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Framing the ASEAN Socio-Cultural Community (ASCC) Post 2015: Quality and Equity Issues in Investing in Basic Education in ASEAN

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Abstract*: The paper starts with a survey on the role of basic education in society. Basic education promotes social cohesion, cultural appreciation, and civic consciousness, and bestows economic benefits to individuals and society. Although basic education does not fit into the strict conditions of public goods, governments are willing to finance and even directly operate schools because of its extensive spillover effects. Thus, it can be considered as a public good by design. The paper reviews the quality and equity considerations in the provision of basic education in the Association of Southeast Asian Nations (ASEAN) as well as the regional and national initiatives in addressing universal access and improving quality of basic education. The paper concludes with a discussion on the major issues confronting basic education and recommends the improvement of participation rates and survival rates by using developments in information and communications technology (ICT) and alternative mechanisms of financing and delivery. In addition, avenues for regional cooperation in improving quality of basic education can be done through capacity building and sharing of best practices rather than efforts towards standardisation.*

Keywords: ASEAN Socio-Cultural Community; education quality; education indicators; public-private partnership in education

JEL Classification: H520, I210, I250, I280

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1. Introduction

The socio-cultural dimension is a major pillar in the establishment of the ASEAN community. The ASEAN is not only an association of governments, business enterprises, and non-government organisations but is also an exercise in building and strengthening the relationships amongst peoples in the region. Building a community is not premised because these peoples are geographically situated in the same region but because they have interacted in the past and they continue to actively work together in various spheres. These prior and existing relationships serve as building blocks in the formation of a regional community in the future. Given the diverse social, demographic, and cultural backgrounds of the peoples in the region, building an ASEAN community should begin with the recognition and appreciation of the differences of peoples, proceed with the celebration of their commonalities, and finally work together towards a shared vision for its people in the region.

A major component of the socio-cultural pillar of the ASEAN community is human resource development. As a region of more than 600 million people, the development of people in the ASEAN can serve as a major input that can further fuel economic dynamism and material prosperity. Human resource development can prepare people not only to become productive workers but also to become prime movers of society – informed citizens and culturally aware. Thus, human resource development covers various components including health, nutrition, education, and employment. Education starts with basic education, transits to technical and higher education, and completes with the assignment of roles in society and the workplace.

The paper deals with basic education as a major component of human resource development. The development of people is not just to fulfil the manpower requirements of a growing economy but also to hone responsible and informed citizens of the community, the country and the region. The foundation of human and social capital starts with the family and transcends to basic education. Basic education is not just for the development of human capital but also for building a civil society, and the inculcation of an appreciation of one's culture that is handed down from generation to the next. For social development, the roles of individuals in societies are learned in basic education. The norms of society, basic numeracy, literacy, cultural

heritage, social roles, and many more are likewise learned in schools. Young students in civics are exposed to their political rights and responsibilities as citizens, voters, and taxpayers. Moreover, pupils learn their future socio-economic roles in subjects like Social Studies and vocational education. Art appreciation and literature, on the other hand, inculcate awareness of the cultural heritage of their people, community, and country.

Given this backdrop, there is a need to review the state of ASCC in the light of the vision for ASCC. A number of targets have been identified and we want to know the extent to which these targets have been achieved. But we have to understand that we are building a community, not just accomplishing targets. Thus, the purpose of this thought paper is to focus on the socio-cultural dimension and how this dimension is contributing to the formation, stability, and development of the ASEAN community.

In the light of the importance of basic education in human resource development and as a major tool in the socialisation process that ultimately contributes in building the socio-cultural community of the ASEAN, the following are the objectives of the paper:

i. Probe into the role of the socio-cultural dimension in the development process and in establishing a regional community;
ii. Examine the role of basic education in the socio-cultural development of a country;
iii. Analyse the role of government in the provision of basic education;
iv. Investigate the quality and equity issues in the provision of basic education in the ASEAN;
v. Inquire into the role of technology in addressing quality and equity issues in basic education in the ASEAN;
vi. Propose various regional cooperative measures in addressing quality and equity issues in basic education in the ASEAN; and
vii. Recommend measures, perspectives, and targets that would enhance ASCC post 2015.

