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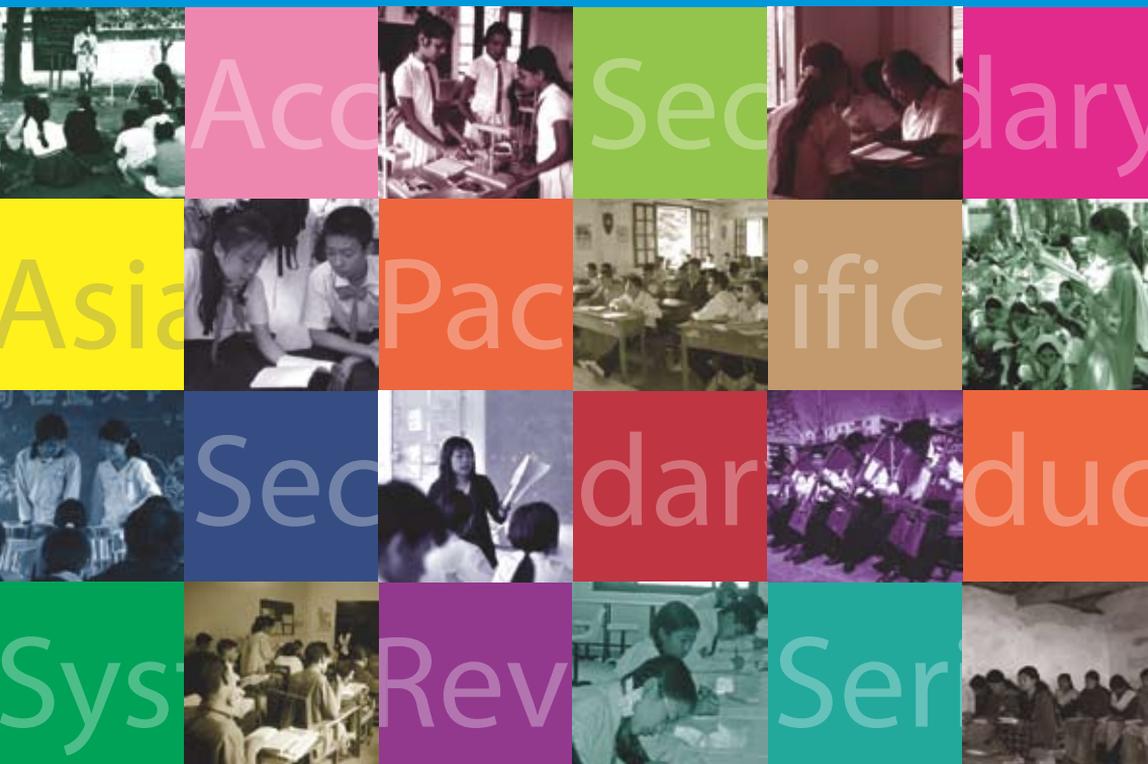


Japan
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Asia-Pacific
Secondary Education System Review Series

Access to Secondary Education



Asia-Pacific
Secondary Education System Review Series No. 2

Access to Secondary Education

Françoise Caillods

Published by UNESCO Bangkok
Asia and Pacific Regional Bureau for Education
Mom Luang Pin Malakul Centenary Building
920 Sukhumvit Road, Prakanong, Klongtoey
Bangkok 10110, Thailand

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ISBN 978-92-9223-339-6 (Print version)
ISBN 978-92-9223-340-2 (Electronic version)

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Printed by MCD Printing

Printed in Thailand

EPR/10/OS/030-800



Preface to the Series

The past decade has seen rapid progress towards universal primary education. As more children complete primary school, secondary education has received added attention from governments and development partners. With the expansion of secondary education, new challenges emerge, such as accommodating a greater diversity of aptitudes and societal needs and mobilizing the resources to fund additional infrastructure and teachers. The demand for quality secondary education is compelling governments to undertake thorough assessments of their secondary education systems. However, this exercise poses a challenge in many countries due to the lack of policy research available on secondary education.

In response to the needs of governments in the region, the Asia-Pacific Secondary Education System Review Series has been developed to facilitate reviews of the secondary education subsector. It is part of UNESCO Bangkok's ongoing regional project on Secondary Education Policy Research in Asia (SEPRA).

The booklets in the series provide practice-oriented guidance to education policy planners and managers, offering readers (a) an overview and analysis of major issues in secondary education across the Asia-Pacific region, (b) a choice of approaches to address issues, based on experiences of countries in the region, and (c) a set of guiding questions and a checklist of key issues to consider when preparing a subsector review and reform. Each booklet focuses on a specific topic that deserves careful attention when countries evaluate their secondary education systems.

The booklets are made freely available for download from UNESCO Bangkok SEPRA's website (www.unescobkk.org/sepra). Printed copies are available upon request. The project is coordinated by the Education Policy and Reform (EPR) unit, UNESCO Bangkok, and receives a generous financial contribution from the Government of Japan.



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List of Abbreviations

| | |
|-------|--|
| BRAC | Bangladesh Rural Advancement Committee |
| CCT | Cash Conditional Transfers |
| GER | Gross Enrolment Ratio |
| GPI | Gender Parity Index |
| IIEP | International Institute for Educational Planning |
| NER | Net Enrolment Rate |
| OECD | Organization for Economic Co-operation and Development |
| PISA | Programme for International Student Assessment |
| SAR | Special Administrative Region |
| SPR | School Participation Rate |
| TIMSS | Trends in International Mathematics and Science Study |
| UIS | UNESCO Institute for Statistics |



Acknowledgements

This booklet was prepared by Francoise Caillods, former Deputy Director of UNESCO's International Institute for Educational Planning.

It was produced as part of the Secondary Education Policy Research in Asia-Pacific (SEPPRA) Project, coordinated by the Education Policy and Reform (EPR) Unit, UNESCO Bangkok.

Members of the Review Team within UNESCO Bangkok included Miki Nozawa, Shiu-kee Chu and Nyi Nyi Thaung. Assistance was provided by Ratchakorn Kulsawet, Alice Yang, Hyangmi Kim, Yoko Kono and Wanwisa Suebnusorn.

UNESCO Bangkok thankfully acknowledges the financial assistance of the Government of Japan in support of this publication.

The focus of the second booklet of the Asia-Pacific Secondary Education System Review Series is access to secondary education. In the Asia-Pacific region, expansion of secondary education has increasingly been recognized as part of the EFA process, although universalization of secondary education is not explicitly spelled out in the EFA goals. In an increasing number of countries of the region, secondary education is considered basic education. Indeed, in the rapidly changing knowledge-based society, no country can afford to be contented only with ensuring universal access of its people to primary education.

Most governments today are endeavouring to widening and increasing access to basic education, which covers beyond primary, often lower secondary education, thus allowing a considerable proportion of young people to have access to upper level of secondary education too, if not universalizing its access. While this region has made a significant progress in enrolment in secondary education over the past decade, some countries are still struggling to find appropriate ways and means for further increase, in particular at lower secondary, let alone upper secondary level, as is the case with most low-income countries.

This booklet gives an overview of the current status of access to and coverage of secondary education in the Asia-Pacific region, describing key issues that hinder young people from accessing secondary education, and provides a set of recommendations for governments to address these issues, drawing from examples of experiences of countries in the region.



Gwang-Jo Kim
Director
UNESCO Bangkok

Section 1:

Introduction

In today's world marked by fast technological change, globalization, rapid movement of capital and businesses scouring countries for qualified and cheap labour, elevating the general education level of the population has become an absolute necessity.

Innovations and technological changes require that the labour force be equipped with advanced skills. Several studies indicate that changes in the demand for labour under globalization favour the employment of workers with secondary education-type skills such as proficiency in reading and writing, the capacity to reason, to solve problems and to cope with uncertainties and the ability to continue to learn throughout life (World Bank, 1993, 2005).

Independent of the requirements of the labour market, a good secondary education provides future adults with the skills to live and adapt in a rapidly changing society. In particular, it empowers individuals to be fully active citizens in a world where climate change, environment deprecation, health hazards and technological innovation are transforming quickly everyday life.

Last, but not least, secondary education prepares and selects the adolescents who are going to enter higher education and become our future leaders, managers and professionals. Quality secondary education is crucial in providing students with the tools to study more independently and succeed at post-secondary level.

Several Asian countries are enjoying fast economic growth thanks to their sound economic policies including investing in high quality education for all. Countries like the Republic of Korea moved in less than fifty years from a developing country to that of a nation which exports sophisticated technological products to the world. Several such success stories exist in the region such as Singapore, Hong Kong SAR of China, and more recently mainland China or Malaysia. Most of these countries follow(ed) a similar approach. Several countries are investing large resources in the education of their citizens to raise the competence and ability of their labour force. Lower secondary education

has become part of basic education in many countries and several of them are striving to universalize access to upper secondary education. Families themselves are aware of the benefits of increased education as a vehicle for economic and occupational mobility and invest in their children's education through schooling and private tutoring. Several East Asian countries/territories¹ feature among the highest performing countries/territories in the PISA (Programme for International Student Assessment) 2006 survey measuring knowledge and skills in science, mathematics and reading amongst 15 year olds (OECD, 2006). These examples show that it is possible to develop reasonable quality secondary education relatively rapidly.

