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Education Systems in ASEAN+6 Countries: A Comparative Analysis of Selected Educational Issues

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Preface

This comparative report reviews and analyses a range of selected educational issues in Association of Southeast Asian Nations (ASEAN)+6 countries, which include 10 ASEAN member countries plus Australia, China, India, Japan, New Zealand, and the Republic of Korea. In particular, it highlights the key issues, challenges and opportunities for improving system performance and reducing educational disparities across ASEAN+6 countries. It thus provides useful inputs for informing policy options for education development in these and other countries. The issues reviewed are grouped into three policy areas: 1) sector policy and management frameworks, 2) secondary education, and 3) technical and vocational education and training (TVET), all of which are of critical importance in the context of formulating and operationalizing education reform agendas in these countries.

A comparative review of the current educational context in ASEAN+6 countries indicates that:
- All ASEAN+6 countries have a legal provision for free and compulsory education for at least some levels of basic education.
- Education system structures vary, however 6+3+3 is the most common in the region, followed by a 6+4+2 system.
- Most ASEAN+6 countries have decentralized some functions and responsibilities to lower levels of administration but remain rather centralized, especially with regard to standard setting and teacher management.
- Many ASEAN+6 countries have promoted alternative education and the use of equivalency programmes, however the ways alternative learning programmes are organized, delivered and certified differ.
- There is an increasing recognition of the association between quality of learning outcomes and enabling factors for quality education such as curriculum and assessment, quality assurance, teaching and learning time, language in education policies and teacher quality.
- Trends in TVET enrolment rates vary across the region; in most countries, the share of TVET has tended to decrease over the past decade. All ASEAN+6 countries recognize the importance of TVET and many include it in their national socio-economic development plans, however TVET continues to be "unpopular" and the demarcation between general and vocational education is increasingly blurred.
- There are wide variances in the ways countries prepare their workforce and perform educationally in TVET but most have attempted to put in place systems for TVET quality assurance and qualifications frameworks.

Reviewing these issues and the diverse approaches that countries have chosen to respond with has shed some lights on the possible policy choices for a country wishing to undertake education reform in these areas. Evidence reveals that high performing education systems appear to:
- Commit strongly, both legally and financially, to education
- Spend more and spend wisely on education
- Devolve more management responsibilities to sub-national levels
- Produce and use more data
- Undertake frequent curriculum reforms to respond to changing needs and make education more relevant

- Train and utilize better teachers
- Provide alternative pathways to education on the basis of gender, ethnicity, poverty and geographical location.

The analysis of country experiences in implementing education policy reform also provides valuable lessons for any successful education policy development. Education policy, in particular reform policy, is most likely to be successful if it is developed with:

- Visionary and consistent policy
- Focus on equity and learning
- Monitoring of progress and outcomes
- Partnerships under government leadership

The paper is Discussion Document No. 5 in the Education Policy Research Series, published by UNESCO Bangkok. This series of documents aims to contribute to the debate around the most pressing education policy issues in the Asia-Pacific region, with the objective of supporting education policy reform in Member States. The documents in this series also contribute to the UNESCO Bangkok knowledge base on education policy and reform issues.

Acknowledgements

List of Acronyms

ADB	Asian Development Bank
ASEAN	Association of South East Asian Nations
ASEAN+6	Association of South East Asian Nations + six countries
ASEM	Asia-Europe Meeting
CBT	Competency based training
CESR	Comprehensive Education Sector Review (Myanmar)
CVET	Continuous Vocational Education and Training
EFA	Education for All
ESPs	Education System Profiles
GDP	Gross Domestic Product
GDVT	General Department of Vocational Training (Viet Nam)
GNP	Gross National Product
HRD	Human Resource Development (Singapore)
HRDF	Human Resource Development Fund (Malaysia)
IBE	UNESCO International Bureau of Education
ILO	International Labour Organization
ISCED	International Standard Classification of Education
IVET	Initial Vocational Education and Training
LMI	Labour Market Information
MEST	Ministry of Education, Science and Technology (Republic of Korea)
MOE	Ministry of Education
MOEL	Ministry of Employment and Labour (Republic of Korea)
MOET	Ministry of Education and Training (Viet Nam)
MOHR	Ministry of Human Resources (Malaysia)
MOLISA	Ministry of Labour, Invalids and Social Affairs (Viet Nam)
MOLSW	Ministry of Labour and Social Welfare (Lao PDR)
MOLVT	Ministry of Labour and Vocational Training (Cambodia)
MTEF	Medium-Term Expenditure Framework
NQF	National Qualification Framework
OECD	Organisation for Economic Co-operation and Development
OJT	On the Job Training
PES	Provincial Education Service (Lao PDR)
PISA	Programme for International Student Assessment
PPP	Public-Private Partnerships
SDF	Skills Development Fund (Singapore)
SEAMEO	Southeast Asian Ministers of Education Organization

TVED	Technical and Vocational Education Department (Lao PDR)
TVET	Technical and Vocational Education and Training
UIS	UNESCO Institute for Statistics
UN	United Nations
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEVOC	UNESCO International Centre for Technical and Vocational Education and Training
VCs	Vocational Colleges
VET	Vocational Education and Training (Australia)

Contents

List of Tables and Figures

Introduction

Countries of the Association of Southeast Asian Nations (ASEAN)[1], despite differences in political systems, ideologies, historical background, development priorities and education structures, share a common vision for an ASEAN community. For ASEAN countries, education is core to development and contributes to the enhancement of ASEAN competitiveness. In fact, the ASEAN Charter, launched in 2007, clearly emphasizes the strategic importance of closer cooperation in education and human resource development among ASEAN member countries. The critical role of education in promoting ASEAN social and economic development and the building of a strong ASEAN community has also been widely recognized and repeatedly confirmed at various high-level policy dialogues[2] and in policy documents.[3] In this regard, one notable regional initiative is the move towards a shared regional qualifications framework, which aims to promote the recognition of qualifications and quality assurance in the provision of education.

ASEAN+6, which includes the addition of Australia, China, India, Japan, New Zealand and the Republic of Korea to the ASEAN mix, is a regional cooperation framework aiming to accelerate economic growth in East Asia and promote cooperation in areas vital to this growth. This cooperation is beneficial not only to its members but also other countries of the Asia–Pacific region. Examination of education systems in ASEAN+6 countries reveals a combination of generally high performing systems (e.g. Australia, Japan, the Republic of Korea, Singapore) and systems where substantial improvement may be needed (e.g. Cambodia, Lao PDR, Myanmar). By comparison, analysis provides greater scope for understanding why an education system performs better in one country than in another. At the same time, comparison also provides solid evidence and thus practical lessons to help improve education system performance. To help inform this reflection, it is important to examine the policies in any given education system, the ways in which they interact and impact upon system performance and other underlying factors that may inhibit or strengthen established policies.

Against this backdrop, UNESCO Bangkok's Education Policy and Reform Unit has undertaken a desk study of education systems in ASEAN+6 countries. The report outlines the features of ASEAN+6 country education systems in the context of on-going discussion on policy options for education development and reform in these countries. In particular, it highlights the key issues, challenges and opportunities for improving system performance and reducing disparities across ASEAN+6 countries with a focus on sector planning and management, secondary education and technical and vocational education and training (TVET), areas of critical importance in formulating and operationalizing the education reform agenda in most of these countries. This report is the product of that study.

The report provides a source of comparative data for researchers, policy analysts, education system managers and policy makers in areas where UNESCO believes policy dialogue and reform is critical for improving education system performance. Data has been collected and comparisons have been drawn wherever possible for all 16 countries under analysis. Implications drawn are designed to serve education policy dialogue and reform efforts in

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[1] ASEAN countries include Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam.
[2] For example, the ASEAN Education Ministers' Retreat in 2005, the 11th ASEAN Summit in 2005.
[3] For example, ASEAN Vision 2020 and the Vientiane Action Programme (VAP).

ASEAN countries but are also relevant to many countries in the region wishing to participate in, and fully benefit from, the regional cooperation and/or integration process.

This report has been compiled for rapid assessment and thus has employed a simple approach to data collection and analysis. Each policy area is briefly introduced, and a description of the policy dimensions under review is presented. Conclusions are then drawn primarily based on the comparative analysis of the educational issues. They are also informed by the experience of UNESCO in the Asia-Pacific region, working closely with government counterparts, civil society and development partners to support the educational development needs of member countries and their aspirations in education.

Constraints encountered in the compiling of this comparative report included a lack of reliable data as well as somewhat inconsistent and incomparable data from across various sources. Wherever possible, the report has relied on existing research or study reports available from international development organizations as well as internationally comparable and official government data sources. In some cases, however, the data available, particularly from online sources, is different from data provided by government sources or collected by UNESCO staff. In such cases, internationally comparable data has been used, complemented or verified by findings from further research or UNESCO in-house expert knowledge. Development banks, academic and UN data sources have also been used extensively in order to provide a triangulated analysis of the issues. In addition, only countries with relevant data have been included in the tables and figures throughout this report and thus, not all ASEAN+6 countries are always included in the analysis.

The report is presented in three chapters. Chapter 1 provides a regional perspective on education development in the Asia-Pacific, including: the great diversity of the Asia-Pacific and the macro trends shaping education development in the region.

Chapter Two comprises a detailed account of ASEAN+6 countries' status on selected education system issues from a comparative perspective. Section 2.1 presents analyses on the legislation, planning and management of the education system. Section 2.2 comprises the analysis of secondary education focusing on issues of pathways, curriculum, teachers and assessment at the secondary level. Section 2.3 provides a brief overview of technical and vocational education and training (TVET) with subtopics focusing on legal, institutional and policy frameworks, financing TVET delivery systems and the relevance and quality of TVET.

Chapter Three identifies some major points for reflection based on the analysis of trends and key issues in the ASEAN+6 education systems, points of relevance for ASEAN+6 countries and others outside this grouping in their review of education policy and in the crafting of education development strategies.

1. A Regional Perspective on Education

At the outset, it is important to provide perspective on the broader development context within the Asia-Pacific region, the region to which ASEAN+6 countries belong. The following chapter thus presents a regional overview of the Asia-Pacific including the great diversity of the region and macro trends shaping education development.

1.1 The Great Diversity of the Asia-Pacific Region

The Asia-Pacific region[4] spans a large geographical area, stretching northward to Mongolia, southward to New Zealand, eastward to the island states of Oceania, and westward to Iran. Countries range in area and population from among the biggest and most populous countries in the world, including China and India, to small island countries such as Nauru and Tuvalu in the Pacific Ocean. The region is home to more than 4.2 billion people or 61 percent of the world's population (UN ESCAP, 2011) and hence, development gains in the Asia-Pacific will continue to have a significant impact on the global education outlook.

In addition to its immense physical expanse, the region is characterized by diversity in terms of landscape, societies, history, culture, religion, and ethnicity. Countries also demonstrate varying degrees of political, social and economic development. Broad demographic, cultural and economic characteristics of the region can help provide context to the concomitant strengths, issues and challenges surrounding education development in the region.

Demographic characteristics

Over the last half century, the Asia-Pacific region has experienced a significant population boom with many countries doubling in size in this time. Because of this, the Asia-Pacific region holds a large share of the world's youth population, estimated at 60 percent (UN Youth, 2013, p.1). Of the region's total population, 17.9 percent are youth. This is both a challenge and an asset. Young people are one of the most valuable resources to any given country as they can contribute significantly to development and growth. At the same time, youth of the Asia-Pacific are confronted with a host of significant challenges that in many cases hinder their capacity to contribute to development. Some of these de-capacitating challenges include insufficient and/or inadequate education, unemployment and HIV and AIDs.

Insufficient and inadequate education	*There are 69 million illiterate youth in the Asia-Pacific region alone. (UNESCO, 2012g)*
Unemployment	*There are more than 700 million young people in Asia-Pacific, but only 20 percent of the region's workers are aged between 15 and 24, these young people account for almost half the Asia-Pacific's jobless.* [5]

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[4]The Asia-Pacific region follows the specific UNESCO definition. This definition does not forcibly reflect geography, but rather the execution of regional activities of the Organization. For a full list of UNESCO Member States in the Asia-Pacific, visit: http://www.unescobkk.org/asia-pacific/in-this-region/member-states/

[5] http://www.ilo.org/asia/areas/WCMS_117542/lang--en/index.htm

HIV and AIDs	*Nearly 5 million people are living with HIV in the Asia-Pacific region. (HIV and Aids Data Hub for Asia-Pacific, 2013). Nearly 351, 000 people became newly infected in 2012, a significant proportion of which are young people.*

The Asia-Pacific region is also highly mobile as migration to and from the region as well as within the region and within countries continues to increase. The region is home to more than 53 million immigrants (UNESCO, 2012f). Important intra-regional migration reflects both demographic trends and the increasing integration of the economies of the Asia-Pacific region. The pattern of rural-to-urban migration is also evident as countries move from largely agricultural economies to manufacturing and service-based economies in their path to industrialization and post-industrialisation.

Because of this increase in migration, cross-border movement of labour has grown significantly at a rate over two times faster than the growth of the labour force of the origin countries (Abella, 2005). Over 50 percent of migrants in the Asia-Pacific region come from South Asia (primarily from India, Bangladesh, Pakistan and Sri Lanka), and the rest mainly originate from South-East Asia and the Pacific (Indonesia and the Philippines) (ILO, 2006). The growing mobility of labour across borders has benefited both sending and receiving countries as well as the migrants themselves, although the extent of these benefits varies; indeed, migration also brings about negative consequences such as "brain drain", the migration of highly skilled workers, "brain waste", or educated and skilled migrants from developing countries being only able to find unskilled jobs in developed countries, and the risk of dependency on foreign labour. In addition, protecting the basic rights of migrant workers and their accompanying children in receiving countries has become a major concern. The swelling numbers of irregular migrants signal the immense problem of managing migration in a positive and protective way as the children of migrants in irregular and informal work arrangements often do not have adequate access to education services. Ultimately, this increase in migration requires careful planning and policy action to cater for the social and educational needs of migrants and their families.

Cultural characteristics

The Asia–Pacific region is home to a great diversity of ethnic, linguistic and religious groups. In fact, there are over 3,500 languages spoken across region. At the same time, many languages share a common root or family, for example in the lands between India and the island of Bali, Indonesia, the ancient Hindu epic "Ramayana" permeates the daily lives of the people. Languages spoken in Indonesia, Malaysia and the Philippines belong to the same language family. These are all linked with those spoken in the Pacific, thus the term Malayo-Polynesian language. Indigenous peoples of Australia and New Zealand also have deep linguistic ties with this language family.

Economic characteristics

Over the past two decades, the Asia-Pacific region has continued to maintain high economic growth rates exceeding that of other regions, and has consequently become known as the "growth centre" of the global economy (UNESCO, 2012f). The Asia-Pacific's combined

economy accounted for 35.36 percent of global gross domestic product (GDP) in 2009[6], making it one of the world's largest aggregate economies. The region's middle-income economies registered the highest growth, with some graduating to higher income status. East Asia and the Pacific led the global recovery from the economic crisis in 2009/10 with China driving most of the economic expansion. Over the coming years, the region is expected to continue to enjoy the highest growth rates in the world and to serve as the engine of the world economy.

Countries of the Asia-Pacific region demonstrate varying levels of economic development and rates of growth. While Australia, Japan, New Zealand, the Republic of Korea, and Singapore are categorized as highly industrialized countries, Bangladesh, Cambodia, Nepal, Papua New Guinea are still in the low-income category. China and India, meanwhile, represent the world's two most significant emerging economies with an increasing share in the world's wealth. Other economies, such as Indonesia, Malaysia, the Philippines, Thailand and Viet Nam belong to the middle-income category.

1.2 Macro Trends Shaping Education Development in the Region

The 21st century presents significant, multi-faceted, rapid and interdependent challenges and opportunities for all countries of the world, including the Asia-Pacific. These range from increasing economic interdependency, technological development, growing pressure on natural resources and environmental degradation, rapidly changing labour markets, shifting geo-politics, older, highly mobile and more urbanized populations amid growing unemployment and widening inequalities. These emerging challenges and opportunities have important implications for education policy-making and delivery, and need to be reflected in the shaping of both national and international effort in educational development. The current thinking on macro trends shaping education development in the region were well documented in "Toward EFA 2015 and Beyond – Shaping a New Vision for Education" conference papers and presentations as part of a regional high level meeting organized by UNESCO Bangkok on the future of education (9 -11 May 2012).[7] These trends are highlighted below:

Demographic change and migration

Rapidly ageing populations, youth bulges and large migrant populations raise questions about how education policy should adapt for the future. Issues of globalization versus the need to maintain regional and local identities are also important issues to address.

Socio-economic trends

The region continues to function as an engine of global growth, but performance across countries remains mixed; there are vast disparities between and within countries and the highest prevalence of extreme poverty in the world is found in this region. As elsewhere across the globe, the region's dramatic economic development has often led to a widening rather than narrowing of disparities in living standards and social and economic opportunities.

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[6] Based on the GDP share of World Total (PPP) Data for Year 2009 for the Asia-Pacific countries, as per the UNESCO definition. More details on the GDP share of world total for specific countries can be found at http://www.economywatch.com/economic-statistics/economic-indicators/GDP_Share_of_World_Total_PPP/2009/
[7] See the full papers and reports at http://www.unescobkk.org/education/epr/erf/

In addition, as countries move to knowledge-based, creative economies, innovation now becomes central to national competitive advantage with significant implications for the kinds of work and jobs people will do, and the skills that education should provide for in the future.

Technological advancement

The ubiquitous spread of information and communication technology has raised questions about the role technology should play within education systems. In particular, there is a great interest in how education can both benefit from and contribute to the digital (and learning) society in which we live.

Climate change and environmental degradation

The Asia-Pacific region has been significantly affected by natural disasters. In fact, between 1974 and 2003, about half of all disasters worldwide took place in Asia and the Pacific (EM-DAT, 2009). In the decade 2000-2009, 85 percent of global fatalities related to natural disasters occurred in the Asia-Pacific (ADB, 2011), making it one of the most vulnerable regions to natural disaster and other environmental changes. This has highlighted the importance of education in supporting knowledge-based practices on prevention, preparedness and mitigation in response to the deleterious impacts of climate change and environmental degradation.

Enhanced integration and interconnection

By default and by design, countries are more connected now than ever before technologically, environmentally, economically and socially. At the same time, intensifying global competition has sparked new conversation on how education can not only provide the required knowledge and skills in a more interconnected world, but also reconcile and resolve conflicts. In this regard, education is increasingly seen as having a critical role in strengthening development and leading social and economic transformation.

2. Education Systems in ASEAN+6 Countries

This chapter analyses education policy and management frameworks, secondary education and TVET, three education policy areas that constitute important reform domains in most education systems of the Asia-Pacific region. To the extent possible, each of these policy areas is analysed from a comparative perspective and a set of conclusions are drawn as reflection points for policy makers and practitioners. It is hoped that these reflection points may guide education policy makers in their discussion on possible areas for and approaches to policy reform.

2.1 Education Policy and Management Frameworks

2.1.1 Introduction

Education policies can play a critical role in transforming the education landscape and outcomes of learning. A prominent feature of the successful educational transformation in many countries is that policy reform efforts and programmes are guided by a clear goal or vision, and implemented through a coherent planning, management and monitoring process. Policies and programmes need to address all of the components of the system in a coordinated and coherent way so that changes, in turn, become mutually reinforcing and promote continuous improvement.[8]

In this section, selected aspects of education policy and management frameworks are compared across the education systems of ASEAN+6 countries and some emerging trends are identified. These aspects include: level of commitment to education development, educational structure, sector management, teacher policies as well as some other quality determinants.

2.1.2 Legal and Financial Commitment to Education

Legal commitment

All ASEAN+6 countries have ratified the Convention of the Rights of the Child, internationally committing themselves to provide free primary education to *all* children. These rights have been built into most national legislation,[9] which then serves as an important regulatory instrument outlining what, how and when citizens of a country should exercise their rights to education. While this commitment is significant achievement, fewer ASEAN+6 countries have either ratified or accepted the Convention against Discrimination in Education (**Error! Reference source not found.**).

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[8] See also Cohen & Hill (2001); Elmore (1995); Vinovskis (1996).
[9] An estimated 90 percent of all countries in the world have legally binding regulations requiring children to attend school (UNESCO Institute for Statistics, 2010).

Table 1: Countries that Ratified/Accepted the Convention against Discrimination in Education (CADE, 1960)

Ratified	Countries
Yes	Australia, Brunei Darussalam, China, Indonesia, New Zealand, Philippines
No	Cambodia, India, Japan, Lao PDR, Malaysia, Myanmar, Republic of Korea, Singapore, Thailand, Viet Nam

Source: UNESCO (2012a).