2. Role of Basic Education in Social and Cultural Development

2.1. Education is a Social Mechanism for Social Maintenance, Differentiation, and Development

Education provides a myriad of benefits to a person, his household, his community, and ultimately his country. In terms of economic benefits, education raises the productivity of a person because of the increase in his knowledge and skills, which in turn increases his earning capacity and improves income distribution (Xiao, 2001; Mincer, 1974; Becker, 1964; Tullao and Cabuay, 2013; as cited in Tullao, Cabuay, and Hofilena, 2014). Economic studies primarily focus on the role of education on a person's productivity and hence his employability. But the role of education is initially geared towards personal development. The personal development of an individual, according to Plato in the *Republic*, focuses on building his character as much as his intelligence so he may contribute not only to the growth of the economy but also towards the foundation of a just society (Young Adult Learners Partnership [YALP] 2003). Education enables a person to become a responsible and productive member of society. This is the primary reason governments provide individuals access to capital for primary and secondary education – because the gains from education not only accrue to the individual or his household, but also to society (Friedman 1955). This same perspective may also be seen in progressive education thinking influenced by John Dewey (YALP, 2003). Progressive education is characterised by informal learning and personal and social development, a learner being able to learn from experience.

However, there are various benefits, both market and non-market, of educating citizens, particularly young children. Perhaps the most conspicuous benefit to the individual is the attainment of some basic level of knowledge and skills.

Basic education also results in a host of effects that go beyond the individual and his or her household. Haveman and Wolfe (2002) write that the effects of education are not only reflected in terms of improved labour market returns of the schooled individual and that looking solely at this view neglects the 'external and public-good-type benefits' of education (p.103). They list the following as pure public benefits due

to schooling (p.106): technological change, social cohesion, and crime prevention. At the same time, the following partly external and public outcomes were observed to have improved due to education (pp.104–106): intra-family productivity, level of education and cognitive development, health, fertility, consumer choice efficiency, and savings.

Another role of education is enabling individuals to strengthen and contribute to a country's social capital in a way that it keeps society together. The social capital in a country is made up of 'social and community networks, civic engagement, local identity, a sense of belonging and solidarity with other community members, norms of trust, and reciprocal help and support' (YALP, 2003). Social capital may be instilled and generated through younger people as long as they are well-informed – that is, they are educated in the ways of norms and sanctions, trust, and the importance of keeping networks and relationships. Education helps form social capital and helps develop culture, a norm or a network that binds people together.

2.2. Importance of basic education in building the ASEAN Socio-Cultural Community

Governments have an important role in promoting access to basic education as this provides the minimum degree of literacy and knowledge needed by individuals to become good, productive citizens (Friedman 1955). The gains of education accrue not only to the child but also to society through a neighbourhood effect. This means that when individuals are educated, they become productive and contribute not only to the economy but to the betterment of society as well. Not only will their knowledge and skill give them higher earnings, thus narrowing income gaps and alleviating poverty, but their better character and attitude will lead to the promotion of peace and harmony amongst societies. These educated citizens are integral to the success of the ASCC.

2.3. The ASEAN Socio-Cultural Community Blueprint

The ASCC is the culmination of the third pillar of the ASEAN community which is a socio-cultural community aimed at ensuring peace, stability, and prosperity in the region (ASEAN Secretariat 2009). The mission of the ASCC is to help realise an ASEAN community that is people-centred and collectively responsible; promote

peace, freedom, harmony, solidarity, and unity; forge a common identity for the ASEAN; foster cooperation, human and social development, and gender equality; and respect the various cultures, languages, and religions in the region. The ASCC enhances cooperative activities to promote sustainable development and to improve the quality of life of its people.

The ASCC has six primary characteristics (ASEAN Secretariat 2009):

1.) Human development;
2.) Social welfare and protection;
3.) Social justice and rights;
4.) Ensuring environmental sustainability;
5.) Building the ASEAN identity; and
6.) Narrowing the development gap.