Asia and the Pacific is, however, a region of contrast. While some countries have high enrolment rates at secondary and higher education levels, others have still a long way to go to offer secondary education to the majority of their school age population, to reduce disparities across gender, social and ethnic groups and to reduce drop out. This booklet is about how to increase access to secondary education. It analyses the coverage of secondary education in Asia and the Pacific, reviews major inequalities that exist in access and coverage, and identifies the factors that limit the access of primary school graduates to secondary education. Finally, it discusses options to increase access and coverage and suggests interventions to be considered in different contexts. The booklet focuses on countries which have not yet ensured wide access to lower and upper secondary education and concentrates on issues of general education.

¹ Hong Kong SAR and Macao SAR of China, Republic of Korea, Taiwan of China (Source: OECD PISA database 2006, Table 2.1c.)

Section 2:

Definition of Secondary Education and Different Structures

Since the duration and the terminology used to describe different cycles and streams of secondary education vary a great deal from country to country, it is useful to define the terms used in this booklet. In its simplest form, secondary education is the education level that exists between primary education and higher education. It can be defined by the age of the students. They enter secondary education as children and depart as young adults at the age of 17 or 18, ready to enter university, start looking for work and to become responsible citizens. Secondary education is the school for young adolescents, a very crucial age where important knowledge, skills, attitudes and values are acquired for the rest of their lives. It is the level where future technicians and professionals, scientific personnel and managers are identified, and those who will continue to study in various specialized and technical schools and at higher education level are selected.

In most Asia-Pacific countries, secondary education lasts six or seven years. It is usually divided into lower secondary and upper secondary (or between junior and senior secondary). Lower secondary has the objective of consolidating the knowledge and skills acquired in primary education (literacy and numeracy), transmitting additional basic knowledge and competence in core subjects (mathematics, natural and social sciences, health education, foreign languages, citizenship education) and imparting generic skills (analytical skills, learning to think, learning to learn, to solve problems). Lower secondary education is often part of basic education and as such is largely undifferentiated in terms of orientation or specialization. At upper secondary level specializations appear between different streams (e.g., science and arts) and tracks (technical and vocational tracks exist alongside general education).

In countries whose education system was influenced by the United Kingdom as the former colonizer, there are often three levels of secondary education:² Junior secondary, secondary and higher

² See UNESCO Bangkok's secondary education country profiles (www.unescobkk.org/sepra/infobase).

secondary in Bangladesh; upper primary, secondary, and higher secondary in India; lower secondary, upper secondary, post-secondary education (Form 6) in Malaysia; and junior secondary, senior secondary, collegiate in Sri Lanka. In some cases, the first level of secondary education is considered as part of basic elementary education and may no longer be treated as secondary education (e.g., upper primary in India). In other cases, higher secondary or pre-university education, being highly specialized³ and taught in secondary schools and in colleges, is sometimes considered as part of tertiary education (e.g., Bangladesh, Malaysia). In this booklet the three levels will be generally considered as part of secondary education.

³ Corresponding to the former 'A' level.

Section 3:

Access to and Coverage of Secondary Education in Asia and the Pacific

The best indicator to measure the coverage of secondary education is the net enrolment rate, which measures the proportion of the relevant age group who are enrolled in secondary education. Figure 1 shows that it varies a great deal between the developed countries of the region including Japan, Republic of Korea, Australia and the Central Asian countries (which have a fairly developed education system due to the soviet tradition) and when compared to the poorest countries of the region. While a high proportion of the adolescents in high-income countries receive some secondary education, this is the case of only one child in three in Cambodia and Pakistan. Nevertheless, between 2000 and 2007 secondary education expanded considerably almost everywhere and particularly in low-income countries such as Pakistan, Cambodia, Lao PDR and Timor Leste.

Internationally comparable data on net enrolment rates, however, is not available separately for lower and upper secondary education for all countries. Overall net secondary enrolment rates do not allow us to identify where the drop out problem lies, and where selection takes place if any: at the end of primary, between lower and upper secondary cycle or throughout the cycle. Table 1 presents separate indicators on the coverage of secondary education in selected countries for lower and upper secondary. The definitions of education levels, of the indicators and the statistics presented, are those of the UNESCO Institute for Statistics (UIS, 2009) (See the definition of indicators in the Annex).

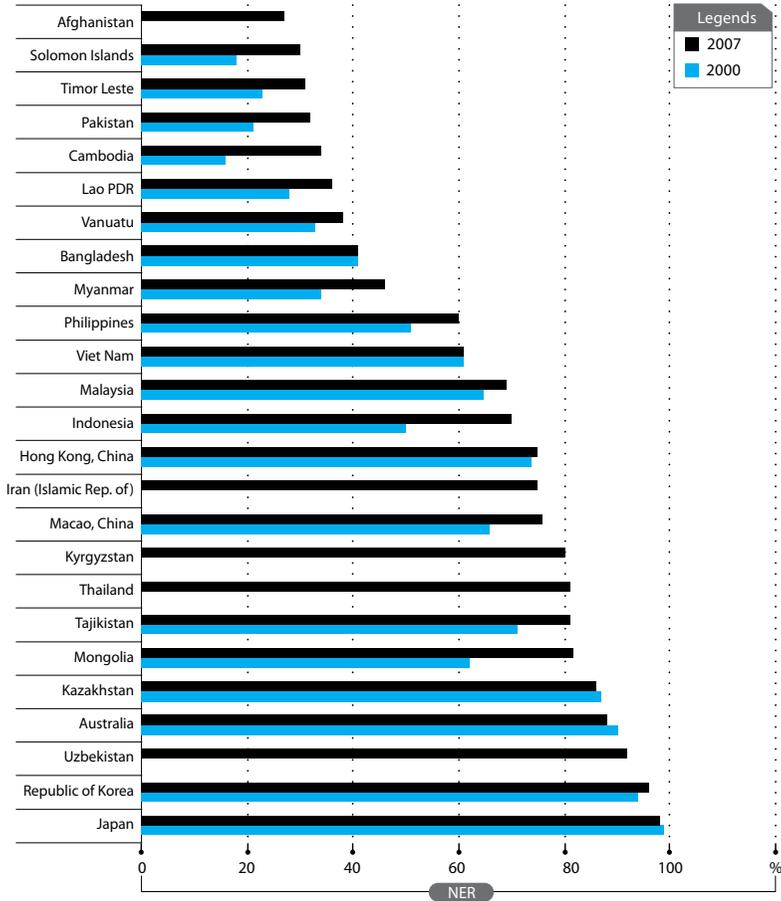
The coverage of secondary education depends on three elements:

- The proportion of the relevant age group who complete primary education, i.e., those who are candidates to enter secondary education. This proportion is measured by the primary cohort completion rate. This indicator itself depends on the number of children who had access to primary education five or six years earlier and who reached the last grade of primary. The primary completion

rate is not available for a large number of countries. A proxy is provided by the gross intake ratio to the last grade of primary.⁴

- The selection that takes place at the end of primary: as measured by the transition rate from primary to secondary education.

Figure 1: Net Secondary Enrolment Rates in Asia and the Pacific 2000-2007



Source: UIS (2010a). Data Centre.

⁴ This is not a very satisfactory proxy: the gross intake ratio at the last grade of primary tends to overestimate the proportion of children who reach the end of primary education in countries where repetition is allowed.

- The drop out that occurs throughout secondary education and the possible selection at the end of lower secondary.

In this absence of detailed information at the regional level on the transition from lower to upper secondary and on the level of drop out throughout secondary, the level of attrition can be assessed by comparing the gross enrolment ratios at lower (GER I) and upper secondary level (GER II).

As could be expected, gross enrolment ratios are usually higher at lower secondary than at upper secondary. A sharp decline in GER from one level to another may be the result of selection procedures, more specifically, of a government policy to regulate the flow of students and to select the best to continue after lower secondary. It may be the result of lack of space at upper secondary level, lack of school facilities within a reasonable distance or the high cost of schooling for some families. Or it may be the result of lack of demand or interest for secondary schooling.

It appears from Table 1 that the problems concerning access and coverage of secondary education are very different from one subregion to another and from one country to another.

In **Central Asia** most countries have reached universal primary education, a very high enrolment rate at lower secondary level and a fairly high coverage at upper secondary level. This achievement is related to the policy of the former Soviet Union. It is, nevertheless, quite remarkable considering the decline in enrolment rates and the rise in educational disparities which followed the decline in public education spending when Central Asian countries became independent (Open Society Institute, 2002). Since these initial setbacks in the early 1990s, enrolment rates have been rising steadily. At upper secondary level there is considerable variation among countries, with Tajikistan having the lowest GER (55 percent) and Uzbekistan the highest (115 percent). It is interesting to note that countries in Central Asia with a fairly high enrolment rate at upper secondary tend to enrol a fairly high proportion of their students in technical and vocational education. The private sector still plays a negligible role in most countries of the subregion, Mongolia excepted.⁵

⁵ This study follows the geographical classification of the UIS which includes Mongolia in Central Asia.

