of upper secondary programmes/tracks by type and historical period

	Historical period			
	1930s	1960s	1980s	Total
Upper Secondary Programme/Track Type:	%	%	%	%
Comprehensive or General	23.3	30.5	32.0	29.2
Mathematics, Science and/or Technical	21.6	27.9	33.3	28.1
Classical or Semi-Classical	36.2	16.2	9.3	19.0
Arts and Humanities	7.8	12.2	16.7	12.5
Modern Languages	9.5	10.2	5.3	8.4
Social Sciences or Law	1.7	3.0	3.3	2.8
Total	100.1	100.0	100.0	100.0
Number of upper secondary tracks classified in each period	(116)	(197)	(150)	(463)

Source: Meyer, Kamens and Benavot (1996).

Recent data describing track types in upper secondary education is presented in Table 11, which classifies 345 academic tracks comprising the upper secondary systems of 161 countries in the 2000–03 period. While the two datasets are not entirely comparable, they do indicate:

- a continuing decline of classical programmes insofar as only 1% of all upper secondary tracks were identified as such in the most recent period;
- considerable continuity in the relative prevalence of comprehensive/general (29%) and mathematics, scientific and technological tracks (25%+6%);
- a small increase in the prevalence of social science and business tracks; and
- slight tendencies to establish cross-disciplinary tracks (e.g., humanities and sciences) and to incorporate some teacher training and religious training programmes in the academic sector of upper secondary education.

Table 11: Classification of the names of upper secondary academic tracks, 2000–03

Classification of academic track names	Number of tracks	Frequency %
Comprehensive or General	100	29
Sciences and/or Mathematics	88	25
Technical, Technological, Computer	21	6
Modern Languages; Humanities, Arts, Letters	73	21
Social Sciences; Economics, Business, commercial	33	10
Classical, Semi-Classical	2	1
Humanistic and Scientific	9	2.5
Mixed Humanities and Social Sciences	5	1.5
Normal School, Teacher Training, Education	4	1
Religious Education, Training	4	1
Vocational (e.g., hotel, home economics, agriculture)	3	1
Other	3	1
Totals	**345**	**100**

Source: UNESCO-IBE 2003.

Global trends in the organization of upper secondary systems conceal considerable regional variation. For example, in the most recent period, over two-thirds of countries in Asia (EAP and SAS) and Eastern Europe had a general or comprehensive upper secondary programme, whereas almost all countries in the Middle East and North Africa had systems with specialized tracks in the sciences and humanities. In other regions the prevalence of general/comprehensive programmes versus more specialized upper secondary tracks was close to the global average.

Two summary remarks are in order. First, from a global perspective, academically oriented upper secondary education is increasingly organized around either a comprehensive school model involving some course selection by students or the provision of specialized programmes of study (e.g., mathematics and science, humanities and modern languages, social sciences) emphasizing distinctive contents. The latter mode typically occurs in systems where classical programmes were once strong. Second, at the national level, upper secondary education systems experience a considerable degree of volatility over time (see Kamens and Benavot 2006). A surprisingly large percentage of countries have oscillated between single-track and multi-track systems during the post-World War II period. This volatility in track composition reflects the intensification of national reforms (re-structuring) of secondary education since the 1960s.

F. The curricular organization of secondary education by subject area

During the last years of basic education, when most students attend lower secondary schools, which subject areas are prioritized? This section examines the intended curricula of lower

secondary education based on official timetables.[12] Specifically, the analyses focus on grades 7 and 8, which comprise the typical grades of lower secondary education. As a reminder, the analyses focus solely on subjects listed in official timetables and not on the detailed specification or the actual contents of each required subject.

Table 12 presents mean curricular emphases in lower secondary education, worldwide and by region, for the most recent period.[13] At the global level, considerable instructional time is devoted to languages (about 30%), mathematics, sciences and computer/technology (about 30%), and the social sciences (about 13%). The remaining time is primarily devoted to the arts, physical education, skills and religious/moral education.