The development of basic education in the region is highly relevant to human development. The ASEAN aims to enhance the livelihood of the people through investing in education and life-long learning, human resource training and capacity building, spurring innovation and entrepreneurship, promoting English as a common language, and using ICT to facilitate socio-economic development (ASEAN Secretariat 2009).

ASCC Blueprint: The progress of the human development characteristic

2.3.1. Targets

In advancing and prioritising education, the ASEAN committed to the following actions concerning basic education (lifted directly from the ASCC Blueprint; ASEAN Secretariat 2009):

- 'Achieve universal access to primary education across ASEAN by 2015 with priorities to eradicate illiteracy and to ensure compulsory primary education for all and gender equality in education, through advocating for equal opportunity in education regardless of social class, geography ethnicity, background or physical disabilities, with 70 percent target benchmark achieved by the end of 2011;
- 'Improve the quality and adaptability of education, including technical/vocational/skills training education in the ASEAN region by developing a technical assistance programme including training for teaching

staff and staff exchange programme at higher education level for this purpose by 2009, in particular CLMV;

- 'Use ICT to promote education and life-long learning, particularly in underserved communities through open, distance education, and e-learning;
- 'Promote equal access to education for women and girls, and enhance the exchange of best practices on gender-sensitive school curriculum;
- 'Include the teaching of common values and cultural heritage in school curricula and develop teaching materials and capability for this purpose starting in 2008;
- 'Establish ASEAN university games, ASEAN youth peace corps, ASEAN computer games and ASEAN Science Olympiad to promote greater interaction and understanding among the youths in the region;
- 'Work towards the establishment of an ASEAN Youth Programme Fund to fund the various youth projects and activities in ASEAN;
- 'Establish platforms for networking and sharing of best practices on ASEAN children and youth development strategies and tools;
- 'Exchange of cultural performers and scholars among Member States through education system to give greater access and understanding of the different cultures of ASEAN Member States;
- 'Support the citizens of Member States to become proficient in the English language, so that the citizens of the ASEAN region are able to communicate directly with one another and participate in the broader international community; and
- 'Promote life-long learning'.

2.3.2. Progress so far

The implementation of the human development characteristic has improved over the years in terms of the access and quality of education (ASEAN Secretariat 2014a). According to the ASEAN Secretariat (2014), 'the preponderance of projects implemented is at the confidence-building or at joint efforts level, focusing on human capacity enhancement'. ASEAN sectoral bodies have partnered with many dialogue partners for the financing and the enforcement of key programmes for socio-cultural development.

In terms of access, education has been made more available to more children in each ASEAN country. Youth literacy ratios have been improving in general for the region, as well as the number and ratio of female students who are enrolled in basic education. In general, net participation rates have improved and are generally higher than the world average. This implies that children in the region are gaining more and

more access to educational opportunities. This is of course in light of the national and regional initiatives that the region is taking to promote basic education. A more detailed discussion is presented in Part 5.

In terms of quality of education, pupil–teacher ratios across the ASEAN have improved and are lower than world averages, though this is not for all ASEAN countries. This is a good indication that the teachers are spread in good proportion and are able to focus on their students' education. At the same time, necessary accreditation and assessments are in place to ensure that these teachers can deliver quality education. In terms of the quality of outputs, the survival rates in basic education are varied across countries, indicating that not all in the region are able to complete the cycle of basic education.

As for the use of ICT in education, several initiatives across the ASEAN are already in place and have already been recorded and supported by institutions like the Southeast Asian Ministers of Education Organization (SEAMEO) Regional Center for Innovation and Technology (SEAMEO INNOTECH), and the International Council for Open and Distance Education (ICDE). These ICT initiatives range from Massive Open Online courses (MOOCs) which enable students to take subjects online; Open Educational Resources (OER) which upload teaching materials such as filmed lectures, readings, and problem sets online; distance education; tapes; and videos. A more detailed discussion is available in Parts 4 and 5.