Table 1: Data on the Coverage of Secondary Education by Country, Circa 2007

| | Primary survival rate to last grade | Gross primary graduation ratio | Gross intake ratio to the last grade of primary | Transition rate from primary to secondary (general programmes) | Lower secondary GER | |
|----------------------------|-------------------------------------|--------------------------------|---|--|---------------------|-------------------|
| | (MF) | (MF) | (MF) | (MF) | (MF) | (F) |
| Central Asia | | | | 99 | 97 | 97 |
| Kazakhstan | 100 ⁺¹ | 99.1 | 101 | 100 ⁺¹ | 105 ⁺¹ | 105 ⁺¹ |
| Mongolia | 84 | 81.6 | 110 | 96 | 95 | 98 |
| Tajikistan | 99 | ... | 95 | 98 | 95 | 90 |
| Uzbekistan | 99 | ... | 96 | 100 | 97 | 96 |
| East Asia Pacific | | | | 95 | 93 | 93 |
| Cambodia | 54 | 75 | 85 | 79 | 56 | 52 |
| China | ... | ... | 99 | ... | 96 | 96 |
| Indonesia | 95 | ... | 108 | 99 | 90 | 91 |
| Lao PDR | 61 | 70 | 74 | 78 | 53 | 47 |
| Malaysia | 89 ⁻¹ | ... | 96 | 99 ^{**,-1} | 90 ⁻² | 91 ⁻² |
| Myanmar | 73 | 72.6 | ... | 73 | ... | ... |
| Philippines | 73 | ... | 92 | 98 | 87 | 90 |
| Solomon Islands | ... | ... | ... | ... | 46 ⁻² | 44 ⁻² |
| Thailand | ... | ... | 87 | 87 | 101 ⁺¹ | 102 ⁺¹ |
| Tonga | 91 ⁻¹ | ... | 105 ⁻¹ | 62 ⁻¹ | 99 ⁻¹ | 99 ⁻¹ |
| Timor Leste | ... | 45 | 70 | ... | 68 ⁻² | 69 ⁻² |
| Viet Nam | 92 ^{**,-1} | ... | ... | 93 ^{**,-1} | ... | ... |
| South Asia | | | | 84 | 67 | 63 |
| Afghanistan | ... | ... | 38 ⁻² | ... | 38 | 21 |
| Bangladesh | 55 ⁻¹ | 57 | 58 ⁻¹ | 97 ⁻¹ | 60 | 64 |
| India | 66 ⁻¹ | ... | 94 | 84 ⁻¹ | 71 ⁻¹ | 66 ⁻¹ |
| Iran (Islamic Republic of) | ... | 94 | 117 ^{**} | 83 ^{**} | 86 ⁻² | 82 ⁻² |
| Nepal | 62 ⁺¹ | 65 ⁻² | ... | 81 ⁺¹ | 68 ⁺¹ | 66 ⁺¹ |
| Pakistan | 70 ⁻² | 46 | 60 | 76 | 45 | 39 |
| Sri Lanka | 93 ^{**,-1} | ... | 105 | 97 ^{**,-1} | ... | ... |

Notes:

MF Refers to both males and females
 - Magnitude nil or negligible
 . Not applicable
 ... Indicates that data are not available
 * National estimation

** UIS estimate
 +n Data refers to the school or financial year after the reference year.
 -n Data refers to the school or financial year before the reference year.

| | | Upper secondary GER | | | Enrolment in technical and vocational programmes, upper secondary (%) | Enrolment in private institutions, total secondary (all programmes) (%) | Total Secondary NER (all programmes) |
|--|--------------------|---------------------|------------------|--------------------|---|---|--------------------------------------|
| | (GPI) | (MF) | (F) | (GPI) | (MF) | (MF) | (MF) |
| | 0.98 | 89 | 87 | 0.96 | 42 | 1 | 88 |
| | 1.00 ⁺¹ | 66 ⁺¹ | 63 ⁺¹ | 0.92 ⁺¹ | 26 ⁺¹ | 0.8 | 86 ⁺¹ |
| | 1.07 | 86 | 94 | 1.18 | 22 | 6 | 81 |
| | 0.91 | 55 | 41 | 0.61 | 12 | . | 81 |
| | 0.98 | 115 | 114 | 0.98 | 72 | . | 92 |
| | 1.00 | 63 | 64 | 1.03 | 34 | 19 | 71 |
| | 0.87 | 23 | 19 | 0.70 | 8 | 2 | 34 ^{**} |
| | 1.00 | 60 | 61 | 1.03 | 40 | 8 | ... |
| | 1.02 | 57 | 56 | 0.98 | 33 | 49 | 68 |
| | 0.81 | 34 | 30 | 0.76 | 2 | 2 | 36 ^{**} |
| | 1.02 ⁻² | 53 ⁻² | 58 ⁻² | 1.22 ⁻² | 14 ⁻² | 3 | 69 ⁻² |
| | ... | ... | ... | ... | - | . | ... |
| | 1.07 | 73 | 79 | 1.21 | . | 20 | 61 |
| | 0.89 ⁻² | 17 ⁻² | 14 ⁻² | 0.74 ⁻² | ... | ... | ... |
| | 1.03 ⁺¹ | 67 | 74 ⁺¹ | 1.21 ⁺¹ | 40 ⁺¹ | 18 | 81 ⁺¹ |
| | 1.00 ⁻¹ | 81 ⁻¹ | 88 ⁻¹ | 1.17 ⁻¹ | ... | ... | 60 ^{**,-1} |
| | 1.02 ⁻² | 37 ⁻² | 37 ⁻² | 0.96 ⁻² | 11 ⁻² | 11 | ... |
| | ... | 59 | ... | ... | 14 | 10 [*] | ... |
| | 0.89 | 13 | ... | ... | 14 | 10[*] | ... |
| | 0.40 | 16 | 8 | 0.34 | 3 | ... | 26 ^{**} |
| | 1.13 | 30 | 30 | 0.97 | 6 | 96 | 41 |
| | 0.89 ⁻¹ | 42 ⁻¹ | 36 ⁻¹ | 0.77 ⁻¹ | 2 ⁻¹ | ... | ... |
| | 0.91 ⁻² | 77 ⁻² | 76 ⁻² | 0.96 ⁻² | 16 ⁻² | 8 | 77 ⁻² |
| | 0.94 ⁺¹ | 32 ⁺¹ | 31 ⁺¹ | 0.91 ⁺¹ | 2 ⁺¹ | 14 | 42 ^{**} |
| | 0.75 | 23 | 20 | 0.77 | 9 | 31 | 32 |
| | ... | ... | ... | ... | ... | ... | ... |

Source: UIS (2009, 2010b).

In the **East Asia and Pacific region** the situation is very diverse.

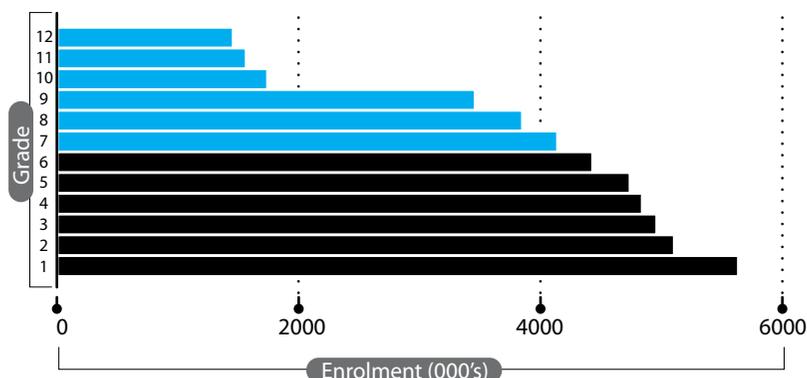
A first group of countries have high enrolment rates at lower secondary level (China, Indonesia, Malaysia, Thailand, Philippines, Viet Nam) but experience a drop in participation rates at upper secondary level. A second group of countries seem to practice selection at the end of primary (Solomon Islands, Vanuatu). A third group of countries have a fairly low enrolment rate at secondary level as a result of heavy drop out within primary (Cambodia, Lao PDR).

Countries in the first group have successfully implemented a basic education policy which integrates primary and lower secondary. Their gross enrolment ratio at lower secondary is equal or above 90 percent. Yet some adolescents (possibly as high as one in five) still do not have access or do not complete lower secondary education. Specific studies are required at the country level to identify who these drop outs are, where they live and why they drop out.

The decline in participation is, however, more serious at the end of lower secondary. Most, if not all countries in this first group experience a significant drop in the enrolment rate moving from lower to upper secondary. For some countries this may be the result of a deliberate policy reflected in the existence of a selection examination at the end of lower secondary (as in Viet Nam and Indonesia). But this is not the case in other countries whose causes are to be found elsewhere. The enrolments in education by grade in Indonesia below (Figure 2) illustrates the high selection that takes place at the end of lower secondary (although attrition at the end of lower secondary may be somewhat overestimated as vocational education is not included in upper secondary enrolments).

It is worth noting that the countries which have the highest enrolment rates in upper secondary education also have a fairly high proportion of their students enrolled in vocational schools. Private schools play a significant role in several countries and contribute to enlarging the coverage: they enrol a significant proportion of students at lower secondary level for example in Indonesia (44 percent of enrolment) and Thailand (15 percent); and they enrol an even higher proportion of students at upper secondary level, particularly in vocational schools (Indonesia, Thailand and Viet Nam).