Table 12: Mean percentage of total instructional time in Grades 7 and 8 allocated to selected curricular areas, circa 2000, by World Bank-defined region

Region	# of cases	Mean percentage of total instructional time allocated to selected curricular areas* in grades 7 and 8										
		LANG	MATH	SCIENCE	CTEC	SOCSC	RELM	ARTS	SPORT	SKILL	OTHER	Totals
LAC	19	25.0	14.8	11.9	3.3	15.3	2.3	7.4	5.4	7.5	7.3	100.0
EAP	12	24.0	13.7	13.9	2.4	13.8	4.0	4.6	6.1	4.4	13.2	100.0
AFR	23	35.0	15.6	12.7	2.0	13.1	2.7	4.4	6.1	6.8	1.5	100.0
MNA	16	34.4	15.1	9.9	1.8	11.9	7.3	5.9	5.1	5.7	3.1	100.0
SAS	5	34.5	13.8	13.4	0	12.3	5.8	4.3	3.6	8.7	3.5	100.0
ECA	25	27.9	13.7	17.5	2.7	13.5	1.1	5.8	5.9	3.2	8.7	100.0
AIC	16	29.4	12.4	10.3	2.8	12.1	4.3	8.8	7.3	4.8	7.9	100.0
Total	**116**	**29.8**	**14.3**	**13.0**	**2.4**	**13.3**	**3.4**	**6.0**	**5.9**	**5.5**	**6.4**	**100.0**
	SD	7.1	3.6	5.6	3.7	4.1	4.0	3.8	2.6	6.0	8.6	
	CV**	0.2	0.3	0.4	1.5	0.3	1.2	0.6	0.4	1.1	1.3	

Notes:
(*) Each general curricular area consists of the following subjects:
    LANG refers to Language education and includes instruction in national, official, local and/or foreign languages and literature;
    MATH refers to Mathematics and includes all math-related subjects;
    SCIENCE refers to Science and includes all general science subjects (e.g., natural, physical) as well as chemistry, biology and physics;
    CTEC refers to Applied Science education and includes Computers and technological subjects;
    SOCSC refers to Social Science and includes social studies, history, geography, social sciences, environmental studies, civics and citizenship education;
    RELM refers to religious or moral education and/or ethics;
    ARTS refers to Aesthetic education and includes art, music, dance, singing, handicrafts;
    SPORT refers to sports and physical education;
    SKILL refers to subjects such as health education, hygiene, agriculture, manual training, vocational education, domestic science and life skills;
    OTHER refers to all remaining subjects, but especially electives or (required) optional subjects.
(**) CV refers to the coefficient of variation, which is calculated as the standard deviation (SD) divided by the mean.

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[12] As Meyer, Kamens and Benavot (1996) report, knowing the name of an upper secondary track provides a reasonably accurate indication of curricular emphases: that is, subjects taught and time allocations. In addition, analyses of the recent curricular policies of the upper secondary tracks remain incomplete.

[13] Similar tables for the constant set of cases in the 1980s and the 2000s and for total instructional time are available upon request. For detailed discussions of select subject areas, see Benavot and Braslavsky (2006) and Amadio, Truong and Tschurenev (2006).

Interesting regional differences are observed, most of which are small. For example, language education receives greater emphasis in sub-Saharan Africa, the Middle East/North Africa and South Asia than in other regions. Mathematics is a relatively important subject in sub-Saharan Africa, and less so in the advanced industrialized countries. Countries in Latin America and the Caribbean place greater emphasis on social science subjects, aesthetic education and skills and less emphasis on language and religious/moral education. Industrialized countries allocate relatively more time to aesthetic and physical education and less time to science education. Religious and moral education is allocated very little time in Eastern Europe and Central Asia, but substantially more time in the Middle East/North Africa.

In general, regions share much in common in relation to the required subject domains of the lower secondary curriculum. Some variation is observed when factoring in the length of the school year and estimating yearly instructional hours pupils receive (see Benavot and Amadio 2005).

Discussion

Historically, the dominant feature of secondary education was its affirmation and conferral of status (in the Weberian sense). Secondary schools taught classical languages and literature--a distinct form of esoteric knowledge—in order to develop cultivated persons who could be recognized and acknowledged as such by other members of a status group (Collins 1979). The affirmation of status group membership through the mastery of high status knowledge, be it religious or secular, provided the overarching legitimacy of distinctively elite secondary schools. Institutionally distinct secondary schools contained a strong class-based character: selective academic institutions provided the children of privileged classes with a pathway to higher education and high status professions while terminal vocational institutions inculcated the children from lower class backgrounds with useful skills and values for the labour market.