The ASEAN has formed many institutions devoted to implementing programmes for the development of the socio-cultural dimension in children. One is the ASEAN Ministers Responsible for Culture and Arts which promotes ASEAN awareness, community, cultural creativity and industry, and preserves cultural heritage (ASEAN Secretariat 2014b). The main body for culture is the ASEAN Committee on Culture and Information which is comprised of representatives from the Ministries of Foreign Affairs, Ministries of Culture and Information, national radio and television networks, museums, archives, and libraries aimed at promoting cooperation amongst ASEAN member countries in their cultural projects and activities (ASEAN Secretariat 2014b). The ASEAN Sectoral Body on Sports enforced the ASEAN Ministerial Meeting on Sports which promotes greater interaction, healthier lifestyles, peace and stability, sportsmanship, competitiveness, and a culture of excellence in sports amongst ASEAN peoples (ASEAN Secretariat 2014b). The ASEAN Education Ministers

Meeting (ASED) was agreed to be held on a regular basis by the region's education ministers to focus on cooperation in education, promoting awareness amongst the youth, strengthening identity, and building the region's human resources. ASED works in cooperation with SEAMEO to achieve this. Youth matters are generally taken care of by the ASEAN Senior Officials on Youth and, more generally, the ASEAN Ministerial Meeting on Youth which enhances awareness and civic responsibility amongst the youth and promotes employability.

2.3.3. Remaining issues

The ASEAN still faces issues regarding the quality of and access to education. Despite improvements, there are still impediments to access to basic education such as the lack of school facilities (school buildings, classrooms, textbooks) in developing countries in light of insufficient public funding. Though there are many teachers in the region and the pupil-teacher ratio is generally good, the teachers still experience difficulty in reaching students in remote areas. The disparate distribution of the population across provinces does not make the task easier. At the same time, the compensation of teachers tends to be on the lower side of the scale in some ASEAN countries. The varying conditions of households such as poverty, as well as the decisions of parents to make their children take up jobs instead of sending them to school have also impeded the access to education.

3. The Role of the Government in Providing Basic Education

This section describes the predominant view of basic education as a public good. We begin by providing a sketch of the motivations for the public provision of education, leading to the rise of the 'Education for All' (EFA) movement, and how these are rooted in the theory of public goods. We conclude this section with a discussion on the public–private nexus in education.

3.1. Motivations for the Public Provision of Education

The importance of education to a country can be observed even through a cursory glance at the expenditures incurred by its government in its provision. Indeed, amongst ASEAN Member States (AMSs), government expenditure on education averages close to five percent of gross domestic product, with governments allotting an average of 13 percent of their budgets to education (See Table 1). This implies that the provision of education has become ubiquitous in modern societies.

This section provides a sketch of why the government has a role in providing education and how this is primarily due to the benefits to be had from education. Boli, *et al.* (1985) write that aside from an individual's nationality, education is perhaps the most significant contributor to his or her social status and life chances. The rise of mass education was also due to the perceived notion that education was the panacea to the societal problems that emerged in the drive towards industrialisation (Menashy, 2011). Industrialisation has also put to the fore the increasing need for well-skilled labour, which is also deemed an important factor contributing to the 'massification' of education (Katz, 1976). Of course, the basic proposition that education improves productivity and efficiency is owed to Adam Smith (1776, 2003). Education was also used as a tool for socialisation, thus providing an added impetus for its widespread provision. As Katz (1976, p. 394) asserts, schools were used as 'agents of cultural standardization.' At the same time, schooling was also used to mold students into the type of citizens that society desires (Boli, *et al.*, 1985). With the rise of the human capital theory proposed by Becker (1964, 1993), countries started to pursue the widespread provision of education with a view towards increasing national productivity and shifting economic development onto a higher plane.