Figure 2: Enrolments in Education by Grade, Indonesia, 2007



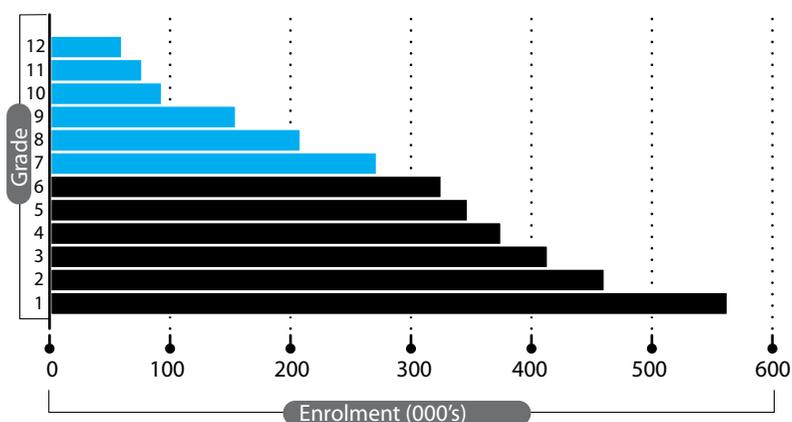
Source: UIS (2010c).

The second group consists of a few Pacific countries which have high enrolment rates at primary education but relatively low transition to secondary education (Solomon Islands, Vanuatu and the Federated States of Micronesia). These countries select students to continue studying at the end of their primary education. In the Solomon Islands and Vanuatu for example, selective examinations in grade 6 force at least half the cohort out of education. Papua New Guinea also has severe selection at the end of primary, coupled with relatively low participation at primary level.

Countries in the third group have a relatively high transition rate to secondary education (above 75 percent) but drop out at primary level and the low intake rate in the last grade of primary school explains to a large extent the low enrolment rate at secondary level (Cambodia, Lao PDR, Timor Leste). No more students can be admitted to secondary other than those who have actually graduated from primary school. Regular and continuous drop out continues throughout lower secondary education. The educational pyramid of Cambodia illustrates this pattern.

Due to the selection procedure that occurs at the end of lower secondary, the lack of infrastructure at upper secondary level and the continuous drop out, another significant decline in participation occurs at the end of lower secondary. Naturally, when the policy of primary education for all eventually bears fruit bringing a large number of students to the last grade of primary education, a substantial increase in secondary enrolment is to be expected.

Figure 3: Enrolments in Education by Grade, Cambodia, 2007



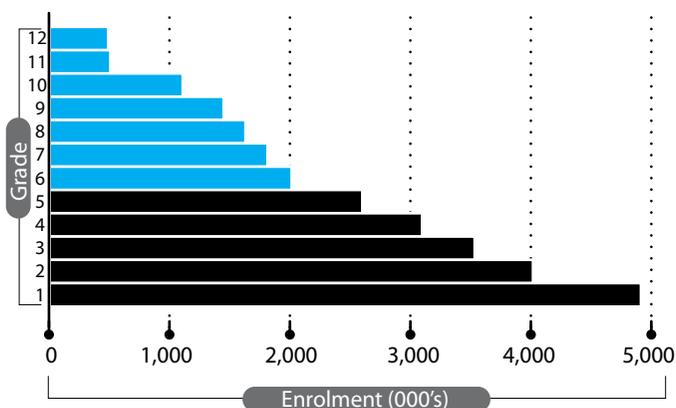
Source: UIS (2010c).

South and West Asia is the subregion with the lowest enrolment rate at secondary level. This low participation is essentially the result of the low proportion of children who reach the last grade of primary education as can be seen in Bangladesh (where only 58 percent of the relevant age group reach the end of primary), Pakistan (where 60 percent of the relevant age group reach the end of primary) and in some States of India (e.g., Bihar, Madhya Pradesh Orissa, Rajasthan, Uttar Pradesh). The low participation rate can be further explained by the selection process that takes place at the end of every cycle. Indeed, some selection still exists at the end of primary in some countries as only pupils who have had satisfactory examination results are admitted to secondary level, for example in Bangladesh and Nepal. Another selection takes place at the end of the different cycles of secondary education, lower secondary and upper secondary,⁶ with or without a public examination. But as the educational pyramid of Pakistan illustrates, drop out occurs throughout the education cycle, in the middle or at the end of every grade. Besides socio-economic and cultural factors, political instability and problems of security may contribute to such drop out problems.

In both Pakistan and Bangladesh, private schools contribute to the provision of secondary education. They enrol a high proportion of students, 31 percent in Pakistan and as much as 96 percent in Bangladesh

⁶ The second level of secondary education (Years 9 and 10) is referred to as Secondary Education in Bangladesh and Nepal and Matriculation in Pakistan. See UNESCO Bangkok's secondary education country profiles (www.unescobkk.org/sepra/infobase).

Figure 4: Enrolments in Education by Grade, Pakistan, 2007



Source: UIS (2010c).

where public schools are rare in rural areas. The government supports teacher salaries in most of the Bangladeshi schools (government-aided schools), but a contribution may still be requested from families which may prevent children from poorer families attending school.

In Bangladesh, the BRAC (Bangladesh Rural Advancement Committee), the largest southern NGO founded in the country, offers alternative primary education opportunities for young people in remote rural areas and in urban slums, encouraging them to transfer to the formal sector afterwards. Another alternative exists at post primary level. Madrasas, religious schools, enrol 17 percent of all secondary students in the country. Recognized madrasas offer a modern curriculum where alongside religious studies students are educated in secular subjects such as science, mathematics, English and geography. Their graduates are eligible for admission to secular educational institutes for higher education. A similar parallel system of religious schools also exists in Pakistan and offers an education meant to be equivalent to the traditional system.

India has announced a policy of universal secondary education to support its economic development. The country has witnessed a massive expansion of educational facilities in the past decades. Enrolment has grown fast up to secondary level but the coverage varies a great deal from state to state. In some states, coverage remains low as poverty and various socio-cultural factors continue to cause low

enrolment and a high level of drop out. Drop out rates increase with grades and levels of education (Sujatha, 2008). Public examinations at the end of upper primary (grade 8), secondary (grade 10) and upper secondary ensure a fairly strict selection of those who are allowed to continue. The different states support government schools and some private schools (government aided schools). Although the proportion of students in the different kinds of schools varies from state to state, private unaided schools have mushroomed in recent years following the economic liberalisation policy. This trend indicates a fairly strong demand for quality education that prepares students for higher learning.

Thus in many South Asian countries, the expansion of secondary enrolment depends primarily on the success of policies aimed at improving primary completion rates. It depends too on selection procedures and policies concerning access to the different stages of secondary education. Specific measures are also needed to reduce drop out at lower secondary level, including improving the quality of education.

Sri Lanka and Iran (Islamic Republic of) are exceptions: they have both high primary and secondary enrolment rates and they have reached gender parity. Sri Lanka has been for many years the example of a country which succeeded in offering wide access to secondary education in spite of limited government resources.

The Asia-Pacific region is very large and very diverse. Each country and within each country, each province or state may present very specific conditions and problems. This quick diagnosis of secondary education coverage needs to be refined at the country level by analysing the concrete conditions of secondary education provision, the specific social and cultural dimensions, as well as government policy and its implementation.

Section 4:

Making a Diagnosis of Access and Coverage

This section makes suggestions on types of data to be collected and analyzed to make a diagnosis of access and coverage issues in secondary education.

Indicators to be used to do the diagnosis at national level

Several indicators in addition to those mentioned earlier can be useful to refine the diagnosis of access and coverage at the country level. These include:

1. Age attendance rates at secondary level: total and by gender.
2. Enrolment growth rates at different levels of secondary education. These provide an indication on whether efforts have been made to increase access and retention and whether demand does exist.
3. Promotion, repetition and drop out rates at lower secondary level and survival rate⁷ (i.e., the proportion of students entering lower secondary education who finish it a certain number of years later). These indicators are to be computed at national and regional levels: they measure whether drop out occurs throughout secondary or between two cycles; and whether attrition is higher at lower secondary or at upper secondary level.
4. The transition rate between lower secondary and general upper secondary (i.e., the proportion of students enrolled in the last year of lower secondary who are enrolled the following year in the first grade of general upper secondary education).
5. The transition rate from lower secondary to technical and vocational schools and the proportion of students at upper secondary level who study in technical and vocational schools. In many countries only general secondary school graduates can apply to higher education. A high proportion of students in technical and

⁷ Also called retention rate. It differs from the gross intake ratio to the last grade of primary (proxy to the completion rate) since those who reach the last grade are computed as a proportion of those who entered the cycle a number of years earlier. While the completion rate is computed as a proportion of the relevant age group.

vocational education indicate the willingness of governments and families to prepare their young people for the world of work. It is also an indication on the part of the government to reduce the pressure on higher levels of education.

6. Pass rates in different examinations and their variation by type of school, region, gender: these provide an indication on the selection policy as much as on the quality of the education provided.
7. Promotion, repetition and drop out rates at upper secondary level and survival rate.
8. The inequalities in access and retention between gender and between regions: the indicators listed above (survival rates, transition rates) should be calculated by gender and by regions.
9. The size of private education at different levels: the share of enrolment in private schools in different regions and areas (urban/rural). These indicators measure the demand for education which is not satisfied by the public education system (in quantity or in quality). It is important to separate government aided private schools from independent private schools.
10. The proportion of the relevant school age population who is enrolled at lower secondary level by age in urban and in rural areas; likewise the proportion who is enrolled in upper secondary level by age in urban and rural areas.
11. The proportion of the 20 percent poorest young people who are enrolled in secondary education by age compared to the 20 percent of richest young people.
12. The number of secondary schools per 10,000 inhabitants.
13. The physical accessibility of existing secondary schools: the distance to be covered from the different primary schools to the nearest lower secondary school; and from the lower secondary schools to the nearest upper secondary school. If students do not walk but use different collective transport systems, the time to reach the secondary school would be a better indicator.
14. The proportion of boarders and semi-boarders in lower and upper secondary. The number and location of boarding schools and their admission criteria.