Over the course of twentieth century, as countries dramatically increased access to secondary education and extended the years of compulsory schooling (World Bank 2005), the array and purposes of secondary level institutions were transformed. Teacher-training institutions, which were prevalent at the secondary level, underwent 'professionalisation' and upgraded into post secondary institutions. Schools specializing in the training of religious teachers and leaders were phased out, except in the Middle East and North Africa. Vocational-technical schools, whose purpose was to provide practical skills and training for entrance into the labour market, lost their terminal character and became the object of sustained reform efforts.

In the academic core of secondary education, the influx of larger student cohorts eroded the legitimacy of traditionally selective programmes providing a classical education, except in a small group of European countries. The Soviet 'polytechnical' model, which had blurred the boundaries between school and work, and between academic and vocational education, was revamped in the newly emergent 'countries in transition'. As older models of secondary education withered away, many countries restructured their academic secondary systems around two alternatives. The first model, prominent in Europe and many former colonies, involved the establishment of multiple tracks emphasizing 'modern' fields of study

such as sciences and mathematics, modern languages and literature, and the social sciences. The second model, initially developed in the United States, consisted of an all-encompassing comprehensive high school which provided a core set of curricular offerings together with substantial elective subjects. While European systems organized discipline-based knowledge in academic tracks (or schools) and practical knowledge in vocational tracks (or schools), comprehensive schools combined both knowledge forms in an inclusive curriculum that sought to address the diverse interests, talents and abilities of all pupils.[14] The evidence suggests that the institutional array and track composition of secondary education today increasingly reflects these two basic models of secondary education. Moreover, these emergent models of secondary schooling, and the opportunities for choice they engender, provide ample bases for social inequalities, although these are quite unlike the formal, class-based distinctions of past models of secondary schooling.

To what extent has the expansion of secondary education, and the on-going postponement of occupational specialization, affected the substantive contents taught? Do these processes inevitably result in 'unbearably irrelevant' school curricula for young people (World Bank 2005: 77)? Does the transformation of secondary schools into more flexible, inclusive and democratic institutions, in which students face a growing array of curricular choices and options, necessarily reduce the economic and social relevance of their learning experiences? Do the 'conventional' subject domains of secondary school curricula have no bearing on the skills and competencies that young people are thought to need today as they confront the challenges of adult life?

The causal linkages embedded in these questions are not easily disentangled. National reforms of secondary education, which establish particular organizational frameworks, may have only a marginal impact on curricular contents and emphases. In many countries, altering the labels of curricular tracks is relatively easy and cheap to accomplish, which partially accounts for the resulting volatility. However, the choice and contents of subjects taught, as well as the pedagogy employed in classrooms, are less amenable to change. Indeed, curricular contents appear to be more sensitive to the flows of global ideologies and trans-national models than the particular structures in which they are situated (McEneaney and Meyer 2000). School officials find creative ways to accommodate current ideologies and fashions without making fundamental changes to school life. On the other hand, educational decentralization and the devolution of political authority give voice to new actors—for example, parents, local officials, non-profit agencies. They also create new possibilities for greater sub-national diversity within education systems (Astiz, Wiseman and Baker 2002).

In sum, the growing diversity of curricular structures found in secondary schools today deserves greater attention by scholars and policy makers alike. Complex international, national and local forces impinge on these structures. Secondary education generally, and lower secondary education in particular, represent a special period of curricular trial and error. Situated between the 'obsessive' teaching of generic skills during the primary grades and the high stakes consequences of pupil achievement (or the lack thereof) during the final grades of compulsory schooling, secondary curricula have the potential of providing spaces for experimentation and exploration. Such conditions are more likely to nurture competences with important long-term consequences.

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[14] Both models of secondary schooling, it should be noted, continued to serve as effective selection mechanisms, employing a variety of practices to limit student access to higher education.

References

Amadio, M., Truong, N. and Tschurenev, J. 2006. *Instructional Time and the Place of Aesthetic Education in School Curricula at the Beginning of the Twenty-First Century*. IBE Working Papers on Curriculum Issues, No. 1. Geneva: UNESCO-IBE. (Available online.)

Astiz, M. F., Wiseman, A. and Baker, D. 2002. "Slouching Towards Decentralization: Consequences of Globalization for Curricular Control in National Education Systems." *Comparative Education Review* 46(1): 66–88.

Benavot, A. 1983. "The Rise and Decline of Vocational Education." *Sociology of Education* 56 (April): 63–76.