All ASEAN+6 countries have a legal provision for free and compulsory education for at least some levels of basic education, mostly for primary education (Figure 1). The average duration of free and compulsory education for the ASEAN+6 countries is 7.7 years. Among those countries having only free and compulsory primary education, it should be noted that the duration for primary education in Lao PDR, Myanmar and Viet Nam is 5 years while it is 6 years in the Philippines, the Republic of Korea[10] and Singapore. It should also be noted that in some countries, upper secondary education is provided free of charge, even though it is not compulsory (e.g., Malaysia, Japan). On the other hand, although lower secondary education is compulsory in Viet Nam and the Republic of Korea, only primary education is free.

Figure 1: Years of Free and Compulsory Education
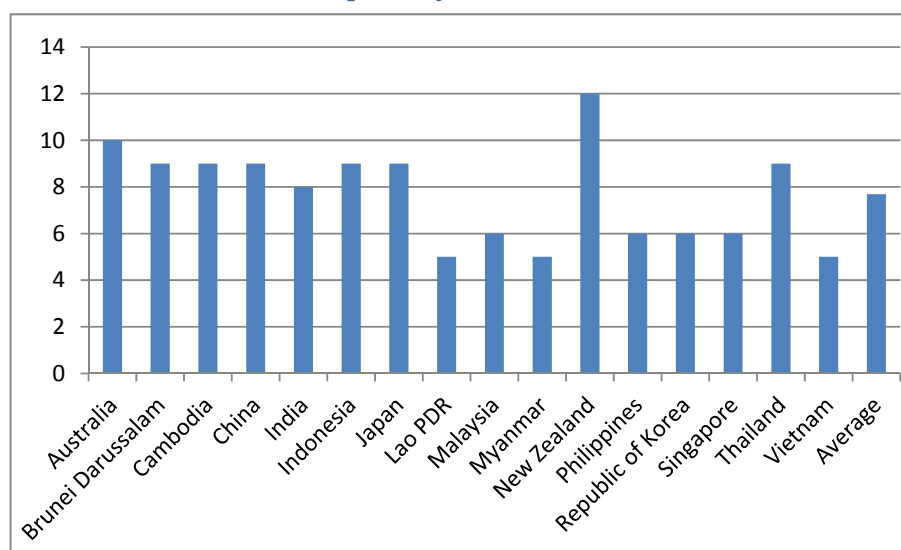
Source: Compiled by UNESCO staff based on IBE data (2011).

Financial commitment

Financial allocation to the education sector provides a clear indicator of government commitment to education. On average, ASEAN+6 countries allocate 14.7 percent of their government expenditure on education. The share of education in the total government expenditure varies across the countries (from 8.54 percent in Brunei Darussalam to 22.3 percent in Thailand in 2010), but on average (among 13 countries with data available), countries spend a considerable amount of their public resources on education (Figure 2).

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[10] Secondary education is compulsory and partially free.

Figure 2: Public Expenditure on Education as a Percentage of Total Government Expenditure, Selected Years, 2007 – 2010

Relative government spending on education is clearer when the share of education expenditure as a percentage of GDP is compared (Figure 3). ASEAN+6 countries allocate an average of 4 percent of their GDP to education.

Figure 3: Public Expenditure on Education as a Percentage of GDP, Selected Years, 2007 – 2010

Allocation of financial resources to education sub-sectors reflects the relative priorities countries give to corresponding education levels (Figure 4). For instance, Thailand spends 6.8 percent of its education budget on pre-primary education (UIS, 2009), which is much higher than other countries in the region. Indeed in many other countries, private providers largely fund pre-primary education. High-income countries tend to spend more on secondary and

higher education, while a large share of the education budget is allocated to primary education in developing countries, possibly due to limited resources available for education.

Figure 4: Share of Education Expenditures by Sub-Sector (%), Selected Years (2007-2010)
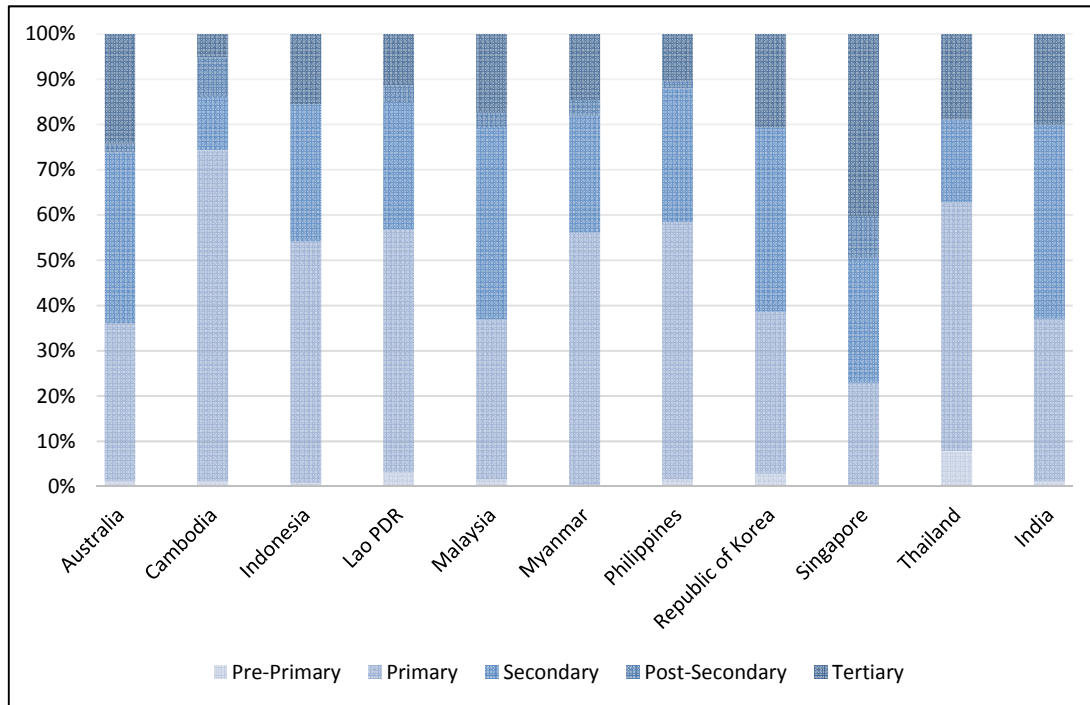
Note: The most recent year is selected during the period 2007-2010 for which data is available. Data for Myanmar is taken from UNESCO (2011)

Source: UIS (2012).

Formula funding is a common funding mechanism in education. When used appropriately, it can be an effective means to ensure equity and efficiency of resource allocation. Many of the ASEAN+6 countries apply formula funding, at least partially, in the allocation of funds while factors and weights used in the formulae vary considerably among countries (**Error! Reference source not found.**). Countries such as Australia and Republic of Korea integrate different student and school characteristics and needs into the formulae. This enables "disadvantaged schools" to receive more financial support in a more systematic way. For instance, unit cost for schools in rural areas tends to be higher than for those in urban areas since items such as books and stationary are often more expensive in rural areas. Similarly, students with a disability or special learning needs often require additional learning and staffing resources.

Table 2: Determination of Core Recurrent School Funding Items from the Level of Government with Primary Funding Responsibility, Selected Countries[11]

Country	Factors taken into account in the formula							
	Socio-economic status of the student/ school	Loca-tion	Size	Level of schooling (i.e. primary/ secondary)	Subjects / curri-culum offered	Language back-ground of students	Addi-tional needs of students with special needs	Other student charac-teristics (i.e. ethnicity, culture)
Malaysia			✓		✓			
Australia *,#	✓	✓	✓	✓		✓	✓	✓^
Republic of Korea	✓	✓	✓	✓	✓		✓	✓
Viet Nam	✓	✓	✓	✓				✓

Notes: * the funding formulae can differ between states and territories (Australia) – these are therefore summaries; # the Australian Government is currently undertaking a review of the funding arrangements for schooling, including funding formulae; ^ indigenous, refugee and certain migrant students attract additional funding.
Sources: Information collected by UNESCO Bangkok staff.

Without appropriate adjustment, standardized formulae can fail to capture such differences and result in unequal and ineffective distribution of funds. Most of the schools have supplementary programmes to address specific issues (e.g., students from poor families, schools located in very remote areas), but they tend to be application-based and the amount can fluctuate. This can make medium- and long-term planning and management at the school level difficult and may result in a negative impact on equity of access to quality learning.

2.1.3 Starting age and duration of compulsory education

In the majority of countries with data available (12 of 16 countries), formal education officially starts at the age of 6, while in two countries (Myanmar and New Zealand), children start formal education at the age of 5 and in China and Indonesia, at age 7 (Figure 5). It should be noted that in New Zealand, 5 year-olds are enrolled in Year 0, focusing on readiness for academic curriculum.

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[11] Only ASEAN+6 countries with relevant available data are included in this table and in all subsequent tables and figures.

Figure 5: Official Starting Age of Formal Education (Number of ASEAN+6 Countries)
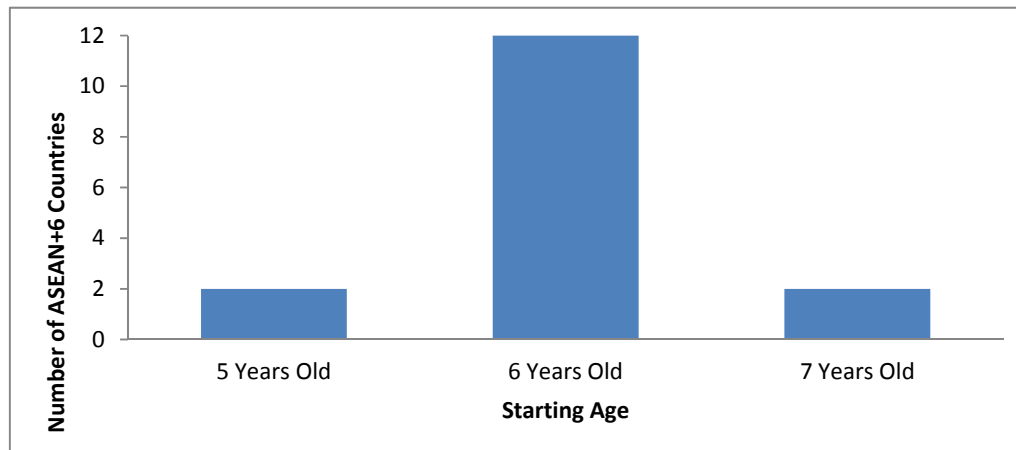
Source: IBE (2011), UNESCO (2007), and the World Bank (2012).

Many of the ASEAN+6 countries have 12 years of formal education divided into primary, lower secondary and upper secondary levels while some have 11 years of education (Table 3).

Table 3: Education Sector Structure and Years of Primary and Secondary Education

Structure	Total years	Countries
6+3+3	12	Cambodia, China*, Indonesia, Japan, Republic of Korea, Thailand
6+4+2	12	Australia (or 7+3+2)
5+3+2+2	12	India
5+4+3	12	Lao PDR, Viet Nam
6+4+2	12	Philippines, Singapore**
8+4	12	New Zealand
6+3+2	11	Malaysia
6+5	11	Brunei Darussalam
5+4+2	11	Myanmar

Notes: * in China, some provinces apply a 5+4+3 structure; ** Singapore's education structure is commonly described as 6+4+2. Other pathways consist of 6 years of primary education, 4 or 5 years of lower secondary education, and 1, 2, or 3 years of upper secondary education.

Source: IBE (2011).

The detailed structure of education varies among countries but most countries have 5 or 6 years of primary education, followed by 3 or 4 years of lower secondary, and 2 or 3 years of upper secondary education. 6+3+3 is the most common education structure in the region, followed by 6+4+2 system. This represents 8 of 15 countries reviewed. More years of secondary education may also mean additional costs, including for subject teachers, labs and equipment although funding required depends on a number of factors including teaching curriculum and teacher-student ratio.

In recent years, several countries have introduced structural reform to their education systems, a move requiring significant investment and preparation. Lao PDR is one of such example in the ASEAN+6 grouping. Lao PDR introduced 5+4+3 school system in 2009/2010 by adding one year to the lower secondary level. As a result, the number of students at lower secondary level increased by 38 percent between 2008/2009 and 2009/2010. The number of

teaching posts and classrooms required for the lower secondary level also increased by 36 percent and 18 percent respectively between these two years. In addition, additional teacher training, curriculum development, textbook revision, school facilities were needed. As a result, the share of government recurrent expenditure for lower secondary education jumped from 11.9 percent in 2008/2009 to 14.8 percent in 2009/2010, and is expected to steadily increase to 19.9 percent by 2015/2016.[12]

Countries that are considering structural reform to education systems therefore need to consider carefully the potential implications of reform measures. Considerable confusion is possible during the period of reform and mitigating negative effect on student learning must be of central priority. Carefully planned preparation, which may take years, is needed before introducing new structures to existing educational systems.

2.1.4 Sector management

To ensure that education sector priorities and reforms are implemented effectively, countries need to ensure both long and medium term development plans are underpinned by realistic and thorough financial planning. To this end, aligning national education plans with a multi-year budgeting and expenditure planning process is important. In practice, however, policy makers often find it challenging to link education plans with public sector financial planning and budgeting processes. This is due to the fact that education planning, financial planning and budgeting processes are each led by different entities within education ministries. Often cases, education plans are not prepared based on solid financial feasibility studies and fiscal frameworks. Consequently, attempts to implement and sustain reforms in the education sector often achieve only limited result as governments are unable to secure adequate public resources for the education sector.

A medium term expenditure framework (MTEF) in the education sector is one important instrument that may help address this challenge. MTEFs have been introduced in some ASEAN+6 countries at varied stages of implementation (Table 4).

Table 4: Overview of MTEF Implementation in Selected ASEAN+6 Countries

Country	Republic of Korea	Singapore	Viet Nam	Thailand	Indonesia	Cambodia
Year MTEF introduced	**2005**	**2004**	**2005**	**2006**	**2004**	**2008**
MTEF mandated in State Budget Law	Yes	No	No	No	Yes	Yes
Ceiling allocation to sub-sector level	Yes	No	No	No	No	No

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[12] These projections are made possible using a simulation model customized for Lao PDR (LANPRO model). During 2009-2010, UNESCO Bangkok provided technical support for the preparation of Lao PDR Secondary Education Subsector Action Plan 2010-2015.

Country	Republic of Korea	Singapore	Viet Nam	Thailand	Indonesia	Cambodia
Year MTEF introduced	**2005**	**2004**	**2005**	**2006**	**2004**	**2008**
Effective linkage of MTEF to Annual Budget	Yes. MTFF and MTEF ceilings set hard annual budget constraint	Yes. MTFF and MTEF ceilings set hard annual budget constraint	No	No top down sector ceilings produced or at least released	No ceilings nor guiding budget allocations	Not fully integrated because capital is outside ceiling

Source: Clarke (2010).

While it is not possible to determine which modality of MTEF is most appropriate, country case studies conducted in nine countries in Asia[13] indicate that the effectiveness of MTEF very much depends on the following key issues:

- Capacity of policy and financial staff;
- Strong coordination and leadership of Ministries of Education (MOE) when education service is also provided by other ministries and/or local governments;
- Strong coordination between MOE and Ministries of Finance (MOF); and
- Effective integration with the annual budgeting process and respect for the MTEF budget ceiling.

MTEF, when developed and implemented effectively, can improve the robustness, feasibility, efficiency and effectiveness of education plans.

Decentralization

Most ASEAN+6 countries have decentralized some key functions and responsibilities to lower levels of administration. Many patterns or arrangements are observed in ASEAN +6 countries. School-based management, aimed at giving schools and communities more autonomy in decision-making, is one example. Another is the growth of educational models emphasizing the virtues of choice and competition, either within the state sector or through an expanded role for the private sector. In many developing countries, low-fee private schools are emerging as another source of choice and competition, often outside government regulation.

Table 5: Distribution of Key Responsibilities

	Standard-setting	Primary funding source	Budget allocation	Teacher recruitment
Australia	Central	State	State	State
Indonesia	Central	Central	Central	Central
Japan	Central	Prefecture/ Municipality	Prefecture/ Municipality	Prefecture/ Municipality
Republic of Korea	Central	Central	Metropolitan city/Province	Metropolitan city/Province
Myanmar	Central	Central	Central	Central
Vietnam	Central	Central	Province/District	Province/District

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[13] These case studies were commissioned by UNESCO Bangkok during 2008-2010 under the framework of a regional programme on education financial planning.

Sources: IBE (2011) and data collected by UNESCO staff.

Although decentralization is not a panacea for better education sector management, countries with centralized education systems could potentially learn from the experiences of countries that have decentralized**.** Hoping to lessen the financial burden on the government and improve relevance, efficiency and effectiveness of education, many governments in the region have embarked on education decentralization reform (Table 6).

Table 6: Key Milestones of Education Decentralization Reform in Selected Education Systems

China	Major fiscal reform in 1994 to shift the intergovernmental fiscal system from ad hoc, negotiated transfers to a rule-based tax assignment.
India	73th constitutional amendment in 1992 to put in place a local government system called *panchayati* as the country's third level of governance after the central and state governments.
Indonesia	Two laws were enacted in 1999: law 22/1999 on regional governance and law 25/1999 on the financial balance between central government and the regions
Philippines	Revised local government code was enacted in 1991 to consolidate all existing legislation on local government affairs, providing the legal framework for the decentralization programme
Thailand	The 1997 Constitution of the country embraced decentralization
Cambodia	First introduced school-based management (SBM) in 1998
Hong Kong, SAR	First introduced SBM in 1991

Source: Information collected by UNESCO staff.

In the absence of a definite measure that permits one to easily conclude whether or not the delivery of public education is centralized or decentralized, a proxy measure can be used based on the recruitment, employment and payment of teachers. Research on the determinants of good quality learning consistently shows that teachers are the most important school input (Hanushek & Rivkin, 2012). In addition, teacher salaries are by far the largest expenditure category in the basic education budget, often comprising 70 percent or more of recurrent education spending. Thus, asking which level of government selects, manages and pays teachers is perhaps the best and simplest indicator of the extent to which education is decentralized. Table 7 presents an overview of the level and scope of decentralization with regard to teacher management in selected ASEAN +6 countries.

Table 7: The Locus of Teacher Employment (Selection, Management, and Payment of Teachers)

Country/Government	Central government	Regional government	Local government	School
Cambodia	✓			
China			✓(County)	
India		✓		
Indonesia	✓		✓ (District)	✓
Japan		✓		
Lao PDR	✓			
Malaysia	✓			
Philippines	✓			
Singapore	✓			✓*
Thailand		✓		

Notes: * only accredited schools.
Source: UNESCO Bangkok (2012b).

While decentralization seems to bring improved access and increased financial resource allocated to education, in some cases the impacts are mixed and some countries face challenges in implementing decentralization. (Table 8) Without appropriate government interventions, decentralization can cause more harm than good. UNESCO Bangkok (2012b) identifies three key areas that are crucial for successful decentralization: (1) ensuring equity; (2) building accountability; and (3) building local capacity.

Table 8: Challenges in Decentralization of Basic Education Financing and Delivery from Selected Asian Countries

Country	Under-funding	Limited local fiscal capacity	Regional disparity in funding	Private financial burden	Roles and responsibilities	Accountability	Local capacity
Cambodia		✓					
China	✓		✓	✓			
Indonesia				✓		✓	
Lao PDR	✓	✓			✓	✓	✓
Nepal	✓	✓			✓		
Pakistan	✓					✓	✓
Vietnam			✓	✓			✓

Source: UNESCO Bangkok (2012b).

Public and private sector roles in provision and financing of education

Having an appropriate mix of public and private sector[14] involvement in education can be key to equitable, efficient and effective education system management. As far as education sector management is concerned, most countries have involved the private sector in the financing and provision of education. Private sector involvement in education can be found in a variety of forms including: full-fee private schools, publicly supported and privately managed schools (e.g., voucher programmes), community schools, private funding (fees and donations) to

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[14]The "private sector" refers in this context to non-state or non-public actors in education including companies, non-governmental organizations (NGOs), faith-based organizations, and community and philanthropic associations. It is not just the companies or firms.

public schools, and private tutoring. In ASEAN+6 countries, most basic education is publicly provided through government or public schools (Table 9). However, this does not mean that the private sector (including families and communities) has no role; in fact, the private sector plays a significant role in many countries.

Table 9: Percentage of Students Enrolled in Privately Managed Schools, Selected ASEAN+6 Countries

Country	Primary	Lower secondary	Upper secondary
Cambodia	1.2	2.8	4.9
China	4.2	7.2	11.5
Indonesia	16.1	37.2	51.4
Japan	1.1	7.1	30.8
Republic of Korea	1.3	18.3	46.5
Lao PDR	2.9	2.3	1.3
Malaysia	1.2	4.1	3.9
Philippines	8.2	19.3	25.4
Thailand	18.0	12.4	24.3
Viet Nam	…	1.2	29.7

Source: UNESCO Bangkok (2012b).