15. Financial accessibility: the level of tuition fees and other fees that families must pay to enrol their children in different types of secondary schools; and the proportion of students who are exempted.
16. Various indicators of the quality of the education provided in different types of schools and in different areas (e.g., the number of students per class; the proportion of trained teachers; the existence of specialized teachers and facilities).
17. Learning achievements of adolescents as measured in different international surveys of student achievement such as TIMSS (Trends in International Mathematics and Science Study) and PISA.

Several of the above indicators can be computed at both national and subnational levels (provincial or district) using existing statistics (indicators 2 to 9, 12, 14 and 16). Other indicators require analysis of household surveys (indicators 1, 10 and 11). Such survey data are available for many countries. Attendance rates calculated on the basis of household surveys are more reliable indicators of participation than enrolment rates, as official inscription at the start of the year can be inflated masking non-attendance and drop out during the school year (UIS, 2010d). Moreover, enrolment rates in urban and rural areas using traditional enrolment statistics tend not to be reliable as, depending on the country, most secondary schools — particularly upper secondary schools — are located in urban areas. The rates thus obtained tend to overestimate the enrolment rate in urban areas. Indicator 13 requires doing a specific survey.

The indicators described above can help to refine the analysis of the coverage of secondary education in different regions and for different groups. The analysis may determine to what extent low coverage is the result of a deliberate policy of restricting access (e.g., selection examination), of a series of supply-related factors, which can be changed or worked upon, or whether it is the result of various economic and socio-cultural factors. It is, obviously, easier to eliminate an examination or to reduce selection than to deal with a lack of demand for education, or deal with gender discrimination in society and within families. The indicators mentioned above should also allow identification of who is excluded from secondary schools and at what level.

In brief, the analysis of the different indicators mentioned above should facilitate the identification of coverage problems and their possible causes, making it easier to suggest proper interventions and policy measures should the government want to enlarge access to secondary education.

Past and future policy with respect to expanding secondary education

In order to interpret the indicators above it is necessary to know what the policy of different governments was with respect to increasing access to lower secondary and to upper secondary education. Likewise it is important to know what the policy for the medium and long term is if it has been defined. The diagnosis may serve to learn lessons from the implementation of past and present policies. The following questions need to be looked into:

- Has increasing access of young people to secondary education been a government's priority? What are the details regarding the medium and long term policy?
- Was/is the government policy to proceed step by step, i.e., not opening access to lower secondary before having achieved a fairly high participation rate at primary; not opening access to upper secondary before having a substantial coverage at lower secondary? What is the policy regarding access to lower secondary; and regarding access to upper secondary?
- Was the policy translated into construction of government secondary schools and training of teachers, or was it left to communities or to the private sector (the market)? Was the development of private secondary schools encouraged? What is the policy in this respect for the future? Was/is government financially supporting private schools and how? What are the regulations and what kind of controls exist?
- What has been the policy in terms of flow regulation mechanisms (maintaining, reforming or eliminating examinations)? What is being considered for the future?
- When does the differentiation of the curriculum start and to what extent? When does orientation take place towards technical and vocational education? And what is the size in terms of students

enrolled in the technical and vocational tracks? What is the future policy in this regard? This question has an obvious influence on the cost of education, on the type of building necessary and also on the potential demand for education.

- Has the present curriculum been revised? Are there plans to do so?
- What is the policy regarding fees, grants to schools, and scholarships?

Section 5:

Existing Disparities: Who Does Not Have Access to Secondary Education?

Most Asia and Pacific countries aim at facilitating access to lower secondary education by their primary school graduates. Some countries even aim at providing 11/12 years of education for all. But there is a long way between the announced objective and the reality. Offering access to a nine year basic education requires reducing inequalities in access and retention. Thus attention has to be paid to those who do not have access to secondary education. The situation varies from country to country but the groups who are most at risk of exclusion are girls, young people living in rural areas, minority and specific ethnic groups and children from the poorest families.

Gender disparities

One of the objectives of the Dakar Framework for Action and one of the Millennium Development Goals is to reach gender parity at all levels of education by 2015. Gender inequalities start at primary level but they increase as children grow older. Table 1 shows the total enrolment rate, the enrolment rate of girls and the gender parity index. The expansion of secondary education opportunities has reduced disparities and a number of countries have reached gender parity (e.g., Central Asia). In some countries girls stay in school longer than boys. This may be due to girls performing better than boys and/or because when boys reach a certain age they have to start working to assist their family. They may also have better work opportunities than girls (e.g., Malaysia, Mongolia, Philippines, Thailand).

But in most other countries girls are under-represented in secondary education. In South and West Asia, six out of nine countries have low enrolment rates for girls and low gender parity indexes. The situation is particularly serious in Afghanistan and Pakistan. India is not doing very well either on this indicator, particularly in its Northern states and at upper secondary level. A noticeable exception is Bangladesh which has reached gender parity in both lower and secondary education. In East Asia and the Pacific, Cambodia, Lao PDR and the Solomon Islands are countries that lag behind.

The low incidence of girls' education has a lot to do with the prevailing socio-cultural context. In some of these countries (and some states within countries) gender discrimination is well entrenched in the social system. Patriarchal relations are strong and reflected in various social practices such as child marriage, early marriage and high maternal mortality rates. Early marriage, early pregnancy and a poor maternal health record are a vicious circle that keep many girls out of upper secondary education even if they manage to finish primary education and enter lower secondary. Economically and culturally, girls are expected to stay at home and to assist in different chores including taking care of younger children. Cultural and economic handicaps cumulate so that the girls' situation is generally much worse in rural areas, in poor families and in certain ethnic groups than in cities.

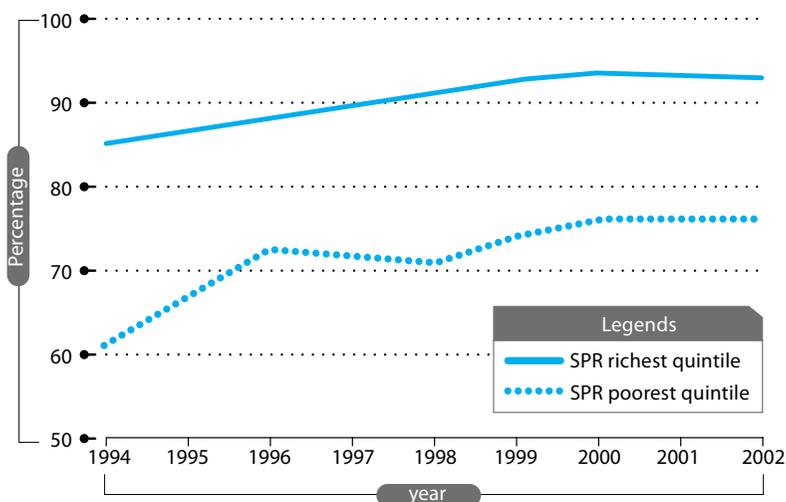
Schooling conditions may also explain the reluctance of parents to send their daughters to school. The lack of water and the lack of separate toilets for girls is common in many schools in economically disadvantaged regions. This, to which should be added the low percentage of female teachers, the lack of hostels and the long distance that girls may have to walk to reach school, are all factors that deter the girls and their parents from enrolling in secondary education. In brief, the cultural context, socio-economic conditions and school location are all responsible for the low participation of girls in education in general and secondary education in particular.

Socio-economic and ethnic disparities

Disparities are not limited to gender alone. They concern various social groups defined in terms of income, minority groups, castes, and communities. In most countries children from the poorest households are not well represented in secondary education. This may be due to the high cost of education. Direct education costs — fees, textbooks, uniforms, transportation or hostels — constitute a large burden on poor families' income. The indirect cost of education — income foregone by going to school — is also high. Instead of going to secondary schools, young people can start working on the farm, in the informal sector or even in industry. The opportunity costs can be quite significant for poor families and it rises with age. If the quality of education is not as high as expected or if the youngster does not perform well, the family may decide to interrupt his/her schooling.

Figure 5 shows the gap in the enrolment rate of children from the poorest and wealthiest families in Thailand. Thanks to the education policy, the enrolment rate of the poorest group increased but the gap did not disappear. In 2007, Thailand announced 12 years of free basic education for all, but policy takes time to be implemented and opportunity costs remain high for the poorest families. In 2008, enrolment rates by grade continued to show a continuous decline after grade 9 when entering upper secondary education and throughout upper secondary. (Ministry of Education Thailand, 2009).

Figure 5: Thailand: Secondary School Participation of Children from Richest and Poorest Income Quintiles



Source: Household Socio-Economic Survey 1994-2002, World Bank (2006).