Table 1: Government Expenditure on Education

Country	% of GDP	% of total budget
Brunei Darussalam (2009)	3.45	9.67
Cambodia (2012, 2010)	3.10	13.08
Indonesia (2012)	3.61	18.09
Lao PDR (2011, 2010)	4.93	13.22
Malaysia (2012, 2011)	5.89	20.89
Myanmar (2010, 2011)	8.37	4.42
Philippines (2009)	2.65	13.21
Singapore (2013)	3.05	n/a
Thailand (2012)	7.57	n/a
Viet Nam (2010, 2009)	6.29	12.49

Notes: GDP - gross domestic product;
The years in parentheses denote the year of the latest data in the two columns, respectively
Source: UNESCO Institute of Statistics (2014).

There are two primary motivations for the public provision of education: (i) its contribution to the accumulation of human capital and thereby economic growth and development; and (ii) its role in the process of socialisation (Menashy, 2011). The broad appeal of these motivations is evidenced by the near universal acceptance of the tenets of EFA, which aims to ensure that 'by 2015, all children, particularly girls, children in difficult circumstances, and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality' (UNESCO, 2000, p. 8). On the ASEAN front, the ASCC Blueprint has made it its goal to achieve universal access to primary education by 2015 (ASEAN, 2012).

3.2. Education as a Public Good

The motivations for the public provision education cited above are rooted in the theory of public goods and how this has evolved to the modern concept of 'global public goods.' As a result, the provision of basic education may be insufficient if left

to private individuals, thus necessitating government intervention if its social benefits are to be reaped.

The origin of the theory of public goods is owed to Samuelson (1954) who proposed that a public good is such that, when produced for some consumers, may be consumed by others without any extra costs. A modern interpretation of this characteristic is that an individual's consumption of a public good does not diminish the consumption of another. A second characteristic is typically added: Once a public good is produced, no consumer may be excluded from its consumption (Holcombe, 1997). Collectively, these two characteristics are generally termed as *non-rivalry* and *non-excludability* respectively. Because of these characteristics, the market cannot efficiently provide these goods, justifying the entry of the government for their provision.

Following this classical definition of a public good, education, then, is not a public good. Indeed, a child can take up one space in a school (or school system for that matter) to the exclusion of other students. At the same time, it is widely held in the literature that larger sizes of classes or the school system may have a deleterious effect on student performance (see, for example, Welsh and Zimmer, 2014; Whitehurst and Chingos, 2011; and Wössmann and West, 2002). In this example, education is viewed as a rivalry, with more students diminishing the quality of education 'consumed' by other students. Finally, following Samuelson's (1954) original definition, if education were to be considered a public good, having more students should not make the provision of education more costly. In reality, however, Howard (2001) writes that the costs of education go up as more students partake of it. In the light of these issues, education is then defined as a private good. Levin (1987) also writes that the private benefits of education are so substantial that that even without government intervention, the private provision of education should be tenable.

Because of the benefits accruing to society due to expanding the provision of education, it may then be viewed as a public good (Levin, 1987). Of course, this definition only applies if education were to be looked at from a broader perspective – that is, if one looks beyond the traditional definition proposed by the theory and considers those who are affected by the provision of education. In this case, the benefits are consumable by the public in general.

Recent pieces of research have thus begun to broaden the classical definition of a public good. Kaul and Mendoza (2003) write that society can actually modify the benefits of a particular (say, private) good through policy decisions to imbibe it with a public good character. The authors provide the example of land, which is both rival and excludable, but could be imbibed with a public good character if it were declared as open space. Following this recasting of the theory of public goods, education may then be thought of as being made public by design. From being a private good to educated individuals, various governments around the world have adopted policies to make education non-exclusive (thanks to the goal of EFA) in order for society to benefit in terms of increased growth and better potentials for development. The former situation may be described as 'rival goods made non-exclusive' whilst the latter as having the characteristics of a 'pure public good' (Kaul and Mendoza, 2003, p. 83).

Finally, Menashy (2011) writes that education may be described as a global public good particularly because the forces of globalisation have led to the benefits of education transcending borders. The author writes that because of this, international policies such as the EFA movement and the MDG on achieving universal public education 'aim to make education a global public good' (p. 99). Indeed, both the EFA and the particular MDG on universal public education essentially call on national governments to make education non-exclusive and a 'national public good' (p.99) and, indirectly, a global public good. In this case, where international development agencies are now actively promoting basic education as a global public good, Deneulin and Townsend (2007; as cited in Menashy 2011) contend that the extent to which a populace's access to education is also now dependent on international initiatives and funding rather than solely on their national government's policies.