In most countries, private (household) expenditure on education is substantial and stable. Private expenditure on education includes: school tuition, textbooks, uniform, school running fees, and private tutoring. Accurate data on private expenditure on education is difficult to collect and is not readily available. However, existing information suggests that households bear a significant share of education costs (Table 10). Households in most of the ASEAN+6 countries where comparable data is available spend as high as 3 percent of their GDP on education.

Table 10: Total Expenditure on Education as a Percentage of GDP, Private Sources, All Levels

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Australia	1.4	1.4	1.5	1.5	1.7	1.6	1.6	1.6	1.6	1.6	…
Japan	1.2	1.2	1.2	1.3	1.2	1.5	1.7	1.7	1.7	…	1.7
Lao PDR	…	…	…	…	1.1	1.2	…	…	…	…	…
New Zealand	…	…	…	…	1.1	1.3	1.4	1.3	1.1	1.1	1.3
Philippines	2.5	2.1	2.0	1.9	…	…	…	…	…	…	…
Republic of Korea	…	3.0	2.8	2.8	2.7	3.1	2.8	3.0	3.1	3.2	
Thailand	0.2	0.2	…	…	1.9	…	…	…	…	…	…
India	0.2	1.6	…	1.3	1.2	1.2	…	…	…	…	…

Source: UIS (2012).

While the share of private expenditure tends to be lower at the basic and secondary education level compared to the tertiary education level, there is an upward trend in private expenditure at the basic and secondary education level. On the other hand, private expenditure is the major source of funding for tertiary education in many countries (Table 11), which has contributed to considerable expansion of tertiary education.

Table 11: Private Education Expenditure as a Percentage of Total Education Expenditure in Selected Asian Countries

Country	2000		2001		2002		2003	
	Prim & Sec	Tertiary	Prim & Sec	Tertiary	Prim & Sec	Tertiary	Prim & Sec	Tertiary
Australia	15.2	48.1	15.6	48.7	16.1	51.3	16.3	52.0
India	6.4	...	6.3	...	29.3	22.2	...	...
Indonesia	23.5	56.2	23.7	56.2	23.8	56.2	...	...
Japan	8.3	55.1	8.5	56.9	8.3	58.5	8.7	60.3
Republic of Korea	18.3	75.6	22.8	84.1	...	85.1	...	76.8
Philippines	32.1	65.6	33.2	66.9	...	...	...	...
Thailand	...	19.6	...	17.5	...	...	...	...

Source: The World Bank (2012).

Private tutoring, while providing students with additional academic support, may also be costly to households and may also widen academic and socioeconomic divide between families and communities. Private tutoring, particularly prevalent in East Asian countries, has become a global issue. Bray and Lykins (2012) provide a comprehensive literature review of what is termed "shadow education" (Bray, 2009) in Asia, mapping the current status of the issue in the region. Despite the differences in foci and methodologies of the studies cited, the findings suggest that enrolment in private tutoring is increasing and so is the families' financial burden. This trend extends to most of ASEAN+6 countries.

The reasons for receiving private tutoring vary, but the competitive nature of the education process and a lack of trust in quality of formal education are undeniably root causes. Bray (2009) recommends that an appropriate diagnosis (both quantitative and qualitative) is crucial for developing effective policy responses to shadow education. Once evidence is collected, the governments can focus their interventions on supply issues (e.g., teachers providing private tutoring), demand issues (e.g., competitive nature of examinations, limited transition to higher levels of education), as well as harnessing the existing private tutoring market (e.g., professionalization of private tutors).

2.1.5 Teacher management policy

Teacher qualifications and length of pre-service training

At the primary and secondary education levels, entrance to teacher training colleges requires graduation from the 12th grade in most ASEAN+6 countries, except in Brunei Darussalam, India, Lao PDR and Myanmar, where students are qualified upon graduation from the 10th or 11th grade (Figure 6).

Figure 6: Total Number of Years of Schooling Required for Entry to Teacher Training
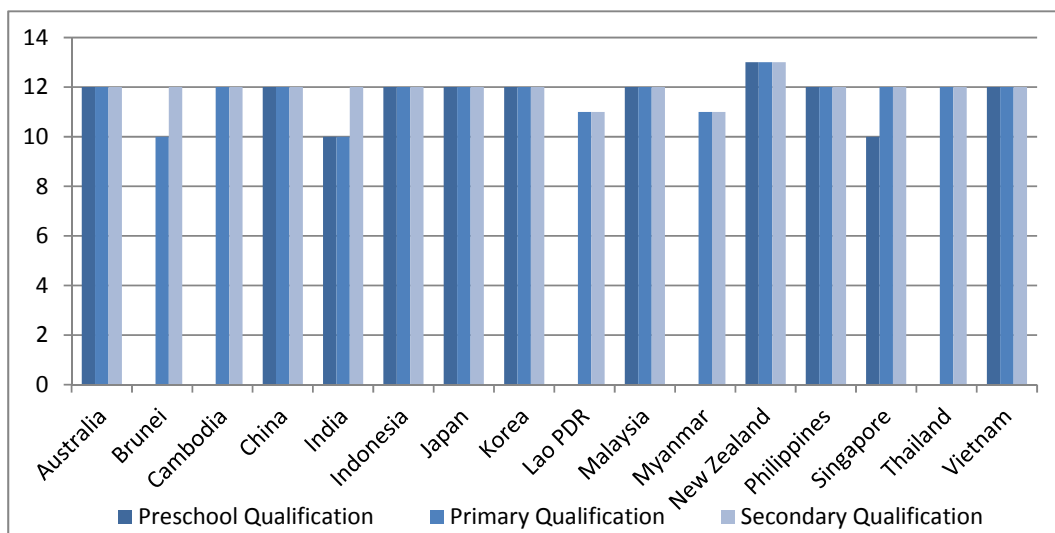
Source: Data collected by UNESCO Bangkok staff.

This lower level requirement coupled with the shorter duration of the teacher-training course (two years for primary school teachers and three to four years for secondary school teachers) in these countries could negatively impact upon the quality of teaching.

In some countries, the duration of pre-service training is four years and the entrance requirement is completion of Grade 12, which means that these teachers are likely better qualified to teach and to achieve better learning outcomes for their students. These countries include Singapore, Japan and the Republic of Korea, which consistently rank significantly above the OECD average in PISA rankings (OECD, 2009).

Teacher standards

At the point of data collection for this report, information on teacher standards was lacking in Cambodia, Lao PDR, Myanmar, Viet Nam and India. Among the remaining eleven countries, only four countries (China, Indonesia, Japan and the Republic of Korea) hold national entrance examinations for teachers, while five countries (Australia, Indonesia, New Zealand, Philippines and Thailand) make it mandatory for teacher licenses to be renewed. It is also noted that most countries have a minimum teacher standard enforced either through teacher entrance examinations or regular licensure renewal. In the majority of ASEAN+6 countries, a probationary period of one to three years has also been implemented.

Teacher professional support

On-going professional support is most important for new teachers in their first few years of service and is important for teacher retention in the education system. Professional support may include study opportunities for teachers, training workshops, support from in-service advisors and inspectors, inter-school visits, and peer consultation in teacher clusters. At a recent KEDI-UNESCO regional policy seminar[15], Cambodia, Lao PDR, Malaysia, Republic of

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[15] The joint KEDI-UNESCO Bangkok regional policy seminar "Towards Quality Learning for All in Asia and the Pacific" (Seoul, 28-30 July 2011) is viewable here: http://www.unescobkk.org/education/epr/epr-partnerships/unesco-kedi-seminar-2011/

Korea and Viet Nam reported implementing classroom observation as part of their teacher development and management policies. According to practitioners, teacher training and support within the first five years of teaching in the teachers' own classroom environment is one of the more effective strategies to foster professional growth. Moreover, in their first five years of teaching, teachers benefit from each year of additional practice as there seems to be a correlation between years of experience and improved student learning outcomes.

As indicated in Table 12, policies for in-service training and continuous professional development of teachers exist in most ASEAN+6 countries at all levels, except for Lao PDR, where training sessions for secondary school teachers are organized on an ad-hoc basis in the context of donor projects. In-service teacher upgrading centres are located in different provinces, but currently institutionalized only for primary school teachers (IBE, 2011).

In Australia, since most teachers are college graduates, professional development opportunities occur through postgraduate courses, and are usually taken part-time. In Singapore, a Staff Training Branch was established specifically to facilitate teachers' professional development through the sharing of best practices, learning circles, action research and publications. A network of teachers has also been set up to plan and organize teacher-led workshops, seminars, conferences and learning circles as well as developing and managing on-line programmes in addition to teacher welfare programmes and services. In Malaysia, in-service programmes are mainly 'refresher' courses. They range from two- to three-day courses to six weeks, ten weeks and fourteen weeks.

While professional development opportunities have been institutionalized in the high-performing education systems, and while they are carried out in a relatively consistent fashion, others take place under less formal arrangements.

In Cambodia, for example, community teachers have in-service training for 16 days provided by the Department of Early Childhood Education in the provinces, and literacy teachers for parenting programmes receive in-service training for three days twice a year. In Viet Nam, in-service training for secondary teachers follows the cascade-training mode. Here, teachers are required to participate in in-service training 30 days out of the year. Some countries have also established systems for the training of untrained teachers. In Malaysia, the three-year Diploma in teaching in-service course is conducted during the school holidays. This course is specially designed to cater to the many untrained teachers who have been teaching in Malaysian schools for several years and have missed out on mainstream teacher training. Based on a SEAMEO-Innotech study (2010) on teacher rewards and incentives in Southeast Asia, Lao PDR, Malaysia, Myanmar and Singapore are the only remaining countries in Southeast Asia that do not provide scholarships as a form of training development for teachers (Table 12 below).

Table 12: Overview of Teacher Management Policies

Country	Qualifications (Minimum years of study) / Years in School + Years in Teacher Training			Teacher Standards			In service training	Teacher Salary and Other Benefits	
	Preschool	Primary	Secondary	Entrance Examination/Test	Probationary Period	Licensure Renewal/ Sustaining		Pay/ Salary Increase	Evaluation and Rewards (i)
Australia	12 + 4			No	Yes	Yes; 5 years	Yes	-	No
Brunei Darussalam	-	10 + 3	12 + 4	No	No	No	Yes	No	-
Cambodia	-	12 + 1	LS: 12 + 2 US: 12 + 4	-	-	-	Yes	Yes	-
China	12	12	LS: 12 + 2 US: 12 + 4	Yes	No	No	Yes	No	Yes
India	10 + 1	10 + 1 or 12 + 1 (ii)	12 + 4	-	-	-	Yes	Yes	-
Indonesia	12 + 2	12 + 2	12 + 2	Yes	Yes	Yes	Yes	Yes	Yes
Japan	12 + 1		12 + 4	Yes	Yes	No	Yes	Yes	Yes
Republic of Korea	12 + 2	12 + 4		Yes	No	No	Yes	-	Yes
Lao PDR	-	5(+4); 8(+3); 11(+1)	LS: 11 (+3) US: 11 + 4	-	-	-	Yes	Yes	-
Malaysia	12+3 or 4			No	Yes	No	Yes	Yes	Yes
Myanmar	-	11 + 2	11 + 3	-	-	-	Yes	Yes	-
New Zealand	13 + 3		13 + 4	No	Yes	Yes; 2 years	Yes	Yes	Yes
Philippines	12 + 4			No	No	Yes; 1 year	Yes	Yes	-
Singapore	10 + 2	12 + 2		No	Yes	No	Yes	Yes	Yes
Thailand	-	12 + 2	LS: 12 + 2 US: 12 + 4	No	Yes	Yes; 5 years	Yes	Yes	-
Viet Nam	12		LS: 12 + 3 US: 12 + 4	-	-	-	Yes	Yes	-

Notes: i: measures for evaluation and rewards in place; ii: varies across states depending on the degree of teacher shortage.
Source: Information collected by UNESCO Bangkok staff.

Teacher salary, incentives, and benefits

Almost all countries have in place a system for salary increases. For some countries, the salary increase is based on the evaluation of a teacher's performance, while in some others it is based on a teacher's qualifications. In Singapore, New Zealand and China, salary increments are determined, to varying extents, by performance and whether or not established professional standards are met. In Singapore, formal and informal evaluation is on-going at all school levels and salary increase is rewarded through the Ministry of Education's Enhanced Performance Management System (EPMS) (IBE 2011)

Table 13: Teacher Rewards and Incentives in Southeast Asia

Rewards/Incentives	Salary Increase	Certificate of Recognition	Scholarships/ Training	Promotion
Brunei Darussalam	Yes	Yes	Yes	Yes
Cambodia	Yes	Yes	Yes	Yes
Indonesia	Yes	Yes	Yes	Yes
Lao PDR	Yes	Yes	No	Yes
Malaysia	Yes	Yes	No	Yes
Myanmar	Yes	Yes	No	No
Philippines	Yes	Yes	Yes	Yes
Singapore	Yes	Yes	No	Yes
Thailand	Yes	Yes	Yes	Yes
Viet Nam	Yes	Yes	Yes	Yes

Source: Adapted from SEAMEO-Innotech (2010).

The SEAMEO-Innotech study reveals that all ASEAN countries are doing well in recognizing the efforts of teachers and rewarding high-performing teachers. However, fewer countries implement the use of incentives such as scholarships and training for further professional development.

2.1.6 Quality determinants

Frequency of curriculum reform

Table 14 presents a summary of the number of curriculum reforms carried out in selected ASEAN+6 countries since 1950. Except for the Republic of Korea and Indonesia, most countries have only carried out curriculum reforms since the 1980s. Of the 13 countries for which data is available, curriculum reforms mostly occurred in the two periods of 1995-99 and 2005-09. The average number of curriculum reforms in these countries is 3.5 for the same period.

Table 14: Frequency of Curriculum Reform

Time Period	50-'54	55-'59	60-'64	65-'69	70-'74	75-'79	80-'84	85-'89	90-'94	95-'99	00-'04	05-'09	10-current	Number of reforms
Australia									✓	✓	✓	✓		4
Brunei Darussalam												✓		1
China									✓	✓	✓	✓		4
India								✓				✓	✓	3
Indonesia			✓			✓	✓			✓		✓		5
Japan									✓	✓	✓	✓	✓	5
Republic of Korea	✓		✓		✓		✓	✓	✓	✓		✓		8
Lao PDR												✓		1
Malaysia							✓			✓			✓	3
Myanmar										✓				1
New Zealand									✓			✓		2
Philippines							✓			✓			✓	3
Singapore									✓	✓	✓	✓	✓	5

Source: Data collected by UNESCO Bangkok staff.

Problems of educational quality and relevance manifest themselves in different ways in the ASEAN+6 countries. In general, education systems have been trying to address such problems by means of introducing changes in the curriculum and its delivery. This in part can be observed when one looks at the purpose of curriculum reform in selected ASEAN+6 countries (Table 15) which tends to reflect changes in educational views and orientations; curricular content, teaching approaches and pedagogies; as well as other necessary changes in curriculum planning and implementation processes and in educational management and administration. It is clear that the task of pursuing meaningful curriculum reform is a complex undertaking made even more so by today's rapidly changing environment, context, aspirations and expectations.

Table 15: Education Curriculum Reform Milestones

Country	Milestones
China	**1993:** syllabi and twenty-four curricula for nine-year compulsory programme **1998:** adjustment of primary and secondary school curriculum contents; reducing the overload and subject difficulty; enabling locally relevant selection of teaching materials **2001:** implementation of curriculum standards for basic education; emphasizing innovation and creative thinking
India	**1988:** National Curriculum Framework for Elementary and Secondary Education **2000:** National Curriculum Framework; emphasizing minimum levels of learning, values, ICT, management and accountability, continuous comprehensive evaluation in cognitive, social and value dimensions.

Country	Milestones
	2005: shift in examination system from content-based testing to problem-solving and competency based assessment; states encouraged to renew their own curriculum in light of the national curriculum framework
Indonesia	Curriculum reform: **1960s, 1975, 1984, 1999, 2006** **1999**: development of a national competency based curriculum allowing both unity and diversity; addressing overload and overly rigid curricula **2006:** application of school based curriculum
Lao PDR	**2007:** in response to expanded duration of lower secondary education by one year
Malaysia	**1983, 1995, 1999:** content and outcome based curriculum; use of activity based and student centred pedagogy approaches; promoting critical and creative thinking skills **2008:** trial implementation of new modular and thematic curriculum and school based assessment **2011:** implementation of the standard curriculum for primary school (SSR) in Stage/Phase I (grades 1-3) building on the Integrated Curriculum for Primary School (KBSR) introduced in the late 1990s.
New Zealand	**1992:** Outcomes focused curriculum **2007:** New Zealand Curriculum (NZC) consisting of a framework of key competencies integrating essential skills, knowledge, attitudes, and values.
Republic of Korea	Main curriculum revisions: **1954-1995, 1963, 1973-1974, 1981, 1987-1988, 1992-1995, and 1997-1998** Partial revisions: **2006, 2007 and 2009** (introduced from October 2003 to respond to rapid social changes).
Philippines	**1982:** Implementation of New Elementary School Curriculum **1999:** Decongesting the curriculum, leading to separate curriculum for elementary and secondary levels **2005/6:** Implementation of Standard Curriculum for Elementary Public Schools and Private Madaris

Source: Information collected by UNESCO Bangkok staff.

Quality assurance system

There are generally three primary modes of quality assurance: assessment, audit and accreditation. Their distinctions are not always clear and when used concurrently, their functions may sometimes overlap. Further, within these modes, additional quality assurance activities are practiced such as ranking, benchmarking, the use of performance indicators and testing/examinations.

Assessment, audit and accreditation are all seen operating in the ASEAN+6 countries. The bodies overseeing these tasks vary greatly, however, depending on the country context (Table 16). Some countries (for example Australia, India, New Zealand) have different agencies for different levels of education while others have a central agency overseeing all of these tasks (Lao PRD, Thailand, Viet Nam).

Table 16: Overview of National Accrediting and Quality Assurance Body in ASEAN+6 Countries

Country	Name of Accrediting Body by Sector
Australia	National Quality Framework for Early Childhood Education and Care - ECCE
	Australian Curriculum, Assessment and Reporting Authority - K12
	Australian Universities Quality Agency - HE
	Tertiary Education Quality and Standards Agency - HE
Brunei Darussalam	National Accreditation Council - All
	Technical and Vocational Education Council - TVET
Cambodia	Accreditation Committee of Cambodia - HE
China	Centralized and Decentralized Quality Assurance Bodies - HE
India	National Council of Teacher Education - ECCE
	National Board of Accreditation - TVET
	National Accreditation Assessment Council - HE
Indonesia	National Board of School Accreditation (BAN) - Formal, non-formal, HE
	National Accreditation Board for Higher Education (BAN-PT) - HE
Japan	Employment and Human Resource Development - TVET
	National Institution for Academic Degrees and University Evaluation (Governmental) - HE
	Japan University Accreditation Association (Non-governmental) - HE
Republic of Korea	Accreditation Board for Engineering Education of Republic of Korea (ABEEK) - TVET
	The Republic of Korean Council for University Education - HE
Lao PDR	Educational Standards and Quality Assurance Center - All
Malaysia	Standard for Quality Education in Malaysia (SQEMS) - All
	National Accreditation Board (LAN) -All
Myanmar	Department of Technical and Vocational Education (MOST) - TVET
New Zealand	Education (Playgroups) Regulations - ECCE
	New Zealand Qualifications Authority - All
	Education Review Office - ECCE, BE
Philippines	National Educational Testing and Research Centre - All
	Technical Education - TVET
	Federation of Accrediting Agencies of the Philippines - HE
	Accrediting Agency of Chartered Colleges and Universities in the Philippines - HE
	Philippines Accrediting Association of Schools, Colleges and Universities - HE
Singapore	Preschool Accreditation Framework (SPARK) - ECCE
	Institute of Technical Education - TVET
Thailand	Office for the National Standards and Quality Assessment - All
Viet Nam	General Department for Educational Testing and Accreditation (GDETA) - All

Source: Information collected by UNESCO Bangkok staff.

Learning/teaching hours

The strong association between learning time and student academic performance is widely acknowledged in academic literature (OECD, 2011a). While learning may occur in myriad ways, the amount of time students spent on activities specifically geared toward "deliberative learning" is important to examine. This includes the amount of time, per week, that students spend in regular school classes, out-of-school-time lessons and individual study or homework. A study by the OECD on the relationship between time spent in deliberate learning activities and student performance in school (OECD, 2011) shows that the number of hours spent on learning only partly influences student academic performance but the quality of learning time is just as, if not more, important than the quantity. This is shown in Table 17 below.

While the PISA scores for Japan, the Republic of Korea and Hong Kong SAR are not, relatively speaking, too dissimilar, the total learning time of students in the Republic of Korea and Hong Kong SAR is 5 hours more than that of Japan whereas the relative learning time in regular lessons in Japan is highest among those three countries at 74.5 percent. This suggests that students in Japan have received better quality of learning in regular school lessons and thus, have arguably learnt more efficiently and effectively. This also suggests that the quality of regular school lessons play a more significant role than out-of-school learning time and even individual study. Of the ASEAN+6 countries for which data is available, relative learning time spent on regular school lessons appears to be higher in countries with higher student learning achievement such as Japan, New Zealand, Australia and Republic of Korea.