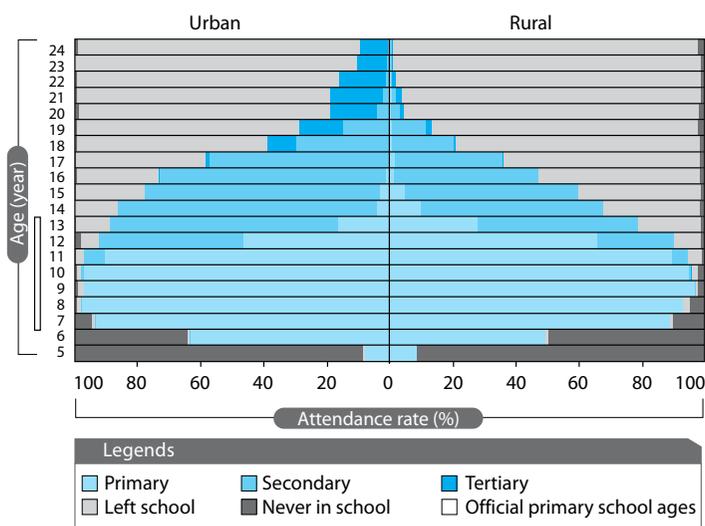
Disparities also exist between ethnic groups. Minority groups are normally not well-represented in secondary education. In India, for example, the population comprises a large number of groups belonging to various castes, communities, linguistic divisions and ethnicities. State statistics indicate that the proportion of children enrolled from scheduled castes and scheduled tribes decreases the higher the education level, indicating that there is a high level of drop outs in such groups (Sujatha, 2008).

Rural-urban disparities

A similar divide exists between urban and rural children. First, the opportunity cost may be higher for rural children than for urban children. Second, the distance to reach secondary school may be discouraging and the cost of food, transportation or lodging can be a deterrent. Figure 6 shows that the young people from rural areas of Indonesia tend to enter secondary education later and that they leave earlier.

It is worth noting that the data used to measure the disparities between income groups and between urban and rural areas come from household surveys.

Figure 6: Indonesia: Disparity in Enrolment Rate by Urban and Rural Areas



Source: UIS (2005).

Factors limiting access to secondary education

The factors explaining the low participation of young people in secondary education are numerous and some have been mentioned above. They are generally regrouped into two categories: supply-related and demand-related factors. Supply-related factors concern

the existence, cost and quality of school provision. As such, they are more easily affected by government policy. Demand-related factors concern the willingness of families to send their children to school and of young people wanting to study. They depend on the characteristics of the education provided and also on socio-economic and cultural factors.

Supply-related factors

The existence of secondary schools relatively close to where young people live clearly influences participation. What is at stake is the distance that children should cover to reach secondary schools and when the distance is too big as in rural areas, the availability of certain services like hostels and transportation.

The cost of schooling is another important factor. Secondary schooling is more expensive than primary schooling. When families have to bear the full cost of schooling, certain children, particularly those from low income families, are unlikely to participate. The extent to which government supports the cost of schooling, including teachers, determines the level of tuition fees in government as well as in private schools and, therefore, participation.

Low quality education is another factor that may discourage families enrolling their children into secondary schools. Families may be willing to pay to educate their children and to sacrifice their contribution to family income, but only if they perceive that their investment is worthwhile and if they find that their children learn something useful. With the rapid expansion of secondary education, quality has often deteriorated. The number of pupils per class has risen, sometimes up to 60 or 70 and teachers are often not qualified. In countries of the Indian subcontinent, absenteeism of teachers is a problem. Families who can afford it prefer to send their children to private schools or government aided schools rather than to government schools. Textbooks and exercise books may also not be available in sufficient number, and they can be expensive to purchase. Finally, the school curriculum may not be appropriate for the majority of pupils who have just graduated from primary schools, many of whom barely know how to read and write.

Another supply-related factor has to do with the assessment and examination procedures. When children fail the examination or the

test and have to repeat, they are more likely to drop out. There is a fairly strong correlation between repetition and drop out. Many countries in the region hold examinations at the end of primary, lower secondary and upper secondary. These examinations have a triple function: they certify what the young people have learnt; contribute to maintaining standards; and assist selection of students for the next level and orient them towards different streams and tracks. Whether the pass rates are low (as for example in India) or not, they introduce a high level of tension.

While it is normal and justified to maintain standards of quality, the succession of tests and exams can put undue pressure on students and teachers. In examination-driven systems, many students feel obliged to take private tutoring in addition to the regular schooling. This constitutes another burden on the budget which not every family can afford. Inequalities are severe between students who can attend school regularly and have private tutoring and those who attend school irregularly, because they have to work, and who cannot attend private tutoring.

Demand-related factors

Poverty and the inability of families to pay fees or to forego the income that their children would bring to the family if they were to work, are probably the most important demand-related factors that explain drop out. The income foregone is negligible for middle income families but it is not so for low income families.

Generally, from an economic point of view, families decide to enrol or not enrol their children after comparing the cost of education with the expected benefits. Three factors militate against enrolling the child in secondary schools. First is the direct cost of secondary schooling, which in addition to tuition fees includes the cost of textbooks, uniforms, examinations, transport and food. Second is the indirect cost of schooling, i.e., the income forgone. Third is the uncertainty of the post-school benefits if the child is not doing well in school, especially the prospect of getting a job. In this regard, families are influenced by the local and national economic environment. In a context of economic boom, parents may be more likely to invest in the education of their children. But if there are few jobs they may be discouraged to do so



unless they plan to migrate. On the whole, the economic development that characterizes the region should have a positive influence on families' expectations and strategies.

Socio-cultural traditions are the second demand-related factor which slows enrolment growth. These have already been mentioned when discussing the low enrolment of girls and minority groups. Early marriage and several other cultural traditions prevent girls from continuing their education beyond primary schooling in certain social groups. Families may also not be satisfied with the education provided to their children. They may find that it is not of sufficient quality, that it is not relevant, and does not transmit proper values. They may be afraid of the influence that other young people and adults have on their children, of the lack of security in walking to school; or be worried about the influence that an empowering education can have on their own children's' behaviour and aspirations. This may be particularly true in traditional and religious families.

Section 6:

Measures That May Contribute to Increasing Access

Different measures or policies can be designed to address the problems and factors of access. They concern increasing the supply of secondary school places; reducing the cost of school attendance for the poorest families; providing incentives and support to selected disadvantaged groups of students; improving the overall quality of education and adapting teaching methods to suit the characteristics of disadvantaged groups; making the school organization more flexible and proposing alternative provisions of secondary education; and finally, addressing the socio-cultural problems.

Increasing the number of school places

The first set of measures address the supply constraints and aim at increasing the number of school places. In countries where enrolment rates are still low, and where teenagers have to walk or commute long distances to go to a secondary school, increase in the coverage of secondary education will necessitate the building of new secondary schools.

One option is to expand existing secondary schools by building new classrooms and recruiting new teachers. In urban areas, double shifts are often practiced when no land is available or if the land is too costly. Double shifts do not necessarily mean low quality if they are well organized and the number of teaching hours is not reduced (Bray, 2008). Introducing triple shifts is another matter. This measure is generally considered inadequate. New schools should be built in new city areas.

In rural areas there may be no schools to expand. The challenge is to provide more schools closer to where students live. Adding two or three classrooms to an existing primary school is a solution which is practiced in some countries. For example, additional classrooms, without any special facilities, are built next to a primary school allowing it to open junior secondary school classes, as has been the

case in Cambodia and Nepal. Facilities are sometimes built by the local communities. Specialized teachers are hired and the primary school becomes an integrated primary junior secondary school.

The provision of upper primary schools in India provides an illustration of a similar strategy. Depending on the States and on the area, upper primary schools can be independent, integrated into a primary school and sometimes into a secondary school. In most cases, upper primary schools are located within 1 to 3 km of primary schools. Teachers are not specialized by subject as they are in secondary education but they are often more qualified than at primary level (Varghese and Mehta, 1998).

Where to place lower secondary education has been debated from France to Norway and Argentina to India when strategies for expanding secondary education are considered. The debate concerns the type of schools where lower secondary should be located and the type of teachers who should teach at that level: should they be subject-specialized teachers or not? Should lower secondary education be integrated with primary education in elementary education type schools, and should lower secondary classes be taught by a majority of unspecialized primary school teachers? Should it be provided with special teachers in independent schools, or should it be integrated with upper secondary in secondary schools? The advantage of schools that offer both primary and lower secondary education is that they facilitate the transition from primary to lower secondary and minimize drop out, for both physical and geographical reasons and for pedagogical ones. This model reduces the barrier between primary and secondary schooling and teaching method, and allows smoother transition. The model is particularly appropriate in countries which have meagre resources, where drop out in primary education is a serious problem and where lower secondary must compensate for low quality primary education. The quality of the education provided, however, particularly in sciences and languages, may not be as high as when specialized secondary school teachers are teaching.

Some educationists are therefore advocating integrated secondary schools employing secondary school teachers. For some years a number of countries relied on elementary-type schools, particularly in rural areas, by simply expanding existing primary schools with the support of the community. Some years later, however, they moved

to a model based on integration with secondary schools (Briseid and Caillods, 2004). The pattern of secondary school provision in Asia seems very diverse. Different types of schools co-exist in different countries reflecting pragmatism and changes of policy over time. Private schools also illustrate a diversity of organization models sometimes providing primary, lower secondary and upper secondary education in the same facility.

Building independent junior secondary schools or integrated lower and upper secondary schools employing subject-specialized teachers, implies building larger schools which can accommodate several classes of junior and senior secondary, with students fed by several primary schools. Such schools should not only be able to attract all the teachers to cover all subjects, they should have specialized facilities, such as a computer room, a laboratory and a storeroom for science equipment, in some cases a multipurpose workshop, a teachers' room and administrative offices. Obviously, they should have water and electricity and appropriate sanitary facilities.