Benavot, A. (in collaboration with M. Amadio). 2004. *A global study of intended instructional time and official school curricula, 1980-2000*. Background paper commissioned by the International Bureau of Education for the UNESCO *EFA Global Monitoring Report (2005): The Quality Imperative*. Geneva: UNESCO-IBE. (Paper available online.) (Tables available online.)

Benavot, A. and Braslavsky, C. (eds.). 2006. *School Knowledge in Comparative and Historical Perspective: Changing Curricula in Primary and Secondary Education*. Hong Kong: University of Hong Kong Press and Amsterdam: Springer.

Benavot, A. and Resnik, J. 2006. "Lessons from the Past: A Comparative Socio-Historical Analysis of Primary and Secondary Education." Pp. 1-89 in A. Benavot, J. Resnik and J. Corrales, *Global Educational Expansion: Historical Legacies and Political Obstacles*. Cambridge, MA: American Academy of Arts and Sciences. Occasional Paper (Available online.)

Braslavsky, C. 2001. *La educación secundaria. ¿Cambio o inmutabilidad? Análisis y debate de procesos europeos y latinoamericanos contemporáneos*. Buenos Aires: UNESCO-IIPE.

Carnoy, M. and Samoff, J. 1990. *Education and Social Transition in the Third World*. Princeton: Princeton University Press.

Catlaks, G. 2005. "Secondary education and transition in Central and Eastern Europe." Pp. 119-132 in N. Bottani, Ch. Magnin and E. Zottos (eds.) *L'enseignement secondaire á l'échelle mondiale: bilans et perspectives*. Actes du colloque de Genève, 5-7 septembre 2004. Geneva: UNESCO-IBE, University of Geneva and Service de la recherche en éducation.

Cheng, Y. and Manning, P. 2003. "Revolution in Education: China and Cuba in Global Context, 1957–76." *Journal of World History* 14(3): 359–391.

Collins, R. 1979. *The Credential Society*. New York: Academic Press.

Commission on the Reorganization of Secondary Education. 1918. *Cardinal Principles of Secondary Education*. Bulletin No. 35. Washington, DC: U.S. Bureau of Education.

Cummings, W. 1997. "An Introduction." Pp. 3–43 in W. Cummings and N. McGinn (eds.) *International Handbook of Education and Development: Preparing Schools, Students, and Nations for the Twenty-First Century*. New York/Oxford: Elsevier Science.

———. 2003. *The InstitutionS of Education: A comparative study of educational development in six core nations*. Oxford: Symposium Books.

Dewey, J. 1916. *Democracy and Education*. New York: MacMillan.

Eklof, B. and Dneprov, E. 1993. "Democracy in the Russian School: Educational Reform Since 1984" in B. Eklof and E. Dneprov (eds.) *Democracy in the Russian School: The Reform Movement in Education Since 1984*. Boulder: Westview Press.

Fiala, R. 2006. "Educational ideology and the school curriculum." Pp. 15-34 in A. Benavot and C. Braslavsky (eds.) *School Knowledge in Comparative and Historical Perspective: Changing Curricula in Primary and Secondary Education.* Hong Kong: Comparative Education Research Centre, University of Hong Kong & Springer.

Gauhar, S. A. 1981. "Education and Mass Media." Pp. 61–81 in M. Wasiullah Khan (ed.) *Education and Society in the Muslim World*. Jeddah: Hodder and Soughton, King Abdulaziz University.

Grant, N. 1979. *Soviet Education*. Fourth edition. New York: Penguin Books.

Green, A. 1990. *Education and State Formation: The Rise of Education Systems in England, France and USA*. New York: St. Martin's Press.

Holsinger, D. and Cowell, R. 2000. *Positioning Secondary School Education in Developing Countries: Expansion and Curriculum*. Paris: UNESCO-IIEP. ([Available online](#).)

Johnson, R. 1987. "Educational Change in Francophone Africa." *Journal of Negro Education* 56(3): 265–281.

Kamens, D. and Benavot, A. 2006, "Worldwide models of secondary education, 1960-2000." Pp. 135-54 in A. Benavot and C. Braslavsky (eds.) *School Knowledge in Comparative and Historical Perspective: Changing Curricula in Primary and Secondary Education*. Hong Kong: Comparative Education Research Centre, University of Hong Kong & Springer.

Kamens, D., Meyer, J. and Benavot, A. 1996. "Worldwide Patterns in Academic Secondary Education Curricula." *Comparative Education Review* 40 (May): 116-138.