Table 17: Student Learning Time*, Selected Education Systems

Country	Regular lessons	Out-of-school-time lessons	Individual study	Total learning	Relative learning time in regular school lessons
	(hours per week)				
Australia	11.40	1.76	4.67	17.83	66.5%
Hong Kong SAR	13.57	3.08	5.33	21.98	64.1%
Indonesia	10.98	3.66	5.58	20.22	56.0%
Japan	10.75	1.40	3.11	15.25	74.5%
New Zealand	12.84	1.74	4.42	19.00	69.7%
Republic of Korea	12.76	4.74	4.93	22.43	61.4%
Thailand	10.69	2.40	5.31	18.40	62.3%

Notes: *Learning time is calculated as the average number of hours a student spent per week in regular lessons of science, mathematics and language subjects.
Source: OECD (2011a).

The length of learning time spent on regular school lessons also reflects the time teachers spend on teaching in the classroom. Not surprisingly, the more effectively teachers spend teaching time, the greater the quality of teaching. Table 18 shows the average number of teaching hours per week in selected ASEAN+6 countries. In Shanghai, teachers teach larger, but fewer classes compared to most other systems for which data is available.[16] Teachers in Shanghai spend a significant amount of non-teaching time on other activities known to have a large impact on student learning including preparing for lessons, teacher cooperation, classroom observation and providing feedback (Grattan Institute, 2012). By contrast, Australian teachers have only half as much time for such activities.

Table 18: Average Teaching Time (Hours per Week)

Country	Average teaching hours (a)	Class size (b)
Australia	20	23
Hong Kong, SAR China	17†	36†
Republic of Korea	15	35
Shanghai, China	10-12*	40*
Singapore	-	35
OECD Average	**18**	**24**

Notes: (a) Public schools only. 'Teaching hours' are hours that a teacher teaches a group or class of students; (b) Public schools only, lower secondary education
*Grattan Institute interview with Shanghai Municipal Education Commission, 2011; † Hong Kong Education Bureau (secondary)
Source: OECD. (2011b) and Grattan Institute (2012).

Language in education policies

The role of English as an international language and the official language of ASEAN, influences significantly language policy and language education in ASEAN+6 countries. This includes in the relationship between English and the respective national languages of ASEAN and the choice of language for instruction. Table 19 provides an overview of language in education policies in relation to official/national languages and stipulation of languages in education in legal documents. As shown, most ASEAN+6 countries stipulate languages in education in their respective education laws and allow the use of national dominant languages as the medium of instruction. While the colonial histories of Brunei Darussalam, Malaysia, Myanmar and Singapore have led to the inherited and institutional role of English in school curriculum, other countries (such as Cambodia, Indonesia, Lao PDR, Thailand and Viet Nam) also place importance on the acquisition of English through the curriculum.

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[16] In Shanghai, teachers teach classes of up to 40 students for 10-12 hours each week.

Table 19: Language Policies

Country	Official / National language(s) (OL/NL)	OL/NL stipulated in the Constitution (Year of adoption)	Use of NDLs stipulated in the Constitution	Language(s) in education			Use of NDLs as media of instruction allowed/legal?
				Stipulated in the Constitution or Language Act	Stipulated in Education Laws/Acts	Stipulated in other important education documents	
Australia	English		No	No	English, Languages (Other Than English)	Yes	Yes
Brunei Darussalam	Standard Malay, English	Malay (1959 C) English (1985 EA)	No	-	Malay, English (1984 EP); Arabic (EP)	-	No
Cambodia	Khmer	Yes (1983)	No	-	Khmer, LLs (2007 EL)	-	Yes
Indonesia	Indonesian	Yes (1945); (amended 1999, 2000, 2001, 2002)	Yes, (LL, Article 32)	Yes, LA in progress	Indonesian, LLs, FLs (1954 EL 12; 1989 EL2; 2003 EL20)	Yes	Yes
Japan	Japanese	No	No	No	No	Yes	Yes
ROK	Korean	No	No	No	No	Yes	Yes
Lao PDR	Lao	Yes (1991)	No	No	Lao (2000 EL)	-	Yes
Malaysia	Malay	Yes (1957, article 152)	Yes,	No	Malay, Chinese, Tamil, ILs (1996 EA)	No	Yes
Myanmar	Myanmar/ Burmese	Yes (1974) Yes (2008, Ch.XV-2)	Yes (1974) Yes (LL, 2008)	Yes (1974) Burmese, LLs No (2008)	-	-	Yes
New Zealand	English	No	Yes (Treaty)	Yes (Maori, 1987)	Yes	-	Yes
Philippines	Filipino, English	Filipino (1987)	Yes (LL)	Yes (1987), English, Filipino (OL)	English, Filipino (OL), Arabic (1987)	English, Filipino (OL), Arabic, other LLs	Yes
Singapore	Malay (NL) English, Chinese, Tamil	Yes (1965, Part XIII, Section 153A)	Yes	Yes (C, 1965)	N.A	English (as working language), other OLs	Yes
Thailand	Thai	No (1997) No (2007)	No (1997) No (2007)	No	No	Yes	Yes
Viet Nam	Vietnamese	No (1992)*	Yes (1992)	Yes, Vietnamese, LLs	Vietnamese, LLs (2005, EL, Article 7)	Vietnamese, LLs (several documents)	Yes

Notes: LL: Local language; NDL: Non dominant language; RL: Regional language; FL: Foreign language; IL: Indigenous language; NL: national language; OL: Official language; LoI: Language of Instruction; Aux: Auxiliary language; C: Constitution; EA: Education Act; EL: Education Law; EP: Education Policy; LA: Language Act

*: Earlier Constitution, however, stipulate Vietnamese as the official language

Source: SEAMEO (2009); additional data is collected by UNESCO staff from different sources.

2.1.7 Conclusion

Reflecting on the great diversity of the Asia-Pacific region and the legislations, policies and education management systems in place, it is clear that great variation occurs across ASEAN+6 countries. Despite this, some common trends can also be identified:

(i)   *Expansion of compulsory education to include at least lower secondary education*
Many of the ASEAN+6 countries have achieved or have almost achieved universal primary education while compulsory education now also commonly covers secondary education, at least at the lower secondary level. This is the case for all high-income countries and most middle-income countries. And as access to education continues to improve in lower-income countries, this trend is set to continue. This of course requires careful planning of resources so as to ensure countries can expand access to education without compromising the quality of the education provided.

(ii)   *Shift to more decentralized management*
Most countries reviewed are moving toward a more decentralized system of education management. This includes transference of some of the key education responsibilities (e.g., teacher management, curriculum development, and financing) to lower levels of administration. Responsibility for standard setting is centralized in all countries, while high performing education systems tend to give more management responsibilities to the subnational level. Teacher management also seems rather centralized in most countries, regardless of how advanced the education system may be. Some countries apply flexibility at local or even school level, yet with central government control and regulations. Given the varied impacts of decentralization, careful consideration of system capacity is needed before embarking upon decentralization reform.

(iii) *Considerable private expenditure on education, including shadow education*
Strong commitment to education is common across ASEAN+6 countries, including from families willing their children succeed academically. While governments can rely on households to contribute financially where government funding falls short, this may also have serious implications for equity. It is important that governments work to ensure that students from poor households can also enjoy the same learning opportunities as their peers from more affluent families. Experiences of both successful and unsuccessful targeted pro-poor policies provide useful lessons that may help inform policy making in the future.

(iv)   *Financing is important, but not the only factor behind educational performance*
Government expenditure on education varies significantly across countries under review: 8.5 percent in Brunei Darussalam vs. 22.3 percent in Thailand (2010) as a percentage of total budget and 2.7 percent in Cambodia vs. 7.6 percent in New Zealand as a percentage of GNP. High performing systems appear to spend more on education as a percentage of GNP (rather than as a percentage of government total expenditure), but also have sound policies in place concerning teacher quality and remuneration, the frequency of curriculum updates/reform, quality assurance systems, quantity and quality of teaching and learning time and language of instruction.

(v)   *Larger class size with teachers teaching less hours in high-performing countries*
While large class sizes may have traditionally been an indicator of poor quality education, large class sizes in Asian countries performing well in PISA may lead us to question this assumption. Instead, their examples demonstrate that it is perhaps more important that teachers spend sufficient time on preparation, collaboration, and reflection, areas which have a proven impact on learning. These findings are relatively new and are not conclusive. Further research is needed to support countries to determine the best balance between class size and teaching loads.

(vi) *Curriculum reforms promoting non-cognitive and higher-order skills, as much as academic contents*
Overloaded curriculum and a heavy focus on academic knowledge have been features of many ASEAN+6 countries and various curriculum reforms have been carried out to promote the acquisition of non-cognitive and higher-order skills or transversal competencies such as innovation, creativity and communication. This is particularly the case for high income and high-performing PISA countries but is also the case for middle-income countries. While this trend is expected to continue, some countries face challenges in integrating what may be termed 'transversal competencies' or 'non-cognitive skills' in curriculum pedagogy and assessment. To this end, it will be necessary to compile country experiences and draw lessons.

(vii)   *Improving teacher performance through result-based evaluation for teachers*
Efforts to improve teacher performance have been made in some ASEAN+6 countries. One particular trend involves linking teacher salaries to performance vis-à-vis pre-determined standards. As public funding continues to come under pressure in a time of economic downturn, this trend is expected to not only continue but also expand to other countries in the region. Further research on the implementation of existing policies will be useful for those countries planning to introduce similar reforms.

(viii) The centrality of English presents important implications for language policy
Given its status as the official language of ASEAN, English in the classroom has been on the increase in many ASEAN member countries. This presents important implications for language policy and language education, including the choice of English as a foreign or second language, the choice of language for instruction, teaching curriculum and the stipulation through policy of languages in education. Nearly all countries reviewed allow the use of Non-Dominant Languages (NDL) as mediums of instruction (except Brunei Darussalam), however not all countries explicitly mention NDLs in their Constitution.

2.2 Secondary Education

2.2.1 Introduction

As many countries have achieved or are achieving universalization of primary education, the expansion of secondary education has naturally become a policy priority. Yet secondary education across countries is both uniform and diverse, it is terminal and preparatory, compulsory in some cases and post-compulsory. It is thus understandably an area of "policy paradox" (WB, 2005, p.14). Many countries are facing challenges in designing and implementing needed policies for secondary education in a number of key areas. The most pertinent areas and those which have sparked the greatest focus include: 1) different systems

in terms of pathways to secondary education (including both formal and non-formal/alternative pathways), 2) relevance and content of curricula at both lower and upper secondary levels, 3) teachers, including their qualifications, recruitment and remuneration, and 4) issues surrounding learning assessment. The following section offers a comparative analysis of these central issues.

2.2.2 Formal pathways to education

Across ASEAN+6 countries, there are various pathways to secondary education offered. In Singapore, students in the top 10 percent of the primary school leaving exam can attend a special course for secondary school. Other students take either the express course or normal course depending on their academic achievement. Similarly, in Brunei Darussalam, different tracks exist for more-academically and less-academically inclined students. In Japan, secondary school students can choose to attend full-time, part-time, or correspondence courses. In Malaysia, students from Chinese- and Tamil-medium primary schools who do not demonstrate sufficient mastery of the *Bahasa Melayu* language are required to take one extra year in a transition class before entering lower secondary school in order to acquire proficiency, since this is the medium of instruction in secondary schools (IBE, 2011).

In addition to general education, many ASEAN+6 countries also offer students the option of attending technical and/or vocational schools. However, each country has different requirements determining admission to these schools. In the majority of countries, students are required to complete lower secondary schooling before enrolling in technical or vocational programmes. A smaller number of countries allow students to enrol in technical or vocational programmes directly after completing primary school. In Indonesia and Malaysia, students who wish to enrol at the upper secondary level have the option of enrolling in religious (Islamic) schools in addition to general or technical/vocational schools (IBE, 2011).

Table 20: Country Requirements for Entering a Technical or Vocational Programme

Completion of Primary School	China, Lao PDR, Philippines, Singapore
Completion of Lower Secondary School	Australia, Brunei Darussalam, Cambodia, India, Indonesia, Japan, Myanmar, New Zealand, Philippines, Republic of Korea, Thailand, Viet Nam

Source: IBE (2011).

Alternative (non-formal) pathways to education

In order to extend education to all children, many countries in the ASEAN+6 group have made attempts to improve and expand the alternative education system. Alternative education, or non-formal education, provides other avenues for those who may be excluded from the formal school system on the basis of gender, ethnicity, poverty, geographical location, or for other reasons. Alternative education has been recognized as an important step in providing access to education for all, assisting in the efforts to reach the EFA goals by 2015. Various types of alternative education exist in the ASEAN+6 countries, including Equivalency Programmes (EPs) and Community Learning Centres (CLCs) (Table 21).

Table 21: Alternative Pathways to Education, Selected Countries

	Duration		Core subjects	Certification
	Formal	**Alter-native**		
Cambodia (Accelerated Learning Programme)	6	3	National curriculum	NA
India (Open Basic Education Programme)	5	Up to 5	Academic and vocational subjects	Completion of examination by National Institute of Open Schooling (NIOS) (2 times/year) Certificate equivalent to Formal Education
Indonesia (Packet A)	6	2	1. Morale-building and academically oriented subjects, 2. Life skills oriented subjects	Examination Certificate issued by the Government
Myanmar (Non-Formal Primary Education)	5	2	Burmese, English, Mathematics, and General Studies	Assess attendance and achievement tests Certificate issued by MOE
Philippines (ALS)	6	10 months or 800 hours	1. Communication skills, 2. Problem-solving and critical thinking 3. Sustainable use of resources/ productivity 4. Development of self and a sense of community 5. Expanding one's world vision	National accreditation

Source: Information collected by UNESCO Bangkok staff.

Table 22: Key Milestones in Alternative Secondary Education in Selected Countries

India	Since 2002, the Government has recognized the Open Basic Programme (OBE). OBE graduates qualify for entry into higher education and employment.
Indonesia	In 1970, government began promoting equivalency education. The Act of the Republic of Indonesia No. 20 in 2003 supported reform in non-formal education.
Myanmar	The Education for All National Action Plan, adopted in 2003, highlights the need to expand non-formal education programmes to achieve basic quality education for all citizens.
Philippines	In 1977, the Government institutionalized non-formal education.
Thailand	Equivalency programmes began in 1940. The National Education Act, Article 10 in 1999, stated that all people shall have equal rights to education, re-confirming the country's commitment to alternative education.

Sources: UNESCO (2006), UNESCO (2010a), UNESCO (2012c), and Myanmar Ministry of Education (2012).

Table 23 illustrates various challenges to improving alternative education in the region.

Table 23: Major Challenges to Alternative Education in Selected Countries

Country	Limited staff capacity	Under-funding	Low public awareness	Shortage of class materials	Problems in monitoring/ evaluation	Lack of relevant/ quality learning	Not reaching marginalized communities
Cambodia	✓	✓	✓		✓		✓
India		✓	✓			✓	
Indonesia	✓		✓		✓	✓	
Lao PDR	✓	✓	✓	✓	✓		
Myanmar	✓	✓	✓		✓		
Philippines		✓	✓	✓			
Thailand	✓			✓	✓	✓	✓
Viet Nam	✓	✓		✓	✓	✓	✓

Sources: Philippines Ministry of Education (2008), UNESCO (2006), UNESCO (2010a), and UNESCO (2011a).

2.2.3 Curriculum at the secondary level

Relevance of curriculum

A relevant curriculum is a necessary pre-requisite for the provision of quality education at any level of education. Many governments, in their national curricula for secondary education, explicitly state that the curriculum should have relevance for students entering higher education or the labour market, by equipping their students with sufficient knowledge, life skills and/or practical skills. Table 24 below provides examples of curricular aims from selected countries. While governments generally aim to develop a curriculum that meets the needs of the country and its people, many do not have sufficient human and financial resources to make this a reality.

Table 24: Examples of Curricular Aims from Selected Countries

Australia	The Australian Curriculum will equip all young Australians with the essential skills, knowledge and capabilities to thrive and compete in a globalised world and information rich workplaces of the current century.
Brunei Darussalam	The new SPN 21 education plan takes into consideration key aspects of quality education for nation building and human capital development. It aims to achieve quality education through the provision of a balanced curriculum benchmarked against creditable quality assurance or assessment systems of international standards.
Cambodia	The aim of the school curriculum is to develop fully the talents and capacities of all students in order that they become able people, with parallel and balanced intellectual, spiritual, mental and physical growth and development.
China	The school curriculum serves the aims of basic education, as defined in the 2001 State Council Resolution on the Reform and Development of Basic Education: • Enabling the development of a new, well-educated, idealistic, moral and patriotic generation with a love for socialism, and who will inherit fine traditions of the Chinese nation • Develop an awareness of socialist democracy and law as well as respect for state laws and social norms • Develop appropriate world outlook, life outlook and values • Develop a sense of social responsibility • Develop an innovative spirit, practical skills, a knowledgebase in sciences and humanities, and an awareness of environmental protection issues • Develop good physical health and psychological qualities, healthy aesthetical tastes and lifestyles.
Japan	In Japan, the standard nationwide curriculum known as the 'Course of Study', aims to strengthen the teaching of basic and fundamental contents and to develop education considering individual student needs and abilities.
New Zealand	The New Zealand Curriculum aims to contribute to all students having a strong foundation for learning, high levels of achievement, and a lifelong engagement in learning.
The Philippines	The secondary education curriculum aims to raise the quality of Filipino students and empower them for lifelong learning by attaining functional literacy.
Singapore	Singapore's national curriculum aims to nurture each child to his full potential, to discover his talents and to develop in him a passion for life-long learning. Students go through a broad range of experiences to develop the skills and values that they will need for life.

Source: Information collected by UNESCO Bangkok staff.

Regular review processes ensure that the national curriculum remains relevant in light of changes such as local developments and global trends. Countries that have scheduled review cycles include Japan, Singapore and Viet Nam. In Japan, 'Courses of Study' are reviewed every ten years or so. In Singapore, the curriculum planning and review process is six years, with a

mid-term review at the end of the third year, while in Viet Nam, the Government has plans to review the curriculum regularly every 5-10 years. For other countries, curriculum reviews appear to take place on an ad hoc basis, usually driven by external factors or emerging issues. While the perception of what a relevant curriculum actually entails may differ, feedback from institutes of higher education or employers who take in workers with secondary education qualifications can prove useful. For example, employers in Cambodia report that it is difficult to find professional staff with strong analytical and decision-making skills, while employers in Malaysia say that secondary graduates lack many "21st century skills" including communication skills, teamwork and English language skills.

Content of curriculum

While most countries have a detailed national curriculum framework specifying subjects to be studied, others only have a broad framework with general learning areas for districts / states to implement based on local needs and priorities. Of the countries with detailed national curriculum frameworks, only a few include a component for 'local content'. The inclusion of 'local content' within an otherwise structured framework allows for flexibility and customization for the teaching of relevant local knowledge/skills. These respective categories, and the countries that fall within them, are seen in Table 25 below.

Table 25: Contents of National Curriculum Framework

Countries with detailed national curriculum framework, without a 'local content' component	Brunei Darussalam Japan Lao PDR Malaysia Myanmar Republic of Korea Singapore Thailand Viet Nam
Countries with detailed national curriculum, including a 'local content' component	Cambodia China Indonesia Philippines
Countries with broad national curriculum frameworks*	Australia India New Zealand

Notes: *Districts / States are free to implement at their discretion based on guidelines
Source: IBE (2011).

In general, lower secondary education curriculum consolidates what has been learnt at the primary level while also introducing foundational content in preparation for upper secondary education. As such, most countries with detailed national curricula have a set of prescribed subjects for students at this level. Upper secondary education then focuses more heavily on preparing students for either the next level of education or for the workplace. At this stage, there is variation between countries regarding student choice in areas of study. This information is presented in Table 26 below.

Table 26: Availability of Option to Choose Subjects for Study at Lower and Secondary Levels

Country	Lower Secondary	Upper Secondary
Brunei Darussalam	Options available	Options available
Cambodia	Prescribed subjects only	Options available
China	Prescribed subjects only	Prescribed subjects only
Indonesia	Prescribed subjects only	Options available
Japan	Prescribed subjects only	Options available
Lao PDR	Prescribed subjects only	Prescribed subjects only
Malaysia	Prescribed subjects only	Options available
Myanmar	Prescribed subjects only	Options available
Philippines	Prescribed subjects only	Prescribed subjects only
Republic of Korea	Options available	Options available
Singapore	Prescribed subjects only	Options available
Thailand	Prescribed subjects only	Options available
Viet Nam	Prescribed subjects only	Prescribed subjects only

Source: IBE (2011).