The larger the school, the more specialized teachers and specialized facilities will be utilized. Hence the larger the school the lower the unit cost. This option often implies a large building programme which has to be undertaken by the government, often with the support of an aid agency. It may be a more expensive option than that of extending primary schools. Two factors may facilitate the implementation of the programme: the decline in the school age population in a number of countries; and the rural-to-urban migration which brings more young people to urban areas.

When central or local governments decide to opt for large schools instead of smaller schools, the question that arises is that of providing boarding facilities and hostels. Boarding schools are notoriously expensive and more and more countries try to avoid them if they can. In rural areas, however, it may be difficult to open a big secondary school including upper secondary classes without a hostel attached to it. Transport is an alternative solution but it depends on how good the road network is and whether taxis and buses are available. In Thailand, the government introduced a bicycle lending scheme which reduced the cost of boarding and yet facilitated access of rural children to schools (World Bank, 2006).

Wherever possible double shifts should be considered as they reduce land and building costs. Standardization of school buildings may also contribute to reducing the cost of school construction. Defining norms and training administrators in techniques of school mapping may be necessary to ensure that schools are located in the most appropriate areas. When schools are built with the support of aid agencies, governments should be wary of too luxurious buildings with sophisticated equipment which may turn out to be very expensive to maintain.

Liberalizing the conditions for opening private secondary schools and allowing independent private schools to develop, is another way of increasing supply without taxing the government's budget. Subsidizing certain private schools and multiplying the number of government-aided secondary schools, can also allow expansion of the number of school places at a lower cost than fully funded government schools. Several countries are already doing this as discussed earlier. This strategy has proven effective to increase enrolment and participation in some low and middle income countries. In principle, it could allow release of funds which can be used by governments to build more schools in rural areas or in the periphery of urban areas where participation rates are low.

Building more schools — government, government aided and private schools — will contribute to enlarging the number of school places and will eventually contribute to increased enrolment. There is a danger, however, that girls, rural students and children from marginalized groups may still not enrol, or drop out after a few months. Additional measures are needed to ensure their participation. The first measure is to make education more affordable.

Making education more affordable

As discussed above the poorest households cannot afford the direct and indirect costs of education.

In order to reduce the direct cost of education, several countries have eliminated tuition fees at lower and sometimes at upper secondary level (e.g., Cambodia, Lao PDR, Malaysia, Mongolia, Thailand). During the economic crisis in Indonesia a scholarship programme was

introduced to cover the cost of fees. It effectively reduced drop out at the lower secondary level (Cameron, 2009). Abolition of school fees is an expensive measure, however, and not every country can afford it. Bangladesh, India, Pakistan and Viet Nam still charge fees at secondary level. In practice, the fees may be officially eliminated but if the schools do not receive an equivalent allocation from the government in the form of a per capita grant, the quality of education declines and/or schools continue to charge registration fees and ask families to contribute to the cost of education, as happens in Lao PDR.

Eliminating tuition fees may not be enough as other direct costs continue to exist such as the cost of buying uniforms, textbooks and paying the examination levy. In 2009 the Thai government extended free education until the end of upper secondary with the objective to have universal access up to that level. Not only did it abolish tuition fees, it announced that it would provide free textbooks and free uniforms to all adolescents until the end of grade 12 whether they are in a public or a private school.

In view of the very large cost involved to scale up, some countries have opted for targeted measures instead: eliminating fees or providing incentives to some groups only.

In Bangladesh, secondary education has been made free for girls throughout secondary. As a result the country was able to reduce gender inequalities and reach gender parity. Some states in India also eliminated fees for girls and give them a free uniform (Sujatha, 2008), although possibly not in sufficiently large numbers as the measure has not had the same results. Textbooks are also distributed free of charge in some Indian states to students from disadvantaged groups (scheduled castes, scheduled tribes). In Mongolia, children of families under the poverty line get free school bags, stationary and textbooks. In Viet Nam fees are reduced for disadvantaged, poor and ethnic minority students. Similar schemes exist in Lao PDR. Targeted measures such as these, allow concentrating limited resources on those who need most support.

The difficulty is to identify who should benefit from the intervention. While it is easy to identify girls, it is not always easy for a school head to decide on who is poor and marginalized in a context where most children are poor. Thus it can lead to bribery and corruption. It can also

lead to anger and resentment amongst those who do not benefit from such an intercession. It is easier if the decision is taken outside the school by the representative of another Ministry, of the local government, or by the community. The result of an experiment in Indonesia concluded that community-based methods for identifying poor people often do not match proxy measures of income. Instead, community based methods which reflect a certain ranking within the community and villagers self assessment of their own status, lead to greater satisfaction with the beneficiary list and targeting process (Alatas et al., 2009).

Incentives and affirmative action

Fees, boarding costs and other direct cost of education are only part of the cost that families have to support. The income foregone is another significant part of the cost as mentioned earlier. To cover this cost, at least partially, and to encourage the poorest families to send their young people to school, several countries have introduced scholarships and stipends. India, Thailand and Viet Nam are among such countries offering stipends to disadvantaged but able young people. Conditions are attached in terms of results. Snacks and lunch programmes constitute other incentives to attract young people to schools.

Few such programmes have been evaluated. Two evaluation studies can, however, be mentioned. The evaluation of the Japan Fund for Poverty Reduction in Cambodia which offered scholarships to poor girls at the end of primary education showed that scholarships did increase the attendance of recipients at programme schools by about 30 percent. It also showed that the largest impact was found with girls with the lowest socio-economic status (Filmer and Schady, 2008). Studies evaluating the impact of cash conditional transfers (CCT) in Latin American countries have shown that such programmes can be quite effective to increase students' participation but increased participation does not necessarily lead to increased learning. CCT, to be really effective, have to be accompanied by specific measures aimed at increasing school quality (Reimers et al., 2006).

Exempting certain groups from paying fees or providing scholarships to a limited number of students belonging to underprivileged groups (girls, ethnic minorities) is affirmative action. Another kind of affirmative

action consists of allocating more funds to schools enrolling children from disadvantaged groups and rural areas. Such measures are aimed at increasing quality in urban and peri-urban areas, but they also provide schooling facilities and access to education in areas where neither would normally be possible. Australia, New Zealand and South Africa have developed funding formulas which estimate the level of per capita grant that every school should receive in view of the profile of their students (Ross and Levacic, 1999). Schools that enrol a large number of rural and minority groups' students need larger per capita allocation than others to allow for a lower pupil-teacher ratio. In Viet Nam funds provided by the State are distributed on the basis of a per capita grant, taking into account the existence of disadvantaged groups (weighted index for disadvantaged) (UNESCO Bangkok, 2007).

Providing free hostels to bright young people living in rural areas is another measure which has been implemented with relative success in various states of India, Malaysia, Mongolia and Viet Nam. Malaysia, for example, created hostels and covered their cost to motivate rural and disadvantaged students to remain in school. At the same time scholarships were provided to students from low-income families having high academic potential. These two interventions — hostels and scholarships — succeeded in boosting the enrolments of rural and economically disadvantaged students.

A study measuring the impact of school hostels in Malaysia revealed that the mean achievement of boarders is higher than that of non-boarders (cited in Abu Hassan and Zainuddin, 2008). Thus free hostels and boarding facilities not only contribute to increased participation and retention in schools of rural and needy students, they also contribute to better learning environments and students' higher learning achievements. This explains why they are so popular with families in English-speaking countries even though the cost of a place in a boarding school is expensive and the cost of subsidizing them quite high. More evaluation of the cost and effectiveness of boarding schools and similar measures are needed.

Improve the quality of education and rendering secondary schooling more attractive

Improving the quality of education and showing all students including girls and disadvantaged children that they can succeed in school is indispensable to motivate students and parents. Expansion of secondary education often leads to an increase in the number of pupils per class and the recruitment of underqualified teachers. The quality of education can be particularly low in certain regions, in rural areas or in urban slums. In several countries, for example India, Indonesia, Mongolia and Pakistan, private schools provide better education than government schools. They offer superior physical conditions, guarantee better discipline and provide more feedback to pupils. As a result they attract an increasing number of middle class students whose families can afford to pay the fees.

Improving the quality of education requires training more teachers, attracting talented and motivated people to the profession and training and deploying them effectively. It requires providing them better support in school such as advice and support from senior teachers, good school management, textbooks, a resource centre and adequate equipment and facilities.

Curriculums also have to be revised to take into account that the newcomers have different and more heterogeneous abilities than previous groups of students; and that certain skills and knowledge that used to be taught in primary schools may now have to be taught in lower secondary. New subjects have to be introduced to make the content more relevant to the day-to-day life of young people many of whom may not further their education. New teaching methods focused on developing learning skills rather than rote memorization and testing and providing feedback to students have to be developed and disseminated. Guidebooks and textbooks have to be prepared and distributed to schools. Improving quality often implies improving school management and reforming assessment methods and examinations. It also involves providing additional coaching facilities for students who cannot afford private tutoring. Discussion of these amenities is well beyond the scope of this booklet but it is necessary to stress that access cannot be isolated from quality.

The preparation and implementation of reform to improve quality are costly and take time to bear fruit. In the meantime, affirmative action as discussed earlier is one answer to avoid further widening of inequalities.