Following economic theory, individuals do not necessarily take into account the public benefits of education when deciding whether to partake of education and in what quantities. The problem with this situation is that families decide to maximise their private welfare. In this case, underinvestment in education may occur (e.g. in years of schooling or school quality). In such a case, the positive benefits accruing to the individual, in terms of improved economic returns, and to society, in terms of higher economic growth, lower poverty, reduced crime, and better health outcomes,

are diminished. In other words, market failures are said to occur. Whilst estimates of the effect of additional schooling are scant, it may be said that the effects may potentially be considerable. Haveman and Wolfe (2002) write that when all the social gains of education are taken into account, the social rate of return owing to an additional year of education may potentially be double the private economic rates of return to education. This is a key result because 'few other public or private investments seem able to claim returns of this magnitude' (p.119). Because the private calculus of net benefits by individuals does not capture the social benefits of education, government intervention is then necessary to ensure that there are adequate investments in basic education – investments that redound, ultimately, to the good of the public at large.

3.3. The Public–private Nexus in Basic Education

As shown in the previous section, the benefits due to schooling do not accrue solely to the student and his or her household. Education causes positive spillovers to society in general. It is this positive externality that causes the marginal social benefit of education to be greater than its marginal private benefit. Because individuals are unable to (or actually do not) take into account the value of the positive externality, private provision of education will be lacking.

In the presence of externalities, the socially optimal level of schooling is one where the marginal social cost is equal to the marginal social benefit. However, the family's valuation of some level of schooling is typically less than the social cost of providing it. Thus, there is a disparity between what education is worth to a student and his or her household, and what that same education level is worth to society. In this case, if the education providers were only offered the household's desired price, the student would be turned away. This is the standard problem faced when dealing with the provision of education.

Typically, the government is looked at to fill in the gaps in the provision of basic education in order for society to fully reap the benefits of schooling. In the case above, it may well be that the government steps in to bridge the funding gap by offering a top-up tuition subsidy. With the subsidy, the socially optimum level of education will be provided because the costs of its provision are adequately covered and the student will pay exactly equal to the benefit he or she will receive from the

particular education level. Of course, in this example, the government does not actually have to provide the service. Private provision of education may exist provided that some form of government assistance also exists alongside it.

Patrinos, *et al.* (2009) write that to ensure not only access but also high-quality education, innovations in programmes and initiatives, which could be offered by the private sector, are required. They further put forward that the public and private sectors may band together to complement each other's strengths in the provision of educational services and in meeting the EFA goals. This section will borrow heavily from Patrinos, *et al.* (2009) in order to outline the various ways by which the public and private sectors can partner with each other in providing education.

Beyond the private operation of schools, there are other ways by which the public and private sectors can work together in education. Figure 1 below shows the possible public–private partnerships (PPPs) depending on the financing and operation of schools. These range from pure public provision to publicly financed but privately operated.

Figure 1: Financing and Operation of Schools in Public–Private Partnerships

		Operation	
		Private	**Public**
Finance	**Private**	• Private schools • Private universities • Home schooling • Tutoring	• User fees • Student loans
	Public	• Vouchers • Contract schools • Charter schools • Contracting out	• Public schools • Public universities

Source: Patrinos, *et al.* (2009).

The next section will illustrate that the provision of basic education in the ASEAN is still mostly publicly financed and publicly operated. However, privately financed and privately operated schools (i.e., private schools) do exist and, in some ASEAN countries, these private schools matriculate students via vouchers and

subsidies. In this latter case, provision is publicly financed via privately operated schools.