The subjects taught at lower secondary in the countries studied are rather similar, with all countries covering at least two languages, mathematics, science, social science and physical education. Most countries have art/music, civics/moral education and technology, while only some include religious studies in their lower secondary curriculum. Table 27 below shows the general subject areas taught at the lower secondary level across the various countries.

Table 27: Mapping of Content Areas Taught at Lower Secondary Level

Country	1st Language	2nd Lang	Math	Science	Social Science	Physical Ed	Art / Music	Civics / Moral	Technology	Religion
Australia	English	✓	✓	✓	✓	✓	✓		✓	
Brunei Darussalam	Malay	✓	✓	✓	✓	✓		✓	✓	✓
Cambodia	Khmer	✓	✓	✓	✓	✓				
China	Chinese	✓	✓	✓	✓	✓	✓	✓	✓	
India	Various	✓	✓	✓	✓	✓	✓		✓	
Indonesia	Bahasa Indonesian	✓	✓	✓	✓	✓	✓	✓	✓	✓
Japan	Japanese	✓	✓	✓	✓	✓	✓	✓		
Lao PDR	Lao	✓	✓	✓	✓	✓	✓	✓	✓	
Malaysia	Malay	✓	✓	✓	✓	✓	✓			✓
Myanmar	Myanmar	✓	✓	✓	✓	✓	✓	✓		
New Zealand	English	✓	✓	✓	✓	✓	✓		✓	
Philippines	Tagalog	✓	✓	✓	✓	✓	✓	✓		
Republic of Korea	Korean	✓	✓	✓	✓	✓	✓	✓	✓	
Singapore	English	✓	✓	✓	✓	✓	✓	✓		
Thailand	Thai	✓	✓	✓	✓	✓	✓			✓
Viet Nam	Vietnamese	✓	✓	✓	✓	✓	✓	✓	✓	

Source: IBE (2011).

For upper secondary, the content of the curriculum differs greatly both among and within countries depending on the educational track and choices of students. Some countries stream their students according to academic ability (i.e. Brunei Darussalam and Singapore), while others provide electives to suit their students' needs. China, Japan and Republic of Korea have

a credit/unit system that allows greater flexibility for students who can exercise choice based on their strengths and interests.

2.2.4   Secondary teachers

Teacher qualifications

Concern about the quality of secondary teaching is common across all education systems, including high performing systems. But just as concern for quality teaching is natural, so too is the role of teachers undeniably critical. What remains difficult is defining and measuring the characteristics and contributions of a 'quality teacher' (Gannicott, 2009).

From a comparative perspective, it is interesting to examine the minimum qualifications required to become either a lower or upper secondary teacher in the selected countries. Eight countries in the ASEAN+6 group require only an ISCED[17] level 4 qualification in order to become a lower secondary teacher, as illustrated in Table 12 of this report. Eight countries, including OECD countries of the region, require a tertiary-level (ISCED 5) qualification, which in most cases is obtained through a four-year degree. The only exception is Lao PDR, which requires the same qualification for lower secondary teachers (11 years of formal schooling plus 3 years of pre-service teacher training).

In addition to formal schooling requirements and pre-service teacher training qualifications, it is interesting to note additional requirements needed before a secondary teacher can be considered qualified. This is all the more important given that teacher educational qualifications alone do not lead to improved student learning, despite the attempts of many countries in the region to increase educational requirements. For example, research by McKinsey and Co. (2007) highlights the importance of attracting the right applicants into teaching, including attracting the top cohort of secondary graduates into teaching and/or by limiting enrolment in teacher training to those with genuine aptitude or motivation to teach. The experiences of Japan, the Republic of Korea and Singapore are highly relevant. (See Table 28.)

Table 28: Additional Aspects of Teacher Qualification in Selected Countries

Japan	Prefectural education boards conduct a teacher appointment examination for certified teacher candidates every year. This examination includes written tests in general education subjects, professional subjects and teaching subjects as well as interviews, essay tests and practical tests in physical education, fine arts, foreign languages, etc. The boards appoint new teachers on the basis of their results in examinations as well as their performance at university and their social experience (Maruyama, H., 2011)
Republic of Korea	Candidates for secondary teaching positions must pass an employment examination (Kim, E., Kim, J. and Han, Y., 2009)

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[17] The International Standard Classification of Education is developed and updated by UNESCO to serve as an instrument for assembling, compiling and presenting statistics in education both within individual countries and internationally.

Singapore	Before being allowed to enrol in teachers' college, applicants must be in the top 30 percent of their age cohort academically (McKinsey and Co., 2007). Upon completion of the teacher training course, candidates for secondary level teaching positions are shortlisted for interview. Interviewers seek to learn more about their passion for teaching, their ability to communicate well with others, their creative and innovative spirit, confidence, leadership qualities and their potential to be a good role model (Tan and Wong, 2007).

Source: Information collected by UNESCO Bangkok staff.

Teacher recruitment

While there are many issues to consider in regard to the recruitment of secondary teachers, one key concern regards the level at which responsibility for recruitment is given. Most countries in the region have delegated this responsibility to the local (e.g. provincial, district or municipal) level, while some, including the Philippines have gone so far as to make this a function of schools. There are still a few countries in the region (Cambodia, China, Malaysia, Myanmar and Singapore) that maintain management of teacher recruitment at the central level. While there is no 'right' approach in the institutional arrangements for secondary teacher recruitment, governments may wish to note the trend towards decentralization in teacher recruitment and may learn from the experiences of other countries. A summary of where responsibility for secondary teacher recruitment lies in the region is given in Table 29 below.

Table 29: Level of Responsibility for Recruitment of Secondary Teachers

Central / national level	• *Cambodia* (Department of Teacher Training within the Ministry of Education, Youth and Sports' Directorate General of Higher Education) • *Malaysia* (Human Resources Department within the Ministry of Education) • *Myanmar* (Department of Education Planning and Training within the Ministry of Education) • *Singapore* (Human Resource Solutions and Capabilities Division, Ministry of Education)
Central / national or local level	• *China* (State Education Commission at the national level. Teachers recruited this way are considered civil servants. However, there is also a process of local recruitment for teachers paid by the local community.)
Local (e.g. provincial / district) level	• *Indonesia* (Educational District Offices) • *Japan* (Prefectural Boards of Education and Municipal Education Committees) • *Lao PDR* (Provincial Education Services) • *Republic of Korea* (Provincial and Municipal Offices of Education) • *Thailand* (Education Service Areas' Sub-commissions for Teachers and Educational Personnel) • *Viet Nam* (Personnel Divisions at district level for lower secondary education and provincial level for upper secondary education)

School level	• *Philippines* (School selection committees must forward applications to the Schools Division Offices' Selection Committees for preliminary evaluation of applications. Schools Division Offices also manage deployment and management.)
Local and/or school level	• *Australia* (via Independent Public Schools/School Selected policy)

Source: Information collected by UNESCO Bangkok staff.

Teacher remuneration

While a good salary is not necessarily the main motivation for prospective teachers, remuneration is an important factor in recruiting and retaining skilled personnel. Despite the difficulty in accurately estimating average teacher remuneration within countries and the challenge of making comparisons between countries, one suitable (though imperfect) measure involves expressing average teacher salaries as a proportion of GDP per capita. Such a measure allows us to compare teacher remuneration with average incomes in the country. Table 30 illustrates secondary teachers' average annual salaries at the different points in their career as a proportion of GDP per capita in selected ASEAN+6 countries.

Table 30: Secondary Teachers' Average Annual Salaries in Public Institutions in Select Asia-Pacific Countries as a Percentage of GDP Per Capita

Country	Year	Lower secondary teachers			Upper secondary teachers		
		Starting	After 15 years of experience	Top of scale	Starting	After 15 years of experience	Top of scale
Australia	2009	97	135	135	97	135	135
Cambodia	2003	64	77	86	91	77	123
Indonesia	2009	38	52	56	45	58	63
Japan	2009	80	140	178	80	140	182
Lao PDR	2002	53	58	65	54	59	…
Malaysia	2006	105	184	279	105	164	279
New Zealand	2009	70	135	135	70	135	135
Philippines	2009	157	173	186	157	173	186
Republic of Korea	2009	122	211	338	122	211	338
Thailand	2006	91	177	299	91	177	299

Source: UIS (2011), and UNESCO Bangkok (2009).

These figures show that there are a number of countries in which the salary of both lower and upper secondary teachers is considerably lower than GDP per capita, including Cambodia, Indonesia and Lao PDR. At the other end of the spectrum, there are countries in which teaching (at both lower and upper secondary levels) is a relatively well-paid profession, with average salaries in public institutions being considerably higher than GDP per capita, such as in Australia, Japan, Malaysia, the Philippines, the Republic of Korea and Thailand. It is also interesting to analyse annual salary growth, as shown for lower secondary teachers in Figure 7.

Figure 7: Lower Secondary Teachers' Annual Salaries in Public Institutions as a Percentage of GDP Per Capita
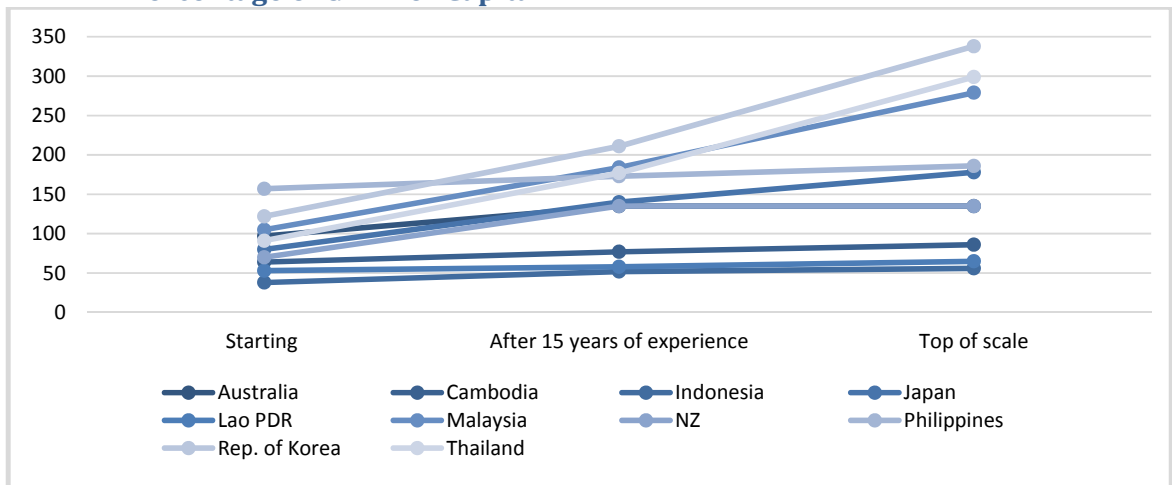
Source: UIS Global Education Digest (2011).

This shows that relatively low-paying countries such as Cambodia, Indonesia and Lao PDR do not offer much by way of salary increase and progression for lower secondary teachers. On the other hand, the trajectory of salary progression is quite steep in countries such as the Malaysia, Republic of Korea and Thailand. In the Republic of Korea, for example, a lower secondary teacher at the top of the salary scale may earn 177 percent more than one just starting in the profession. While the starting salary might actually be somewhat lower than GDP per capita in Australia, Japan, New Zealand and Thailand the profession becomes relatively well paid after 15 years of service and certainly at the upper end of the pay scale.[18] Figure 8 shows similar patterns when it comes to upper secondary teachers in the region. It may be of interest for countries to take stock of the variance in the remuneration of both lower and upper secondary teachers across the region and the different patterns of salary progression.
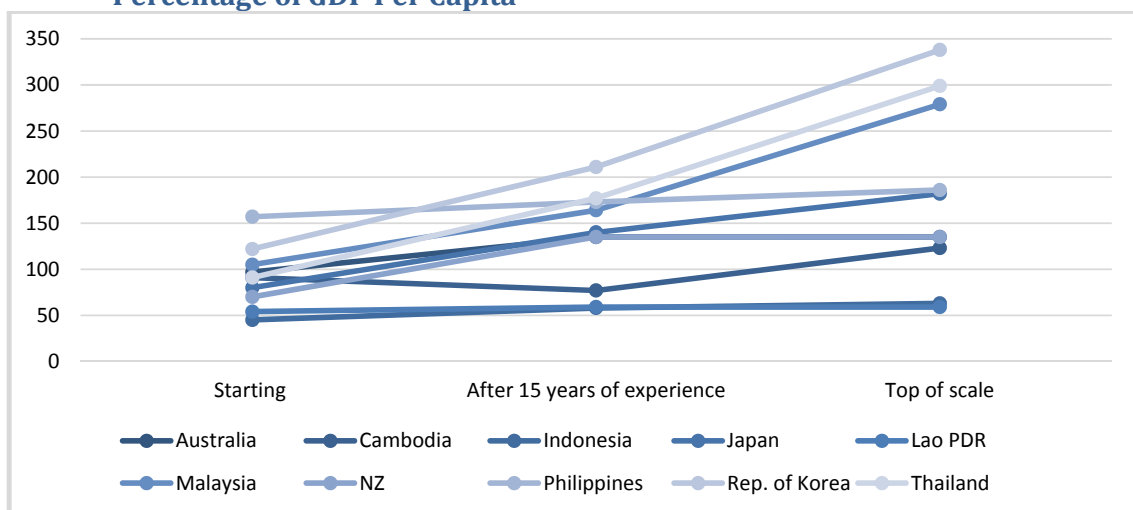
Figure 8: Upper Secondary Teachers' Annual Salaries in Public Institutions as a Percentage of GDP Per Capita

Source: UIS Global Education Digest (2011).

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[18] It is not clear, however, how many years it may take to make it to the top end in several countries.

2.2.5 Student assessment at the secondary level

Policies and mechanisms for student assessment

Student assessment is an integral part of the education process as it provides information on the quality of the learning process. Although there are many modalities to carry out student assessment, only examinations feature prominently in the education policy documents of ASEAN+6 countries. According to Hill (2010), the purposes of examinations are threefold: selection, certification and accountability.

With regards to selection and certification, there is a mix of examination approaches for entry to lower secondary and upper secondary as well as for completion of lower secondary. Some countries use the same exam for both the purposes of certification and selection (such as Malaysia), while separate exams serve differing purposes in other countries (such as Japan). All countries have examinations for either completion of upper secondary and/or entry to institutes of higher education. Table 31 shows whether examinations are required in the ASEAN+6 countries for: 1) entry into lower secondary, 2) completion of lower secondary/entry to upper secondary, and 3) completion of upper secondary/entry to an institute of higher education.

Table 31: The Use of Examinations for the Purposes of Selection and Certification in ASEAN+6 Countries

Country	Entry to Lower Sec	Completion of Lower Sec / Entry to Upper Sec	Completion of Upper Sec / Entry to Higher Ed
Australia			✓
Brunei Darussalam	✓		✓
Cambodia	✓	✓	✓
China		✓	✓
India	✓	✓	✓
Indonesia	✓	✓	✓
Japan	Some	✓	✓
Lao PDR	✓	✓	✓
Malaysia	✓	✓	✓
Myanmar	✓	✓	✓
New Zealand			✓
Philippines			✓
Republic of Korea		✓	✓
Singapore	✓		✓
Thailand		✓	✓
Viet Nam		Some	✓

Source: Data collected by UNESCO Bangkok staff.

With regard to accountability, all countries that administer national examinations could arguably use data collected from these examinations to inform policy making and decision making in a number of areas. Yet, it is difficult to establish clear evidence that exams are used effectively for this purpose within education systems. Other than national examinations, countries may also carry out other forms of assessment specifically designed to provide information about the quality of their education system. Of the countries involved in this

analysis, Australia, Japan and the Republic of Korea have established nation-wide systems of assessment. Details of these assessments are given in Table 32.

Table 32: Details of Assessments Used for Accountability

Australia	The National Assessment Programme – Literacy and Numeracy (NAPLAN) tests are conducted for all students in Years 3, 5, 7 and 9. All students in the same year level are assessed on the same test items in the assessment domains of reading, writing language conventions and numeracy.
Japan	The National Assessment of Academic Ability for grade 6 elementary students and grade 3 junior high students was carried out from 2007 for the purpose of measuring students' learning outcomes. It analyses the academic abilities and learning patterns of schoolchildren throughout Japan and investigates the outcomes of educational policies and programmes, identifies issues requiring attention, and achieves improvements therein.
Republic of Korea	The National Assessment of Educational Achievement (NAEA) was implemented in 2000 to assess Korean language, mathematics, science, social studies, English communication skills, and information technology skills. Starting from 2008, the NAEA was carried out nationwide. The purposes of the NAEA are to diagnose educational achievements at all levels of schooling, analyse student educational achievement trends, and gather fundamental reference data to improve the National Curriculum. In addition, the NAEA aims to improve teaching and learning methods by providing schools with exemplary assessment methods and disseminating knowledge regarding current research design and methods.

Source: Information collected by UNESCO Bangkok staff.

As for process of conducting examinations, some countries have examination units within the Ministry of Education to oversee all matters related to national examinations. Others have established external examination bodies with links to the Ministry of Education to administer examinations. Of the countries included in this analysis, none have independent examining bodies for secondary education. Table 33 provides further information on examining bodies in ASEAN+6 countries.

Table 33: Examining Bodies of ASEAN+6 Countries

Countries with examination units within the Ministry of Education	Brunei Darussalam (Department of Examination) Cambodia (Examination Office of the General Secondary Education Department) China (National Education Examinations Authority) Lao PDR (Education Standards and Quality Assurance Centre)) Malaysia (Malaysian Examination Syndicate) Myanmar (Myanmar Board of Examinations) Philippines (National Educational Testing and Research Center) Viet Nam (Ministry of Education and Training)
Countries with Ministry-affiliated examination bodies	Australia (Various State exam boards) India (Central Board of Secondary Education; Council for Indian School Certificate Examination) Indonesia (National Education Standards Agency) New Zealand (New Zealand Qualifications Authority) Republic of Korea (Republic of Korea Institute for Curriculum and Evaluation) Singapore (Singapore Examinations and Assessment Board) Thailand (National Institute of Educational Testing Service)

Source: Information collected by UNESCO Bangkok staff.

For countries involved in this analysis, the focus seems to be on assessment of learning, most commonly in the form of examinations designed to check whether students have achieved specified learning outcomes. Although some countries mention policies for carrying out on-going formative assessment in the classroom, it is not clear how this is implemented in schools. One such country is Australia, where one of the purposes of assessment is on-going formative assessment within the classroom for the purposes of monitoring learning and providing feedback. Such feedback is designed to support teachers in their teaching and support students in their learning. Another example is Brunei Darussalam, where the national examination at the end of lower secondary is being replaced by the Student Progress Assessment (SPA). Such policies represent a shift from a summative assessment orientation to a system of formative assessment characterized by the measurement of student progress and achievement.

Another increasing trend in assessment practice is the inclusion of non-cognitive skills assessment in the evaluation of student learning. In the Republic of Korea, for example, the evaluation system (Student School Record/School Activities Record) was introduced to provide not only summative information but also diagnostic and formative information on student academic achievement and social development. In Myanmar, the level of student participation in school and community activities is captured in one's Comprehensive Personal Record (CPR), and together with examination results, is taken into consideration for promotion purposes.

In recent years, there has also been an increase in interest and commitment of governments in many of the ASEAN+6 countries to monitor and assess student learning. This growing concern can be seen in the number of countries from the region participating in large-scale international assessments such as the Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) (Table 34).

Table 34: Participation in Major International Assessments by ASEAN+6 Countries

Country	PISA				TIMSS			PIRLS		
	2003	2006	2009/10	2012	2003	2007	2011	2001	2006	2011
Australia	✓	✓	✓	✓	✓	✓	✓			✓
Brunei Darussalam										
Cambodia										
China										
India			✓							
Indonesia	✓	✓	✓	✓	✓	✓	✓		✓	✓
Japan	✓	✓	✓	✓	✓	✓	✓			
Lao PDR										
Malaysia			✓	✓	✓	✓	✓			
Myanmar										
New Zealand	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Philippines					✓					
Republic of Korea	✓	✓	✓	✓	✓	✓	✓			
Singapore			✓	✓	✓	✓	✓	✓	✓	✓
Thailand	✓	✓	✓	✓		✓	✓			
Viet Nam				✓						
Total	6	6	9	9	7	8	8	2	3	4

Source: Information collected by UNESCO Bangkok staff.

Alignment between curriculum and assessment

In general, examinations administered for the purpose of certification create alignment between curriculum and assessment. For these examinations, there are usually clearly specified learning outcomes in the curriculum upon which assessment is based. In some countries including Malaysia and Singapore certification examinations are also used for selection and/or streaming purposes. Examinations administered for the sole purpose of selection, on the other hand, often assess aptitude and general abilities rather than specific curricular goals. Most of these examinations are designed for entry into institutions of higher education.