Kerckhoff, A. 1995. "Institutional Arrangements and Stratification Processes in Industrial Societies." *Annual Review of Sociology* 15: 323–47.

Khan, M. W. 1981. "Introduction." Pp. 1–27 in M. W. Khan (ed.) *Education and Society in the Muslim World*. Jeddah: Hodder and Soughton, King Abdulaziz University.

King, K. 1990. "Introduction: Education in Contrasting Societies." Pp. 1–22 in N. J. Entwistle (ed.) *Handbook of Educational Ideas and Practices*. London and New York: Routledge.

Kleibard, H. 1999. *Schooled to Work: Vocationalism and the American Curriculum, 1876-1946*. New York: Teachers College Press.

Matthews, M. 1982. *Education in the Soviet Union: Policies and Institutions since Stalin*. London: George Allen and Unwin.

Maynes, M. J. 1985. *Schooling in Western Europe*. Albany, NY: Suny Press.

McEneaney, E. and J. Meyer. 2000. "The Content of the Curriculum: An Institutional Perspective." Pp. 189-211 in Maureen Hallinan (ed.) *Handbook on Sociology of Education.* New York: Plenum Publishing.

Mueller, D., Ringer, F. and Simon, B. 1987. *The Rise of the Modern Education System*. Cambridge, UK: Cambridge University Press.

Noah, H. J. 1986. "Education, Employment, and Development in Communist Societies." Pp. 37–58 in E.B Gumbert (ed.) *Patriarchy, Party, Population, and Pedagogy*. Atlanta: Georgia State University.

Rama, G. W. 1983. "Education in Latin America: Exclusion or Participation." *CEPAL Review* 21: 13–38.

Resnik, J. 2006. "International Organizations, the 'Education-Economic Growth' Black Box, and the Development of World Education Culture." *Comparative Education Review* 50(2): 173-195.

Ringer, F. 1979. *Education and Society in Modern Europe*. Bloomington: Indiana University Press.

Schneider, R. 1982. "Public Education." In P. Flora (ed.) *State, Economy, and Society in Western Europe, 1850–1975: A Data Handbook*. Frankfurt: Campus

Shavit, Y., and W. Mueller. 2000. "Vocational Secondary Education, Tracking and Occupational Attainment in a Comparative Perspective." Pp. 437-52 in Maureen Hallinan (ed.) *Handbook on Sociology of Education.* New York: Plenum Publishing.

Sutton, F. 1965. "Education in the Making of Modern Nations." Pp. 51–74 in J. Coleman (ed.) *Education and Political Development*. Princeton: Princeton University Press.

Tillak, Jandhyala. 2003. "Vocational Education and Training in Asia." In John Keeves and Ryo Watanabe (eds.) *The Handbook on Educational Research in the Asia-Pacific Region*. Dordrecht: Kluwer Academic Publishers.

Ulich, R. 1967. *The Education of Nations*. Cambridge, MA: Harvard University Press.

UNESCO. Various years. *Statistical Yearbooks*. Paris: UNESCO.

UNESCO. 1958. *World Survey of Education II: Primary Education*. Paris: UNESCO.

UNESCO. 1961. *World Survey of Education III: Secondary Education*. Paris: UNESCO.

UNESCO. 2007. *Strong Foundations: Early Childhood Care and Education*. The EFA Global Monitoring Report. Paris: UNESCO.

UNESCO Institute for Statistics (UIS). 2005. *Making the Transition to Secondary Education*. UIS Fact Sheet No. 4 (April). Montreal, Canada: UNESCO Institute for Statistics. (Available online.)

UNESCO International Bureau of Education (IBE). 2003. *World Data on Education*. CD-ROM, 5th edition. Geneva: UNESCO-IBE.

Vaizey, J. 1965. "Introduction." In *The Study Group in the Economics of Education: The Residual Factor and the Economic Growth*. Paris: OECD.

Wittrock, B., Wagner, P. and Hollman, H. 1991. "Social Sciences and the Modern State: Policy Knowledge and Political Institutions in Western Europe and the United States." Pp. 28–85 in P. Wagner, C. Weiss, B. Wittrock, and H. Wollmann (eds.) *Social Sciences and Modern States*. Cambridge: Cambridge University Press.

World Bank. 2005. *Expanding Opportunities and Building Competencies for Young People: A New Agenda for Secondary Education*. Washington D.C.: World Bank. (Available online.)