Diversifying the curriculum

As mentioned earlier, many countries with a high enrolment rate at upper secondary level have a good proportion of their students in technical and vocational schools. There may be three reasons for this. First is that all countries are concerned with the need of producing a workforce for economic and industrial development and to modernise agriculture. Those that have a high secondary enrolment rate are more likely to have the resources to offer such education and to have a diversified economy. Secondly, to retain students in school, especially those who do not have very good results in academic subjects, it is necessary to diversify the curriculum and give them a chance to study and specialize in a field that interests them. A third reason is that many of the students will not enter higher education so they need to be prepared for entering the world of work. Good vocational education is expensive, however. The non-salary cost of vocational education can be twice as high as that of general education. It is particularly high in industrial schools.

The debate on the pros and cons of school-based vocational education is beyond the scope of this paper. It is worth mentioning that resource-poor countries should not necessarily plan for a high proportion of their students in vocational schools unless they have a clear indication that there is a demand for such manpower and that students will easily find jobs. A high quality general education emphasizing learning skills, scientific skills and languages (such as English) can just as well prepare young people for work. It allows them to learn on the job or to join vocational training programmes organized by different ministries, agencies or enterprises. Some argue that diversification of curriculum can take place within general secondary schools with multiple options (such as informatics, management) without necessarily implying very high costs (Holsinger, 2000, 2003; Briseid and Caillods, 2004).



Adapting schools to students rather than students to schools

Formal schooling and its strict regulation in terms of schedule, teaching periods and school calendar is often inappropriate for rural and minority group students who have to assist their family during certain periods of the day or certain months in the year. Students who do not attend regularly are excluded and they have no chance of catching up. Examinations can be quite demanding and in some areas pass rates can be so low that they discourage students from continuing. For these reasons non-formal education systems have developed alongside the formal system.

In India, there are several non-formal programmes which offer secondary education. The National Open Schools serve women, scheduled castes, scheduled tribes and rural people who were excluded from the formal system after failing public examinations or are working and cannot attend regular classes. The possibility of transferring credits from the formal system, the flexibility in the scheme of studies and recognition of the National Open School certificate, contributed to the success of this initiative. The learning system is based on correspondence courses, self-study and a network of study centres where students obtain study materials, get advice from tutors and attend a number of programmes. Print material is the main source of learning but contact programmes help students improve their self-learning skills, offering them advice and tutoring on difficult concepts (Sujatha, 2002). A similar programme exists in Indonesia. Considerable investment goes into the preparation of the curriculum, the teaching materials and in the infrastructure, allowing frequent contact with the students. This may be the reason why such programmes exist only in large countries.

In addition to the traditional secondary school curriculum in madrasas. Modernized madrasas are a popular option for many parents. They compete with secular schools for female students, with half of their students being girls. Not much has been documented on the quality of the education provided. Asadullah et al. (2006) conclude that in Bangladesh, students are disadvantaged compared to their peers in other schools in the same region; and their test scores are lower, but not that much once other schools' characteristics are considered. The Bangladesh Madrasa Education Board conducts public examinations and graduates can enter higher education institutions.

Other non-formal education programmes aim at providing young people with livelihood education (teaching them how to make a living), life skills (including health education) and promotion of self esteem. This is the case of the NGO BRAC in Bangladesh, for example, that started an Adolescent Programme focusing on vocational skills and a Basic Education Continuation Programme at post primary level. It is open to young girls and boys in rural areas who dropped out of the formal system. Interestingly, a high number of BRAC primary schools graduates continue to traditional secondary schools. This emphasizes the fact that the roots of low attendance at secondary level lie at the primary level and are intimately linked to the quality of education.

Non-formal education can also complement formal government or non-government secondary education programmes, training their teachers, providing supplementary coaching to girls and minority groups and developing teaching materials.⁸

Addressing the socio-cultural problems

Most of the measures and interventions discussed above contribute to the supply side so as to better meet demand. The assumption is that if education is available, relevant, of reasonable quality and if it is affordable, demand will eventually follow. Education provision and supply side interventions may not, however, solve cases of social and gender discrimination and socio-cultural practices, for example early marriage and in some contexts child prostitution and child trafficking. Changing practices deeply entrenched in culture and poverty will take a long time unless governments take strong measures to strictly forbid them.

Meanwhile, the best approach is to educate adult women and mothers and to involve them in a variety of programmes, giving them responsibilities as leaders in their communities. Literacy programmes, livelihood education, microfinance and all other activities promoting self-image can modify their attitudes, reduce their fear and prejudices and transform them into a group which militates in favour of girls' education. It is a question of role models: identifying educated women who are leaders in the community can go a long way to push the agenda of girls' education.

⁸ BRAC also contributes to training secondary school teachers in rural areas to help improve classroom pedagogy (<http://www.brac.net>).

Recruiting female teachers and head teachers and redeploying them in rural areas may also be helpful. The more female teachers there are in secondary schools and in rural secondary schools in particular, the more reassured families will be. Further, young girl students will be exposed to different role models, illustrating different career possibilities.



Section 7:

Conclusion

There are large variations in the secondary school coverage and the degree to which young people access secondary education in the Asia and Pacific region. The situation varies a great deal from one subregion to another and across countries. Coverage is particularly low in South Asia. Yet globalization has created new job opportunities for educated young people possessing secondary education-type skills and above. Developing access to secondary education is essential for the economic development of the countries in the region. Several countries have managed to expand access to secondary education in a relatively limited period of time, showing that it is possible to do so.

Some countries have a fairly high enrolment rate in both lower and upper secondary. The issue is to reduce drop out among disadvantaged children and youth. In a few countries the low coverage is due to government policies which select students at the end of lower secondary. In most other countries, poverty and socio-cultural problems are leading to fairly high drop out throughout primary and secondary education. Factors restricting access can be economic (the high cost of education), related to supply (lack of schools places or the long distances to be covered), the low quality of the education provided and inefficient flow of students through the education system (selection through examination). Learning from the lessons above, firm government policy commitment and stakeholders' support in providing additional resources, will help to solve these problems. Socio-cultural factors discriminating against girls and disadvantaged groups are more difficult to address and may need more fundamental societal changes and time.

Policies have been implemented throughout the world that address these different factors. Many measures which have been tried and implemented in different countries of the region offer a wide range of options. These vary from creating more schools, eliminating fees, offering stipends and other incentives, to improving the quality of education. In all cases, these measures require increasing the amount spent on education in general and on secondary education in particular. Richer countries can afford to eliminate fees for all and offer

free boarding schools in rural areas. Less well off countries may prefer targeted measures including a focus on girls and minority groups. The success of these measures will depend on the way they are managed, the proportion of the teenagers who benefit from them and the duration of the programmes put in place. They require strong political commitment. Ongoing demographic transitions with a decline in the eligible population, economic transformation and the dynamics of the region should to some extent make such indispensable political decisions easier.



Annex:

Definition of Indicators

Gender parity index (GPI): The ratio of female to male values of a given indicator. A GPI of 1 indicates parity between the sexes. The more the GPI falls below 1, the more there is gender disparity in favour of males. The more the GPI is above 1, the more there is gender disparity in favour of females.

Gross enrolment ratio (GER): The number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. GER I is the gross enrolment rate at lower secondary level. GER II is the gross enrolment rate at upper secondary level.

Net enrolment rate (NER): The number of pupils in the theoretical age group enrolled in a given level of education expressed as a percentage of total population of that age group.

Age attendance rate: Proportion of children of a certain age attending school, at whatever level.

Gross intake ratio to the last grade of primary: The total number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the population of the theoretical entrance age to the last grade of primary.

Completion rate: The secondary — or primary — completion rate is the percentage of the population of the theoretical age to complete the last year of secondary or primary education. It is calculated by taking the total number of students in the last grade of secondary or primary school, minus the number of repeaters in that grade, divided by the total number of children of official graduation age.

Gross graduation ratio: The number of graduates, regardless of age, in a given level or programme expressed as a percentage of the population of the theoretical graduation age for that level or programme.

Transition rate from primary to secondary education: The number of new entrants to the first grade of secondary education in a given year

(general education) expressed as a percentage of the number of pupils enrolled in the final grade of primary education in the previous year.

Promotion rate: Proportion of pupils from a cohort enrolled in a given grade at a given school year who study in the next grade in the following school year.

Repetition rate: Proportion of pupils from a cohort enrolled in a given grade at a given school year who study in the same grade in the following school year.

Drop-out rate: Percentage of pupils who drop out from a given grade in a given school year or between two school years.

Survival rate (or retention rate): Percentage of pupils who enter the first grade (of secondary education) and who reach the last grade, expressed as a percentage of a cohort of pupils (or students) enrolled in the first grade of a given level or cycle of education in a given school year who are expected to reach each successive grade.

For detailed formula see http://www.uis.unesco.org/i_pages/indic_spec.htm

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Asia-Pacific Secondary Education System Review Series No. 2

Access to Secondary Education

This booklet is the second of UNESCO Bangkok's Asia Pacific Secondary Education System Review Series that provides practice-oriented guidance to education policy planners and managers to review national secondary education systems. It gives an overview of the current status of access to and coverage of secondary education in the Asia-Pacific region, describing key issues that hinder young people from accessing secondary education, and provides a set of recommendations for governments to address these issues, drawing from examples of experiences of countries in the region.



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