Accreditation

Students in all countries involved in this analysis receive either a diploma or a certificate upon meeting the requirements for completion of upper secondary education. By contrast, students in only eight countries receive a diploma or certificate upon completion of lower secondary education, as shown in Table 35 below.

Table 35: Accreditation for Completion of Lower and Upper Secondary Education

Country	Accreditation for completion of lower secondary education	Accreditation for completion of upper secondary education
Australia		✓
Brunei Darussalam		✓
Cambodia	✓	✓
China		✓
India		✓
Indonesia	✓	✓
Japan	✓	✓
Lao PDR	✓	✓
Malaysia	✓	✓
Myanmar		✓
New Zealand	✓	✓
Philippines		✓
Republic of Korea	✓	✓
Singapore		✓
Thailand		✓
Viet Nam	✓	✓

Source: Information collected by UNESCO Bangkok staff.

Most of these diplomas and certificates are issued at the national level, with only a handful of countries including Australia, India and Viet Nam, issuing accreditation at the state/provincial/district level.

2.2.6 Conclusion

Years spent in secondary education are critical to youth at the cusp of life beyond formal schooling and as such, secondary education in all countries requires important attention at the policy level. Identification of and support in professional pathways for students, school

curricula, teachers and learning assessment are all important considerations. ASEAN+6 countries have responded to these considerations in diverse ways. Reviewing these varied approaches has shed some lights on trends as well as possible policy implications for any country wishing to undertake reform of this sub-sector. The findings are summarised below:

(i) *Improving and expanding secondary education pathways*
    Many countries in the ASEAN+6 group have made attempts to improve and expand their alternative education system through various means, including Equivalency Programmes and Community Learning Centres. Current non-formal education programmes focus largely on children and youth who have missed out on primary but not secondary school.

(ii) *Relevance of curriculum at the secondary level*
    Strengthening the relevance of curriculum at the secondary level is a critical issue, particularly in regard to its compatibility with higher levels of education and its relevance to the job market. High performing education systems tend to undertake frequent curriculum reforms to respond to changing needs and make education more relevant. An up-to-date and relevant curriculum implies regular processes of curricular review.

(iii) *Higher minimum qualifications required for secondary education teachers*
    While some countries only require an ISCED level 4 qualification as a minimum qualification for secondary teachers, many other countries including the OECD countries of the region require lower secondary teachers to have a tertiary level qualification. But qualifications alone do not equal quality teaching. The importance of higher minimum qualifications may require further review and analysis, as would other important factors in the recruitment of teachers including motivation, interpersonal skills and remuneration in comparison with GDP per capita.

(iv) *The importance of learning outcome assessment of secondary students*
    A number of countries in the region have abolished examinations for entry to lower secondary education but some continue with these exams. Some countries, such as Myanmar, do not administer any national assessments for the purpose of monitoring the quality of education at the secondary level (as is the case for Australia, Japan and the Republic of Korea) nor participate in any international assessments of secondary students, such as PISA. Such national and international assessments are seen as increasingly important in the region as countries attempt to monitor the quality of secondary education provided to students.

2.3 Technical and Vocational Education and Training (TVET)

2.3.1 Introduction

In view of rapid and increasing globalization brought about by significant advances in technology, increased mobility and the development of increasingly knowledge-based economies, the importance of TVET in ASEAN+6 countries is well understood. Countries have similar overall aspirations regarding TVET, a source of education that can help ensure citizens are equipped with the requisite skills to live meaningful and productive lives within society.

Yet for countries at different stages of development,[19] immediate goals for TVET, TVET scope and means of delivery differ in accordance with economic challenges. Some countries in the ASEAN+6 grouping suffer from a shortage of skills in particular areas, while others struggle to generate enough jobs to accommodate labour market entrants. This section provides an overview of the different legal, institutional and policy frameworks for TVET, financing mechanisms in place, TVET structures and delivery systems, and aspects of TVET quality and relevance to labour market needs in the ASEAN+6 countries.

2.3.2   Legislative and institutional policy frameworks

TVET-specific policies

Solid and relevant legislative and policy frameworks underpin most TVET systems in ASEAN+6 countries (Table 36). Some countries, however, lack national TVET qualifications frameworks. The absence of a national qualifications framework does not necessarily signify a critical shortcoming; some countries, including Japan and the Republic of Korea, have achieved solid economic development supported by the development of TVET even without such a framework in place.

Table 36: Legislative and Policy Frameworks for TVET (Selected Countries)

Country	Legislation, Legislative Decisions/ Decrees, Acts	Policy/Plans/Strategies
Australia	National Vocational Education and Training Regulator Act (2011), National Agreement for Skills and Workforce Development 2012, National Partnership Agreement on Skills Reform 2012	National Skills Framework (NSF): Three components 1.VET Quality Framework 2.Australian Qualifications Framework 3. Training Packages
China	Vocational Education Law (1996) State Council Decision on Vigorously Promoting the Reform and Development of VET (2002) State Council Decision on Accelerating the Growth of VET (2005)	The National Medium and Long-Term Plan for Education Reform and Development (2010-2020) Secondary Vocational Education Reform and Innovation Action Plan (2010)
India	The Industrial Training Institutes Act (1961) The Apprentices Act (1961) The Architects Act (1972) The All India Council for Technical Education Act No.2 (1987) The National Institutes of Technology Act (2007)	National Policy on Skill Development (2009)
Japan	Human Resource Development Promotion Act (1969), Ordinance of the Ministry of Labour	Young People Improvement Program (2012)

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[19]According to the Asia-Pacific regional background paper for the Third International Congress on TVET (UNESCO 2011), there are four major stages of economic development in the region. On the Global Competitiveness Index 2010-2011, countries of the region are positioned from 3rd (Singapore) to 133rd (Timor-Leste) among 136 countries globally.

Country	Legislation, Legislative Decisions/ Decrees, Acts	Policy/Plans/Strategies
Republic of Korea	Vocational Education and Training Promotion Act (MEST) Enforcement Decree of The Promotion of Industrial Education and Industry-Academic Cooperation Act (MEST) Workers Vocational Skills Development Act (MOEL) Framework Act on Qualifications	Policy for modernizing vocational education (MEST, 2010), Second Basic Plan for Lifelong Vocational Skills Development (MOEL, 2012-2017), VISION 2020: Vocational Education for All
Lao PDR	Prime Minister's Decree on TVET and Skills Development (2010)	TVET Policy, Master Plan for the Development of TVET for 2008–2015, Component on TVET in the 7th Five year Education Sector Development Plan (2011-2015), TVET Strategy 2006-2020
Myanmar	Employment and Skills Development Law (2013)	TVET policy (1973)
Philippines	-	The National Technical Education and Skills Development Plan (NTESDP) 2011–2016
Singapore	-	Manpower 21 Plan (1998)
Viet Nam	Law on Vocational Training (2006)	Master Plan on Development of Viet Nam's Human Resources 2011-2020, 2011-2020 Socio-Economic Development Strategy, Strategy on Development of Viet Nam's Human Resources 2011-2020

Source: Information collected from national government and education department websites by UNESCO Bangkok staff.

Most ASEAN+6 countries have TVET policies that align with educational, economic and industrial policies. For example, one of the key objectives of India's National Policy on Skill Development is "to create a workforce empowered with improved skills, knowledge and internationally recognized qualifications to gain access to decent employment and ensure India's competitiveness in the dynamic global labour market."[20] The national policy on human capital development in Singapore is rooted in the Manpower 21 Report (Ministry of Manpower, 2003). It envisages the retraining of the workforce and proposes programmes to attract intellectual capital (Ministry of Manpower, 2003a). Viet Nam's TVET system aims to become "more relevant to needs of local and central industries as well as to a multi-sector and dynamic economy" (Ministry of Education and Training, 2006). The new Philippines Development Plan 2011-2016 includes a strategy to improve the effectiveness of the demand-supply match for critical skills and high-level professions through tighter industry-academic links, better dissemination of labour market information, and career guidance (National Economic Development Authority, 2011).

Limited linkages between TVET and economic policy through legislation or other legal texts does not necessarily indicate that the alignment of TVET policy with that of industry is weak. For example, while there are no legal documents explicitly stating synergies between Japanese

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[20] http://planningcommission.nic.in/reports/genrep/skilldev/rep_skilldev7.pdf

national policies on TVET with those of economy or industry, the country's private sector strongly influences the TVET system, suggesting a productive relationship between training providers and employers exists.

Institutional responsibility for TVET

As many would argue, the primary responsibility of TVET is to meet the productive skills demand of national economies. As such, it is common for more than one ministry or agency to be involved in the development and governance of TVET systems. While governments may have the principal responsibility of providing TVET in its early phases of development, there is an increasing involvement of enterprises and other social partners in the provision of TVET, especially in work-based training and skills needs surveying. Table 37 e provides a brief overview of institutional arrangements for TVET provision and administration in selected ASEAN+6 countries. As shown, some countries have a single agency or ministry overseeing the TVET subsector (for example Australia, Philippines) while most others have one or two main ministries taking charge of TVET with other ministries providing TVET programmes.

Table 37: Ministries Responsible for TVET Provision (Selected Countries)

Country	Ministries responsible for TVET provision
Australia	Department of Education, Employment and Workplace Relations (DEEWR)
Cambodia	Main responsible ministry: Ministry of Labour and Vocational Training (MLVT) and its Directorate General of TVET (DGTVE). Other ministries also operate TVET programmes, in particular the Ministry of Education, Youth and Sports (MOEYS), Ministry of Women's Affairs (MOWA), Ministry of Health and the Ministry of Agriculture.
China	Ministry of Education (MOE) and the Ministry of Human Resources and Social Security (MOHRSS)
India	At central level: Ministry of Labour and Employment (MOLE), Ministry of Human Resource Development (MHRD), Department of Education and Training. At state level: several ministries are responsible for TVET provision.
Indonesia	Ministry of Education and Culture, Directorate for SMK, Ministry for Human Resources and Transmigration, Directorate General of Training and Productivity Development
Japan	Ministry of Health, Labour and Welfare (MHLW), Ministry of Education, Culture, Sports, Science and Technology (MEXT)
Lao PDR	Ministry of Education and Sports (MOES) and Ministry of Labour and Social Welfare (MOLSW)
Malaysia	Ministry of Education (MOE), responsible for secondary level vocational education. Ministry of Higher Education (MOHE): responsible mainly for universities, polytechnics and community colleges (TVET). Ministry of Human Resources; Ministry of Entrepreneurship; Ministry of Science and Technology; Ministry of Women, Family and Community Development as well as others: responsible for skills training in specific areas in both formal and non-formal learning settings.
Myanmar	Main responsible ministry: Ministry of Science and Technology (MOST). Other ministries: Ministry of Education, Ministry of Labour, Ministry of Industry, Ministry of Agriculture and Irrigation, Ministry of Environmental Conversation and Forestry, Ministry of Transport, Ministry of Hotels and Tourism, Ministry of Health, Ministry of Defense, Ministry of Boarder Areas, Ministry of Cooperatives, Ministry of Railways, Ministry of Social Welfare, Relief and Resettlement.
Philippines	Technical Education and Skills Development Authority (TESDA)

Country	Ministries responsible for TVET provision
Republic of Korea	Ministry of Education, Science and Technology (MEST), Ministry of Employment and Labour (MOEL).
Singapore	Ministry of Education (MOE), Ministry of Manpower (MOM)
Viet Nam	Main responsible ministry: Ministry of Labour, Invalids and Social Affairs (MOLISA). Ministry of Education and Training (MOET) and its Secondary Technical and Vocational Education Department (STVED) are responsible for secondary professional education. Other ministries providing TVET programmes: Ministry of Industry and Trade, Ministry of Agricultural and Rural Development, Ministry of Health.

Source: Information collected by UNESCO Bangkok staff.

Coordination between ministries and other stakeholders

Coordination can be examined from two angles: horizontal (across ministries and agencies and across government and private providers) and vertical (between central and decentralized levels). The following examples and practices from selected ASEAN+6 countries are provided to illustrate these two types of coordination.

In Singapore, the policy infrastructure for macro level human capital development is characterized by two distinct features: a tripartite approach, based on cooperation among employers, unions, and government and a multi-departmental approach involving all relevant government agencies. The tripartite relationship ensures that there is agreement over strategies and necessary steps required for national Human Resource Development (HRD) strategies. Another important tripartite institution is the Skills Development Fund (SDF), founded by the Government and guided by a tripartite council. The fund is both a mechanism for financing the employee training and a motivation for employers to upgrade the skills of their employees. The SDF was created because employers in Singapore are not normally inclined to fund staff training unless there is a scheme to entice them to do so (Ministry of Manpower, 2003; Skills Development Fund, 2003).

Australia's vocational education and training (VET) sector is based on a partnership between regional governments and industries. Governments provide funding, develop policies and contribute to regulation and quality assurance of the sector. Industry and employer groups contribute to training policies and priorities, and in developing qualifications that can deliver skills to the workforce (AEI, n.d).

In Lao PDR, several ministries are involved in TVET provision. In terms of horizontal coordination, the Prime Minister's Decree on TVET and Skills Development clearly mandates cooperation among the key TVET ministries: the MOES and the MOLSW. This decree identifies synergies and complementarities between both ministries and provides the basis for stronger cooperation. As a wider policy coordination mechanism, the National Training Council (NTC) has been functional since 2002. It is comprised of 24 representatives from relevant ministries and is chaired by the Deputy Minister of Education. With regard to 'vertical' coordination, the national TVET system is managed by the Department of Technical and Vocational Education (TVED) under the MOES and the Provincial Education Service (PES) under provincial governments (UNESCO, 2012d).

In countries such as Cambodia where TVET is managed by other ministries outside the Ministry of Education, some challenges in coordinating TVET policy in line with other education policies can be observed. For instance, while the MOE is exploring ways of expanding vocational education at the secondary level through the reform of secondary education curricular and system, the MOLVT responsible for TVET is itself concerned with the expansion of TVET at the post-secondary level and there appears limited dialogue and cooperation on these issues across both ministries (UNESCO, 2012e).

Public-private partnerships

Public-private partnerships (PPP) in the development of TVET can take place at various levels and in various forms. At national level, this may occur through official institutionalized roundtables on issues such as the encouragement of employer investment, or at the level of individual schools through discussion around ways to provide workplace experiences to TVET students. Table 38 summarizes various forms of PPP mainly focusing on the issue of information exchange between government, education service provider and employer which constitutes the basis for policy level dialogue. Here, councils and boards are officially institutionalized roundtables usually taking place at the national level and comprising official representatives of stakeholder groups. Consultation may present a less formal or less institutionalized process through which employers and education service providers exchange opinions or ideas.

Among ASEAN+6 countries, Cambodia, India, Indonesia and the Philippines have specific legislation and regulations to enable the relevant boards and councils to specify the membership, responsibility, activities and mandates for employer engagement. The boards and councils often have strong decision-making power on key TVET issues. Some countries have shown more progress than others in the establishment of legislation for councils and the operation of councils by government, thus accelerating employer engagement in those countries.

Table 38: Summary of Employer Engagement Types, by Country

Country	Council/Board	Consultation	Others
Cambodia	●	X	X
India	●	X	X
Indonesia	●	X	X
Lao PDR	●	▲	X
Philippines	●	●	X
Viet Nam	X	X	▲

Notes: ●: conducted regularly; ▲: conducted irregularly (ad-hoc basis); X: not implemented
Source: UNESCO Bangkok (2012f).

The benefits and motivation for the development of public-private partnerships and the specific experience of selected ASEAN+6 countries is listed in Table 39.

Table 39: Public Private Partnerships in Selected ASEAN+6 Countries

Country	Characteristics of PPP	Benefits/Motivation	Examples
Australia	Strong, between government and industry	Improve the quality and relevance of VET training packages; improve funding for industry	Industry Skills Councils (ISCs)
Japan	Strongly encouraged	Promote skills training in Japan	Overseas Vocational Training Association (OVTA)
Lao PDR	Strongly encouraged	Improve TVET policy and service provision	Through two modalities: participation of employers in TVET policy and implementation and through private TVET providers.
Philippines	Increasing involvement of private sector (employers and industry associations) in TVET policies	Improve TVET policy formulation	Technical Education and Skills Development Authority (TESDA) Board
Singapore	Strong	Leveraging knowledge, expertise and skills of technology industry leaders; established linkages with private industry	Industry-Based Training (IBT) schemes; board representation of Institute of Technical Education (ITE), curriculum development committee; college advisory committees; Joint Centres of Technologies

Source: Information collected by UNESCO Bangkok staff.

Decentralization

Decentralization has been a widely adopted policy reform measure in education, however there is little agreement as to how much decentralization is necessary to improve organisation and management of TVET. Table 40 demonstrates the status of decentralization of TVET in selected ASEAN+6 countries.

Table 40: Decentralization in TVET

Country	Features of decentralization
Cambodia	- Decentralised management system including a National Training Board, Advisory Industry Technical Committee and Provincial Training Board; - Decentralisation of training programme implementation to different providers including private providers such as NGOs, through National Training Fund and pilot voucher training programme.

Country	Features of decentralization
India	Shared responsibility for vocational training between central and state governments. At the national level, the National Council for Vocational Training, the Central Apprenticeship Council and the National Council of Vocational Training assume the advisory role on TVET issues while the administrative responsibility is held by the Directorate General of Employment and Training (DGET). Industrial training institutes (ITIs) and industrial training centres (ITCs) which operate under the guidance of DGET formulate policies and determine standards and technical requirements such as developing curricula, instructor training, and skills testing. At the state level, State Councils for Vocational Training (SCVTs) and Trade Committees both advise state governments on training policy and co-ordinate vocational training in each state.
Lao PDR	Financing and management responsibilities for TVET decentralized to the Provincial Education Service (PES) under provincial governments
Philippines	TVET specific plans developed for national and sub-national levels with clearly defined inputs and outputs.
Thailand	Decentralized TVET curriculum is specifically designed by the local community to meet their unique social, economic, environmental and cultural needs.

Source: Information collected by UNESCO Bangkok staff.

2.3.3 Financing

It is difficult to provide an overview of financing mechanisms in the TVET sub-sector as practices vary widely across countries. This said, TVET institutions in ASEAN+6 countries, are largely underfinanced as reflected in the relatively low level of direct budget allocations made by governments. Many countries have sought to diversify funding sources as well as improve funding mechanisms so as to achieve increased efficiency and effectiveness. To this end, funding for TVET is often complemented by private sources through tuition fees and from training levies paid by firms. Some examples in ASEAN+6 economies are presented below.

Government funding for TVET

In China, central and local government spending for specialized secondary schools, technical schools and vocational schools has traditionally been relatively low. Tuition fees account for 22 to 33 percent of total spending (Copenhagen Development Consult A/S 2005, p.43). Over the past five years, however, government contribution to TVET has increased through tuition fees for different categories of students. At the same time, the Government has put in place exemption schemes for needy rural students enrolled in government funded vocational schools. Since 2007, the Government has provided annual individual subsidies of 1,500 yuan (USD220) for vocational school students from rural areas (UNESCO, 2011b).

VET in Australia receives about one third of its funding from the Australian Government with the other two thirds coming from state and territory governments. This is based on the National Agreement for Skills and Workforce Development. Australian Government funds are used to support national priorities. State and territory governments can also allocate funding depending on the specific needs in their state or territory (AEI, n.d.).

Singapore's Skills Development Fund (SDF) aims to motivate employers to train workers by reimbursing part or all training expenses, as all employers are required to pay a levy on the wages of employees who earn over a certain amount. Grants can be used for direct training costs (such as fees for external training) or for establishing training infrastructure, including the cost of trainers. The present policy is to increase training for service sectors, small- and medium-sized enterprises, less educated and less skilled workers and for older workers. Training for certifiable skills is also emphasized (UNESCO, 2011b).

In the Republic of Korea, formal TVET is funded by the MOES regular budget. Non-formal skills training is mainly funded by a training levy collected by the MOEL. A training levy is collected from every employer who employs at least one employee. The levy rate is set into four levels according to the number of employees under each employer. Money spent by employers on employee training activities is reimbursed by the MOEL using the training levy funds. At present, the training levy is the most important funding source for almost every kind of non-formal skills training programme, including training for unemployed, self-directed training of employed and employer-led training programmes. The Government is also considering the use of these funds for formal TVET.

In Viet Nam, only public TVET institutions receive substantial public funding to cover both recurrent and capital costs. However, actual allocations per student appear to be declining. For long-term programmes regulated under the General Department of Vocational Training (GDVT), institutions receive public funding allocated through a per capita quota system. The budget norm per training place is 4.3 million VND per annum, while actual allocations are often lower. Private training providers, which have been growing in number in recent years, are usually fully self-financing. They do not receive any regular state funding but tuition fees constitute their main source of funding.

TVET specific non-public funding schemes

A number of countries have implemented non-public funding schemes specifically designed to finance TVET. In some cases, for instance in the Republic of Korea, Malaysia, and Singapore, training levies have been effectively collected from formal sectors to support training in small and medium enterprises (SMEs) and firms in the informal sector (UNESCO, 2011b). To a great extent, their effectiveness relies on the existence of significant formal sectors within their economies, which provide a large tax base. Tax incentives are also widely used. For example, Mongolia adopted a tax law amendment in 2008 to provide tax incentives for TVET related activities. As such the following activities are exempted from tax in Mongolia: expenditure for improving TVET schools facilities, TVET school teachers' training, inviting people from industry to teach at schools and donations for the Supporting Fund for Vocational Education and Training (UNESCO, 2011b).

Training funds financed by levies on enterprises, public contributions, and external sources are another commonly used scheme. The overall aim of the training funds is to raise enterprise productivity and individual income. Equity training funds are used in low-income countries and for disadvantaged groups in middle-income countries. In Singapore, the Skills Development Fund (SDF) established in 1979 aims to motivate employers to train workers by reimbursing part or all training expenses. Under the Malaysian Human Resource Development Fund (HRDF), employers provide a payroll contribution equivalent to 1 percent, and are eligible to claim a portion of training expenditure allowance up to the limit of their total levy for any given year.

Outcome-oriented financing of TVET

To increase the effectiveness of public financing of TVET, a number of initiatives are underway in the region with an emphasis on educational outcomes. Typically, funds are allocated to the education service providers based on a contract applying the principle of 'selection and concentration'. For example, the Ministry of Education, Science and Technology (MEST) in Republic of Korea has selected a number of vocational secondary schools as strategically important. These Meister High Schools are provided special funding to teach students the most up-to-date and advanced competencies in certain trades. This practice is similarly implemented in government funding for colleges and universities running specific targeted vocational education programmes. Usually, the selection process is based on an evaluation of a programme's economic and industrial importance in selected industrial fields and its consideration of labour market needs. Central ministries then make funding decisions.

2.3.4 TVET delivery system

Overview of TVET delivery system

The development of technical and vocational skills in the region can be broadly divided into two categories of initial vocational education and training (IVET) and continuous vocational education and training (CVET), especially in the context of lifelong learning. Skills acquisition can take place at institutions (schools, TVET colleges, training centres) and through on-the-job training in both formal and informal ways. TVET can also be part of secondary education, post-secondary or higher education. It can be provided by the formal education system or delivered informally in the workplace, or through non-formal means outside the workplace. The structure of TVET proposed by Adiviso (2010) has captured this diversity.

Figure 9: Institutional Structure of TVET
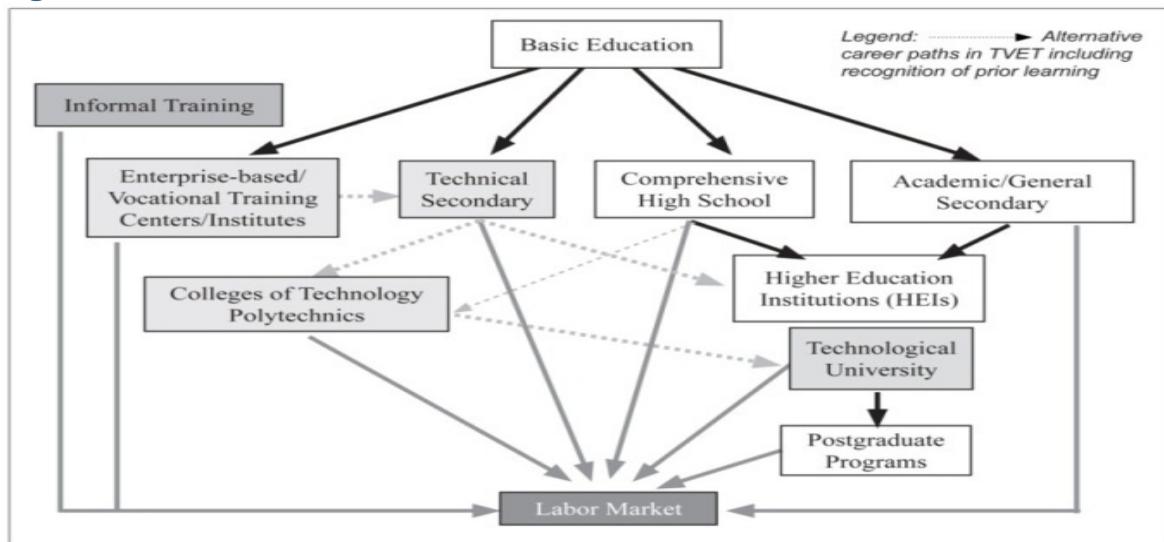
Source: Adiviso, B. (2010).

Different delivery modes and levels of technical and vocational education are summarized in Table 41 below.

Table 41: TVET Delivery Modes

Classification	Description
Formal education	Covers programmes or courses at the secondary, higher secondary, junior colleges, first-degree level, and job-oriented and application oriented first degree programmes.
Upper secondary level	Aims to prepare youth for the world of work. Major areas of study include agriculture, business and commerce, engineering and technology, health and paramedics, home economics and humanities.
Post-secondary level	Emphasizes practical education aimed at producing middle-level technicians. Not necessarily a terminal point of schooling because it is open for students interested in pursuing a university education.
Polytechnic education	Refers to diplomas offered by polytechnics. Categorized within or outside the mainstream of formal education but recognized by the university system. Diplomas include: engineering, information technology, electronics, machinery and metal, textile and crafts, jewellery making, fashion design, beauty culture, garments and trades, foods, office management and many others.
Lifelong learning	Refers to alternative forms of formal education such as para-professional education, correspondence education, credit bank system training and others. Trains the industrial workforce and provides workers who have previously missed opportunities for higher education.

Source: Park (2005).

TVET providers

TVET can be offered by a variety of providers including public sector institutions, private sector providers and international organizations and NGOs. Table 42 presents some interesting country examples demonstrating how different service providers deliver TVET.

Table 42: TVET Service Providers, Selected Countries

Country	Types of providers	Size
Australia	Publicly funded Institutes of Technical and Further Education (TAFE); combined TAFE and university bodies; adult and community education organizations; individual enterprises and schools. Many Registered Training Organizations (RTOs) also offer programmes in addition to recognized VET such as adult and community education and fully commercial non-accredited training	Over 4,000 RTOs
India	There are 1,400 polytechnics and most offer three-year diploma courses in disciplines like Civil, Electrical and Mechanical Engineering. Many also now provide programmes in Electronics, Computer Science, Medical Lab technology, Hospital Engineering, and Architectural Assistantship. Some are specialized and offer courses in areas like Leather Technology, Sugar Technology and Printing Technology. While there are no formal training programmes for the informal sector, a number of institutions are involved in providing training geared to the	7,500 Industrial Training Institutes with an overall capacity of 750,000 places around the country

Country	Types of providers	Size
	needs of informal sector employees. These include community polytechnics, adult education programmes and the National Institute of Open Schooling (NIOS). A number of agencies also provide smaller programmes for the informal sector.	
Philippines	TVET is delivered by a network of public and private institutions through the following channels: school, centre, enterprise, and community-based technology training programmes. TVET programmes are therefore school based, centre-based, enterprise-based or community-based.	4,041 public and private TVET institutions nationwide (as of December 2009)
Malaysia	Public and private providers with private investment in TVET are encouraged through the creation of Private Vocational Colleges using the Private Finance Initiative (PFI)	-
Lao PDR	Public and private providers offer TVET programmes in clerical occupations and service sector-related areas. The number of private TVET providers has rapidly increased in recent years. Private providers must be accredited by the MOES if they wish to award officially recognized TVET certificates and diplomas.	57 new private vocational training centres and 88 new colleges since 1995
Republic of Korea	Formal TVET is offered at the following levels: upper-secondary vocational schools, technical colleges (under MEST), Korea Polytechnics (regular programmes, under MOEL). Non-formal skills training is provided through private training institutions (under MOES and MOEL), vocational academies (private, under MOEL), Korea Polytechnics (short-term non-formal programmes, under MOEL) and the Human Resource Development Institutes of the Korea Chamber of Commerce (under MOEL). Increasingly, some universities are providing short-term non-formal education and training programmes on specific trades and areas using funds from several ministries of the central government and provincial governments.	-
Viet Nam	Formal TVET is offered at the secondary education level and is regulated by the General Department of Vocational Training (GDVT) under the Ministry of Labour, Invalids and Social Affairs (MOLISA) or by the Ministry of Education and Training (MOET). Various types of training institutions are owned and financed by a variety of different actors, including provincial and district governments, different central ministries, trade unions, companies and private institutions.	Around 30 percent of all institutions under GDVT and 20 percent of all technical schools managed by MOET are private. The Vietnamese TVET environment further includes more than 800 other providers (for example employment service offices) offering short term training courses

Source: Information collected by UNESCO Bangkok staff.

### *Overview of Initial Vocational Education and Training (IVET)*

TVET at the secondary level

The demand for TVET is growing in the Asia-Pacific, particularly in developing countries. This is also reflected in the increasing enrolments in upper-secondary TVET, particularly in East Asia and the Pacific sub-region. Due to the greater emphasis many countries place on TVET, targets for enrolments in secondary vocational programmes are set high. For Indonesia and China in 2005, these targets were 70 percent and 60 percent respectively (Copenhagen Development Consult A/S 2005, p.7 cited in UNESCO 2011b) while India (12.6 percent in 1999) targeted 25 percent[21] (World Bank 2006a cited in UNESCO 2011b; World Bank 2007b, p.12 cited in UNESCO 2011b). Implementation needs to be carefully planned to overcome challenges associated with expanding secondary vocational programmes.

TVET at the post-secondary level

At post-secondary level, qualifications at ISCED Levels 4 (non-tertiary, post-secondary) and Level 5b (first stage of tertiary 'practically oriented/occupationally specific') are designed for employment in technical, managerial and professional occupations. UIS-UNEVOC (2006) indicate that one half or more of all countries in the Asia have no enrolments in vocational programmes at level 4, although at level 5b, Asia has the third highest median compared to other regions (UIS-UNEVOC, 2006). As there is a strong correlation between the proportion of TVET students at the post-secondary level (tertiary, non-degree, ISCED 5b) and per capita income in the region, many countries have taken steps to improve the articulation of secondary vocational education with higher education to create further options for students and to meet the ever-increasing demand for new skills and knowledge (Figure 10).

Figure 10: Percentage of Tertiary, Non-degree Enrolment (ISCED 5B) in TVET Programmes in Selected Countries by GDP Per Capita, 2002
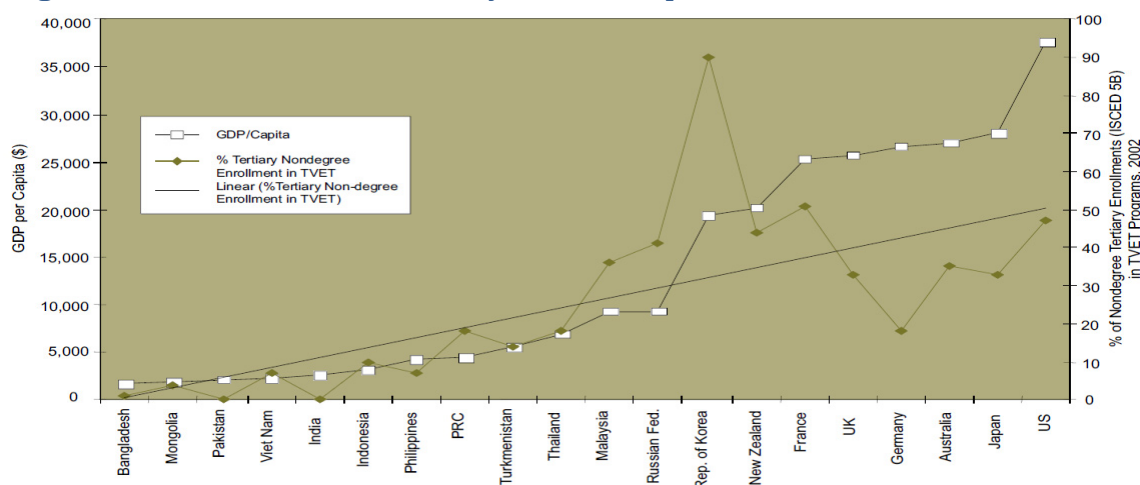
5 = first stage tertiary, nondegree; B = prevocational; Fed. = Federation; GDP = gross domestic product; ISCED = International Standard Classification of Education; PRC = People's Republic of China; Rep. = Republic; TVET = technical and vocational education and training; UK = United Kingdom; US = United States.

Source: ADB (2009).

In some countries, the share of vocational high school graduates advancing to higher education is very high. In the Republic of Korea, for example, the rate grew from 8.3 percent in 1990 to

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[21] Percentage of all secondary students to be enrolled in the vocational/technical secondary stream.

72.9 percent in 2008.[22] Such high numbers advancing to higher education pose a question about whether the main goal of secondary TVET is to prepare students for the labour market or continue pursuing higher education after graduation.

Enrolment figures in formal TVET across countries can be observed in Table 43. In 2008, China and Thailand had the highest share of upper secondary TVET students among all upper secondary students (40 percent), whereas countries with the lowest numbers of upper secondary TVET enrolments were Lao PDR (1 percent) and India (2 percent). At the tertiary level, countries with the highest share of Level 5b[23] enrolments were Lao PDR (61 percent), followed by China (45 percent) and Malaysia (43 percent). Thailand and the Philippines recorded the lowest number of Level 5b TVET enrolments at 15.5, and 9.6 percent respectively.

Table 43: TVET Enrolments at Secondary and Tertiary Levels

Upper Secondary				Tertiary			
Highest Enrolments		Lowest Enrolments		Highest Enrolments		Lowest Enrolments	
China	42.6	Lao PDR	1.1	Lao PDR	60.9	Philippines	9.6
Thailand	39.9	India	1.8	China	44.6	Thailand	15.5
Indonesia	37.2			Malaysia	43.3		
				Singapore	42.3		
				Viet Nam	33.5		

Source: UNESCO-UIS Database (2011).

In analysing the evolving social importance of formal TVET, Table 44 presents the changes in enrolment rates for selected countries in upper secondary and tertiary education from 2001 to 2008. Viet Nam shows the highest increase in secondary TVET (8 percent increase). Meanwhile, the Republic of Korea and Lao PDR registered negative enrolment growth. At the tertiary level, Viet Nam (7 percent), Lao PDR (1 percent) were the most successful in increasing enrolments, while the Republic of Korea (-17 percent), Brunei Darussalam (-9 percent) and Thailand (-6 percent) experienced the greatest decrease in tertiary TVET enrolments.

Table 44: Share of TVET Students among Total Students

Country	Upper Secondary		Tertiary	
	Enrolment Rate 2008 (%)	Change in Enrolment Rate 2001-2008 (%)	Enrolment Rate 2008 (%)	Change in Enrolment Rate 2001-2008 (%)
Viet Nam	16.7	8.3	33.5	6.9
Republic of Korea	25.5	-8.6	24.1	-17.0
Lao PDR	1.1	-3.1	60.9	1.2
Philippines			9.6	0.1
Brunei Darussalam			33.1	-9.2
Thailand			15.5	-6.3
Malaysia			43.3	-4.0

Notes: Growth rates calculated by UNESCO Bangkok.
Source: UIS Database (2011).

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[22] Source: Ministry of Education, Science, Technology, Basic Educational Statistics Survey, 2008
[23]First stage of tertiary practically oriented/occupationally specific

The changes in TVET enrolments may reflect the evolving skills demands in each country. In the Republic of Korea, for example, there has been a dramatic decrease in the share of TVET, which may reflect the rapid expansion of the technology and knowledge intensive sectors resulting in a lower demand for traditional TVET graduates. Japan experienced a similar situation, which also resulted in a lower share of TVET at the upper secondary and tertiary levels. In Viet Nam, the increase in TVET enrolments may be attributed in part to the rapid industrialization of Viet Nam's economy.

In an effort to expand secondary level TVET, some less developed countries such as Lao PDR and Cambodia are considering reforming their secondary education systems to also include the introduction of the vocational stream into general secondary schools. A number of middle-income countries are already active in this area. For example, Malaysia has a multi stream delivery system at the secondary level offering TVET at both general education schools and separate TVET schools. Malaysia's multi stream system ultimately allows for more diversity, focuses on student interests and aims to supply the country with skills and knowledge needed for the labour market. A number of other countries are using new approaches to increase TVET enrolment and the relevance of the curriculum to labour market and community needs. In Victoria, Australia, the education system permits students to easily transfer credits from general education to TVET and vice-versa should a student wish to switch streams. This practice allows greater flexibility for students and thus potentially attracts students to the TVET stream.

Vocationalization of secondary education

Vocationalized secondary education may refer to a curriculum largely general or 'academic' in nature, but including vocational or practical subjects as a minor portion of the students' timetable during the course of secondary schooling. Closely related terms are 'diversified curriculum', 'work orientation', 'practical subjects' in secondary schools and 'pre-vocational education'. The purpose of this approach is to expose more students to vocational education. Vocationalized secondary education can also include several other ways of providing TVET via non-dedicated, non-separated educational streams and institutions. One example is integrated schools providing both general and vocational streams in the same school premises, allowing students to easily switch streams without the necessity of transferring to another school.

TVET at the secondary level has been of particular interest to many countries in the region. At this level, TVET provide pupils who choose direct entry into the labour force with the necessary skills and knowledge required by the labour market. In increasing numbers, especially across industrialised countries, many graduates from secondary level TVET programmes are continuing education after the completion of such studies. However, given a number of factors including the relatively high unit cost of TVET (i.e., setting up specialised technology/vocational classrooms, establishing its material base, hiring, training and retaining technical and vocational teachers), some developing countries are experiencing difficulty expanding TVET at the secondary level. As a solution, they choose to offer TVET programmes through various channels at the general secondary level instead of having it delivered in dedicated vocational schools or centres.

- The case of Japan: In Japan, those who have completed nine-year compulsory education in elementary and lower secondary school may go on to upper secondary school. Upon entering high school, almost all Japanese 15-year-olds take entrance examinations that

determine their placement in academic**,** vocational, or comprehensive high schools, all of which are publicly offered.[24]

- The case of Singapore: In Singapore, secondary education places students in the Special, Express, Normal (Academic) Course or the Normal (Technical) Course according to their performance in the Primary School Leaving Examination (PSLE). The different curricular emphases are designed to match pupils' learning abilities and interests.

- The case of Malaysia case (prior to reform): In Malaysia, technical and vocational education (TVE) begins at the upper secondary level (age 15). Until 2011, dedicated TVE programmes were provided through Secondary Technical/Vocational Schools (STSs). STSs under the MOES offered technical, vocational and skills streams to students who have been streamed into TVE based on the results of the Lower Secondary Assessment (PMR), a test taken prior to lower secondary school graduation.

Figure 11: Diagram of Malaysia's Education System
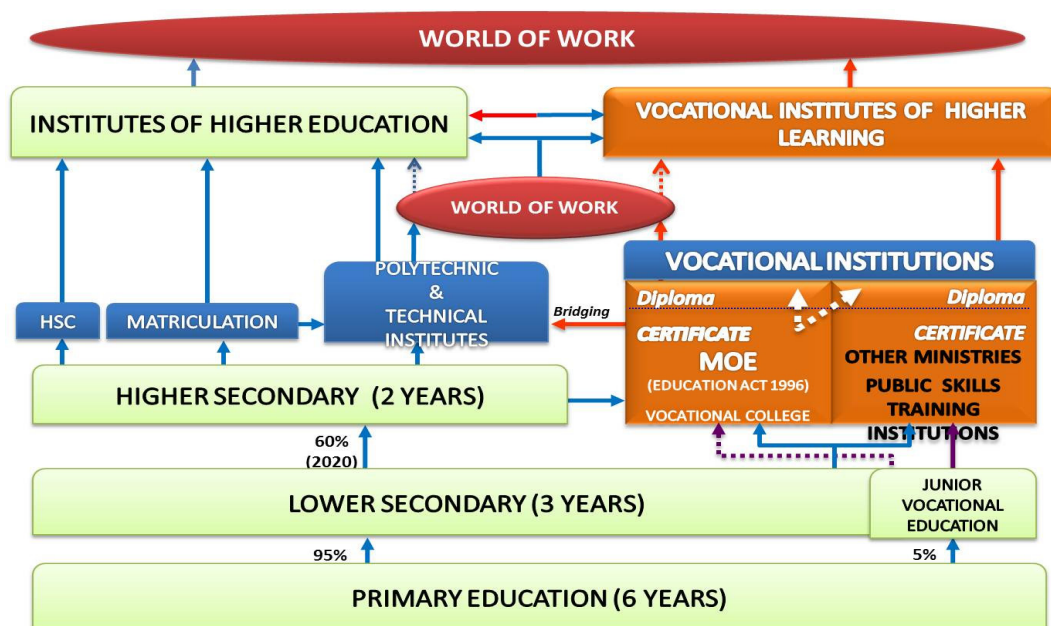
Source: Malaysian Ministry of Education (2011).

- The case of Malaysia (following reform): In 2011, the Malaysian Ministry of Education issued a plan to reform the TVET system in Malaysia under the Transformation of Technical and Vocational Education Plan. The focus of the reforms include:
  - Creation of Vocational Colleges (VCs): By 2020, 274 VCs will be established (182 public VCs under the Ministry of Education)
  - Current STSs under MOES and vocational institutions under other Ministries for upper secondary TVET will be transformed into Vocational Colleges which provide two kinds of TVET programmes: certificate programmes at upper secondary and diploma at post-secondary.

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[24] Further information is available at the US-Japan Centre of Comparative Social Studies: http://www.usjp.org/jpeducation_en/jpEdSystem_en.html

- Creation of Junior Vocational Education (JVE): For youth leaving the education system with only primary certificates offering opportunities to acquire practical life skills.

In short, the current approach clearly targets the expansion of dedicated TVET through combined VC programmes for upper and post-secondary, while abolishing upper secondary pre- or semi-vocational programmes that have not been effective in TVET provision.

2.3.5 Content of TVET at the secondary level

General subjects within TVET curricula

Training for a 'lifelong career' is no longer considered as important as training for 'life-time job security' in many countries across the region. Depending on their stage of development, countries are encouraging the development of both general and specific skills to ensure that students can adapt to the changing labour market. Greater emphasis on the general component of education, particularly in developed countries, has contributed to effective performance within the high productivity sectors. In some secondary schools in the Republic of Korea, academic and vocational students share almost 75 percent of the curriculum. In doing, the Government is opening new pathways for TVET students to higher education (UNESCO, 2005). Increasing convergence between academic and vocational education at the upper-secondary schools and TVET colleges works well for countries at the innovation-driven stage of economic development.

Life skills and core working skills

Another aspect of general TVET subjects is the inclusion of 'life skills' and core working skills in TVET, both formal and non-formal. Incorporation of what is commonly termed core skills, employability skills, generic, key or life skills/competencies into the curriculum helps ensure that young people have the necessary skills or core competencies (ASEM, 2013) to enter and participate in the workforce. In 2006, the Singapore Workforce Development Agency identified ten foundational skills [25] that are applicable across all industries. [26] Courses are offered in these areas particularly for those who do not have any formal qualifications in order to provide an alternative entrance requirement for National Innovation and Technology Certificate (NITEC) courses. Since 2001, qualifications in the Philippines have been based on three types of competencies: basic (generic work skills), common (industry specific) and core (occupation specific). Some examples of basic competencies are: leading workplace communication, leading small teams, developing and practicing negotiation skills, solving problems related to work activities. In the Philippines, life skills were integrated into the Start and Improve Your Business (SIYB) competency standards.

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[25] UNESCO. 2011b. Asia-Pacific Regional Background Paper for the Third International Congress on TVET. Bangkok, UNESCO

[26] Workplace literacy and numeracy; information and communication technologies; problem solving and decision-making; initiative and enterprise; communications and relationship management; lifelong learning; global mindset; self-management; work-related life skills; health and workplace safety.

Recent developments in Continuous Vocational Education and Training (CVET)

The relative weight placed on formal, non-formal, and enterprise-based training vary from country to country. However, it is common to find that formal, school-based training enrols fewer trainees than either non-formal training or enterprise-based training (ADB, 2009). Ideas and efforts to expand the scope for CVET have therefore been made and observed recently.

Enterprise-based vocational training

In addition to TVET offered in secondary schools, TVET institutions or polytechnics provide another important pathway to vocational skills development through various forms of enterprise-based vocational training. Employer-led training brings the benefits of self-regulation and self-financing; however, it is usually not provided on the grounds of equity and therefore requires government interventions to ensure universality of access.

The concept of 'learning organisation' or 'learning company' has also emerged in recent years. The essence of this concept is to use economies of scale in skills development by multinational companies. Typically, a leading firm in a value chain develops standards and programmes for skills development and sometimes even provides facilities and personnel to deliver training. In China for example, according to the statistics from the CASS Institute of Population and Labor Economics, manufacturing productivity improves by 17 percent when workers' education increases for the equivalent of one year. In 2006, the Chinese Society of Education Development Strategy conducted research in eight technological companies with high international competitiveness. The common feature of these companies is the emphasis on staff training and lifelong learning. Investing in human capital, especially in lifelong learning, has become the most fundamental investment in these companies (China PICC, Hua Hong Group Co., Ltd Shanghai, Huawei Technologies, ZTE) (UNESCO, 2011b).

Apprenticeships and dual system

Apprenticeships have long been a tool to provide opportunity to learn on the job and open pathways for employment. Two types of apprenticeships can be observed in ASEAN+6 countries: structured, under the direction of employers and labour organisations, and traditional, which mainly caters for young people out of school who will be trained by master craftspeople in the informal economy.

Structured apprenticeships take a variety of forms across ASEAN+6 countries. In many cases, students take part in training for one or two days a week and are supervised for the rest of the week. Alternatively, training occurs in blocks and for the remainder of the time students are supervised at work. Formal contracts between employers, training organizations and students are common. In Australia, New Zealand and Singapore, this form of apprenticeship is advanced. 'Creative Industry' (CI) Apprenticeships in Singapore, are available in the performing arts, design, public relations, publishing and music and consist of two components: on-the-job training and the compulsory CI Workforce Skills Qualification training programme. Here, apprenticeships last between 3 to 12 months.

In Japan, dual system training programmes are implemented mainly by education/training institutions that have been entrusted to do so by the Employment and Human Resources Development Organization of Japan or a prefectural government. Meanwhile, on-the-job training is offered on a fixed-term. A recipient enterprise employs an untrained person and

provides a combination of practical training at a workplace (practical training conducted in an employment relationship with enterprises, which is referred to as "OJT") and classroom study at education/training institutions (referred to as "Off-JT"). The aim is to facilitate participants in acquiring the skills required for stable employment then obtain regular employment at the recipient or other enterprise. Any recipient enterprise implementing vocational training can receive a grant to offset part of the training costs incurred during the training (Ministry of Health, Labour and Welfare of Japan, 2009).

Table 45 below lists the different forms of apprenticeship/dual system programmes currently in place in ASEAN+6 countries.

Table 45: Existing Apprenticeship/Dual System Programmes in ASEAN+6 Countries

Country	Apprenticeship/dual system programmes
Australia	Australian apprenticeship
Cambodia	Nominal existence
China	Unofficial apprenticeship
India	Apprenticeship under the Statutory Apprenticeship Training Scheme
Indonesia	Apprenticeship in dual form
Malaysia	Apprenticeship programmes implemented by the Ministry of Human Resources (MOHR) in skills training institutions
Philippines	Learnership programme, dual training system, apprenticeship programme

Source: Information collected by UNESCO Bangkok staff.

2.3.6   Quality and relevance of TVET

Demand-driven TVET systems

The characteristics of a country's economy influence workforce requirements, which in turn, should influence TVET provision. A demand responsive training system should address the employer demand. This requires knowledge of labour market needs, incentives for training providers, as well as flexible training delivery. Involvement of employers at all stages of TVET delivery and in the governance structures is equally important to ensure demand-driven TVET.

Many achievements are observed in the area of policy development addressing relevance and efficiency of TVET. The Government of India, for example, has developed and adopted national skills policies along these lines. Its national policy, developed in 2009, focuses on the restructuring of TVET into a demand-driven system guided by the needs of the labour market. In Viet Nam, the TVET system is directed by labour market information and with multi-entry-exit points and flexible delivery. With the aim of innovating the VTE system, the General Department of Vocational Training (GDVT) undertook the development of a new national competency-based curriculum relevant to industry requirements (Ministry of Education and Training, 2006).

As another example, Australia has placed emphasis on greater engagement with industry and employers. Its National Qualification Framework (NQF) brings together major players in TVET – industry, unions, governments, equity groups and practitioners – to oversee and support

quality assurance and to ensure national consistency of TVET across Australia. The new Philippine Development Plan (2011-2016) includes a strategy to improve the effectiveness of the demand-supply match for critical skills and high-level professions through tighter industry-academic links and better dissemination of labour market information as well as career guidance (National Economic and Development Authority, 2011).

Implementation of competency-based learning

Structural economic changes, and in particular the pace of technological change, provides powerful stimulus for many countries in the ASEAN+6 group to undertake TVET curriculum reforms. In this respect, many countries in this review have introduced a competency-based curriculum in TVET to ensure appropriate adaptation to the quickly changing needs of enterprise. Competency based training (CBT) can be seen as training that focuses on the outcome, or in other words, the attained competencies. It uses industry competency standards as the basis for TVET curriculum development. Curriculum is often modular in structure, to provide more flexibility, and includes both on- and off-the-job components. This reform has been geared towards developing skills to comparable standards that employers will recognize. Among ASEAN+6 countries, Australia, Indonesia, Japan, Lao PDR, Republic of Korea, Singapore and Viet Nam have introduced competency-based training standards.

Quality assurance systems and policies

Most ASEAN+6 countries have systems for quality assurance and a qualification framework in place (Table 46). More and more countries have introduced qualifications that are related to competency standards. A Regional Model of Competency Standards has been developed and implemented in Indonesia, Lao PDR and Thailand. These standards foster the mutual recognition of skills and qualifications within the region in key sectors such as manufacturing, tourism, construction and agriculture (ILO, 2011).

Table 46: Overview of Standards, Quality Assurance, Qualifications and Recognition

Country	Qualifications Framework	Quality Assurance	Vocational Certification
Australia	Australian Qualifications Framework (AQF)	Australian Skills Quality Authority (ASQA) Vocational Education and Training (VET) Framework, Australian Quality Training Framework	VET qualification under AQF
Cambodia	National qualifications framework under development		
China	National qualifications framework under development		National Occupational Qualification Certificate
India	National Vocational Education Qualification Framework (NVEQF)	All India Council for Technical Education, (AICTE), Technical Education Quality Improvement Programme (TEQIP)	

Country	Qualifications Framework	Quality Assurance	Vocational Certification
Indonesia	Competency Standards (SKKNI)	National Agency of Professional Certification (NAPC)	Training/Competence Certificate
Japan			Technical Associate, entitled to university entrance
Lao PDR	National qualifications framework under development	Educational Standards and Quality Assurance Centre (ESQAC)	Vocational Education Certificate up to post-secondary level
Malaysia	Malaysian Qualifications Agency (MQA)	MQA in charge of quality assurance of post-secondary TVET and skills training institutions	From Junior Vocational to 4 types of Diploma Certification
Myanmar	Skills standards under development by National Skills Standards Authority (NSSA)		High School Certification, Higher Education Certification
Philippines	National qualifications framework approved in 2005		TESDA Certification for middle-level manpower, Professional Regulatory Commission (PRC) Certification for professionals
Viet Nam	Occupational skills standards	National skills standards system	National accreditation system for schools, Vocational Certification and Diploma

 Source: Information collected by UNESCO Bangkok staff.

The development of the National Qualification System[27] Framework in the region has been led by Australia and New Zealand since the 1990s. The status of national qualification frameworks in the ASEAN+6 countries is presented in Table 47.

Table 47: Status of National Qualification Framework (NQF) in ASEAN+6 Countries

Countries with NQF	
Australia	All sectors, but VET and higher education somewhat separate
Malaysia	All sectors, based on learning outcomes, but early stage of implementation
New Zealand	All sectors, but differences for VET and higher education
Philippines	All sectors included, but sectors managed separately
Singapore	VET only
Thailand	Higher education only
NQF in development	
Brunei Darussalam	Under development
Cambodia	Under development
Lao PDR	Under development

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[27] The term 'qualification system' encompasses all activities a country undertakes in recognition of learning while the national qualification system is said to be an "instrument that classifies qualifications according to a set of criteria" for the levels of learning outcomes achieved (OECD, 2008).

Myanmar	Skills competency framework up to level 4, aiming at developing higher levels
Republic of Korea	Under development
No NQF	
China	None
Indonesia	None, but support for the concept
Japan	None, but likely
Viet Nam	None

Source: UNESCO (2011b), and data for Myanmar was collected by UNESCO Bangkok staff.

Some initiatives have been put in place to improve the TVET quality assurance and qualification frameworks. Most notable are the establishment of comparable national qualification frameworks by the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) Economic Cooperation Work Programme (ECWP) and the TVET quality assurance framework by the East Asia Summit (EAS). Both are aimed at harmonizing regulatory arrangements, principles and standards related to TVET quality and qualification.

Accreditation of TVET providers and certification of TVET programmes

As part of TVET quality assurance, many countries have introduced an accreditation and certification system for TVET. Accreditation refers to the process for ensuring that training providers have the capacity to deliver training programs and adequately manage quality. Certification refers to the documentary evidence that a qualification has been awarded as the outcome of a training programme. The bodies overseeing these tasks however vary greatly depending on the country context.[28] Some countries (for example Australia, India, New Zealand) have different agencies for different levels of education while others have a central agency overseeing all these tasks (for example, Lao PRD, Thailand, Viet Nam).

Monitoring and evaluation

Monitoring and evaluating TVET performance and identifying possibilities for improving its quality and coverage require an understanding of the nature of TVET, its functions, goals and key characteristics. One common but simple tool designed to monitor and evaluate the relevance of technical and vocational training is a tracer study or survey. Tracer studies are commonly conducted by educational institutions with access to graduate contact information. The frequency and coverage of these surveys vary between institutions and countries but very few countries collect information on the labour market situation of students through school administrative processes. The status of selected ASEAN+6 countries in conducting tracer studies is presented in Table 48.

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[28] For an overview of national accrediting and quality assurance body in ASEAN+6 countries, see Table 16 on page 33 of this report.

Table 48: Surveys of Labour Market by Type

Country	Tracer Study	Others
Cambodia	▲	●
India	▲	●
Indonesia	▲	▲
Lao PDR	▲	X
Philippines	▲	X
Viet Nam	X	X

Notes: ● : conducted regularly; ▲: conducted irregularly, ad-hoc basis; X : not implemented
Source: UNESCO (2012f).

2.3.7 Conclusion

Improving education is not only about making sure all children can attend school. Education is also about ensuring young people are prepared for the world beyond their textbooks and beyond the school grounds. Education is about providing youth with the opportunities to find decent work, earn a living, contribute to their communities and societies and fulfil their own unique potential. While the approaches countries take to help youth reach this true potential may vary, a number of emerging trends in education systems across ASEAN+6 countries have also been identified throughout this report and can also be summarised as follows:

(i)   TVET continues to be "unpopular"
Trends in TVET enrolment rates vary across the ASEAN+6 countries. In most countries, the share of TVET has tended to decrease over the past decade. TVET continues to receive relatively low government investment and retains low status within most societies.

(ii)   There is need for strengthened policy guidance, regulatory frameworks, and public-private partnerships
TVET is viewed as a tool for productivity enhancement and poverty reduction. In this regard, governments are putting in place measures to strengthen policy guidance and regulatory frameworks for TVET including expanding partnerships with the private sector. Further improvements are needed to strengthen the alignment of TVET policy with national economic development strategies.

(iii)   A move toward more comprehensive and coherent qualification systems is visible
A growing number of governments are acknowledging the importance of qualifications frameworks to ensure that all academic degrees and vocational qualifications and standards are consistent at a regional level. This, in turn, has created the need for governments to develop common and transparent standards as an important step towards enhancing student and labour mobility and facilitating the integration of national and international labour markets.

(iv)   The is growing momentum for the greater development of TVET quality assurance systems
Quality assurance initiatives, not only for TVET institutions but also for teaching staff through accreditation processes are increasing across ASEAN+6. Different agencies, both national and regional, have been established for accreditation purposes.

(v)   *The demarcation between TVET and general education is increasingly blurred*
A trend moving both towards the "vocationalisation" of general education and towards the "generalisation" of vocational education can be noted in some countries. As ASEAN+6 economies become increasingly knowledge-based, vocational students need a general all-round grounding to accompany their specific vocational education. Generic skills seem increasingly important, given the ever-changing skills requirements that modern society demands. At the same time, general education is becoming increasingly vocationalised.

(vi)   *There is limited opportunity for workplace training*
Many employers, especially in less developed countries, fail to invest in training their staff. Limited provision of employee development opportunities may serve as a limiting factor to national growth and economic development. There is strong need for workplace training given its practical role in strengthening work skills.

(vii)   *TVET information systems and information and guidance services are limited*
Sound labour market information (LMI) and analysis are among the requirements for the introduction of a demand-driven TVET. LMI and analysis are essential tools for skills needs monitoring. Data used should be reliable and up to date if it is to provide the basis for TVET policy evaluation and programme development. Household-based labour force surveys are the main sources of information.

(viii)   *A lack of skills gaps studies exists*
In most countries, nationwide employer surveys on specific skills needs, such as vacancy surveys, are rare, tend to be conducted irregularly, or are only conducted in certain provinces or sectors. There is limited awareness among national policy makers of collecting more detailed skills needs data. The history of national level data collection in the region is relatively short and some countries have yet to conduct labour force surveys on a regular basis.

(ix)   *There is a lack of effective monitoring and evaluation in TVET*
The carrying out of graduate tracer studies is still not widely practiced in most developing countries. There is a lack of awareness among some governments of the need for data and therefore lack of commitment to collecting data.

3. What Lessons can be Learnt?

This report has explored major trends in the ASEAN+6 education systems, leaving space for policy makers and education ministry staff to draw lessons based on their own national development context and needs. Indeed, further in-depth analysis may be required to support in this process. While a one-size-fits-all model for improving education systems is not feasible and is by no means the objective of this review, this report provides a general indication of what measures may strengthen education systems in the region based on the collective successes and experiences of countries under review. These measures are summarised below.

Clear vision and commitment to implementation

- Clear policy vision is critical to any successful development strategy. This vision needs to be founded on broad-based consensus among stakeholders and must facilitate coordination across sectors to accomplish shared goals.
- The translation of vision into realistic actions and targets so as to attain and monitor short, medium, and long term objectives is also critical.
- Investment of time and effort to create a clear vision and a mechanism for translating that vision into achievable actions at the national or sectoral level will have huge operational paybacks.

Alignment and consistency of policies

- Policies should reflect a common vision for sector development and fit generally within the overarching framework for national development. Successful policies and plans are invariably consistent in scope, goals and actions; plans and budgets should align so as to support both effective implementation and monitoring of education reform.
- All educational policies and programmes need to be coordinated within the education sector and with other concerned ministries such as those dealing with economic development, human resource development, labour, science and technology, agriculture, etc.
- A national, cross-ministerial coordinating agency or committee can facilitate this process, harmonize the programme, and promote the sharing of knowledge and resources. This is very much the case for technical and vocational education and training as the subsector often involves many agencies in both regulation and delivery of services. A more streamlined government body to manage, coordinate and monitor the education sector may be an alternative whereby only one or a limited number of ministries exist.

Focus on equity, quality and relevance

- In many countries, there is still great need to improve the quality of education at all levels in line with national and international standards, while ensuring access to education for the most vulnerable and disadvantaged groups. Strengthening management systems, including targeted support to the disadvantaged groups, equitable and sustainable public financing, and a sufficient supply of qualified school leadership and professional staff, is critical to ensuring equity and quality in education.

- There is also a need to improve the vocational and higher education system in many countries. Building on progress achieved in basic education, countries will benefit from strengthening other levels of education if they are to have a well-educated and skilled population with the capacity to contribute effectively to the country's development.
- Appropriate skills are essential for an economy in transition be it to the next level of development or in an effort to increase its knowledge-based sectors. The skills that need to be nurtured are to respond not only to the current needs but also to currently non-existent needs in the context of rapid change, which require providing a right mix of transferable and specific skills and competencies.

Robust policy responses to cater for diverse learning needs

- The demographic profile of ASEAN+6 countries is changing as a result of bulging youth populations, ageing populations and increased intra-regional mobility. Education systems need to provide high quality, relevant education and training which can help people make good life choices as they transition through different stages of life.
- Education systems have to cater for the multiple learning needs and circumstances of young people by promoting flexibility and respect for diversity so as to achieve essential core standards of quality and a maximum level of inclusiveness.
- They must also cater for older people who now tend to live longer and will thus need to live healthier and more self-sustainable lives.

Partnerships

- Successful implementation of education policies and reforms rely greatly on partnerships with a number of different stakeholders: governments, the private sector, civil society and bilateral and multilateral organizations.
- Moreover, cooperation at national and regional levels in a collaborative, constructive and mutually supportive manner leads to more responsive, enabling and participatory planning, implementation and execution of policies.
- Government leadership is key to successful partnership and ownership of education reform and development, which calls for priority attention to strengthening the capacity of national organizations and institutions.

Benchmarking and monitoring of outcomes

- National education data is crucial to evidence-based policy making and successful monitoring and evaluation of education system performance.
- The establishment of benchmarks against which the progress of a programme or the performance of an education system can be monitored and compared can be an important step to improve education policy and practice.

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