As mentioned earlier, the primary reason for entering into PPPs is to alleviate the constraints faced by governments in the provision of education. In addition, the theory states that there are four main arguments in favour of PPPs in education (Patrinos, *et al.* 2009):

1. The creation of competition in the market for education: The public sector has an incentive to raise quality to meet the challenges posed by the private sector entrants.
2. The increased flexibility afforded by PPP contracts: Government contracts and regulations, particularly for hiring and procurement, tend to be inflexible and this could be alleviated by public–private contracts.
3. The open-bidding processes that can allow the government to define specific requirements regarding the quality of the education required from the supplier: The quality of education provided may be increased because private contracts typically have measurable outcomes and include stipulations that define the quality of education that should be provided.
4. The increased risk-sharing between the government and private sectors: Risk-sharing is expected to increase the efficiency of service delivery and should increase the resources harnessed for education.

Table 2 below shows the expected effects of the different PPPs on the main education objectives of: (i) increasing enrolment, (ii) improving education outcomes, (iii) reducing education inequality, and (iv) reducing costs.

Table 2: Expected Effects of Different Public–Private Partnerships on Four Main Education Objectives

Contract	Effect on increasing enrolment	Effect on improving education outcomes	Effect on reducing education inequality	Effect on reducing costs
Vouchers	Strong: number of students who receive voucher	Strong: school choice	Strong when targeted	Strong when private sector is more efficient
Subsidies	Strong: use of already built private infrastructure	Moderate: limited by available places and quality of service delivered in the private sector	Strong when targeted	Moderate
Private management and operations	Moderate: limited by the supply of private school operators	Moderate: limited by available places in the private sector	Strong when targeted	Moderate
Private finance initiatives	Moderate: limited by financial constraints	Low	Strong when targeted	Strong

Source: Patrinos, *et al.* (2009, p.32).

The succeeding section will show that, of the four models highlighted in Table 2 above, systems of vouchers and subsidies are primarily employed in the ASEAN.

3.4. Public–private Partnerships in Basic Education in ASEAN

In the previous section, we established the role of government in the provision of basic education, particularly to ensure some socially optimal level of enrolment, so that the social benefit of education can be maximised. At the same time, we also mentioned that there are benefits to be had from engaging into PPPs in education. The primary gain is the alleviation of the resource and regulatory constraints inherent in the government provision of goods and services. In this section, we will show that certain AMSs have individually recognised these potential gains and have started to enter into these partnerships in terms of financing and operation of their respective basic education systems. Whenever possible, we also include evaluations of these various modes for particular AMSs.

It should be mentioned at this point, however, that for all the AMSs, there is a national governmental body which requires that the teaching or learning content must comply with some national curriculum or minimum standards for basic education,

regardless of whether the institution is private or public. This shows the considerable role, at least in terms of oversight, that governments play in education amongst the AMSs.

In terms of financing, it was shown earlier that many governments in ASEAN spend more than a tenth of their budgets on education. In terms of enrolment, the state also plays a sizeable role (see Table 3). Indeed, for all AMSs, between 60 to 99 percent of primary or secondary schooling is provided by the state through public schools. However, an interesting aspect to note is that over the past decade or so, the share of enrolment in private schools in primary and secondary education has also been growing considerably.

Table 3: Enrolment in Private Schools

	% of total primary			% of total secondary		
Country	**1998**	**2012**	**% Change**	**1998**	**2012**	**% Change**
Brunei Darussalam	35.54	37.27	4.87	11.62	14.80	27.45
Cambodia[a]	1.57	2.38	51.52	0.54	1.97	266.42
Indonesia	17.98	17.33	-3.64	45.20	41.71	-7.72
Lao PDR	2.11	4.13	95.90	0.68	3.14	361.03
Malaysia[b]	0.89	1.53	70.93	6.49	4.68	-27.92
Myanmar		n/a			n/a	
Philippines[c]	7.60	8.13	6.92	27.99	19.84	-29.12
Singapore[d]	5.33	7.59	42.29	5.89	6.37	8.19
Thailand	13.29	19.87	49.50	9.10	16.40	80.13
Viet Nam[a]	0.31	0.55	79.16		n/a	

Notes: [a]1999–2012, [b]1998–2011, [c]1998–2009, and [d]2007–2009
Source: World Development Indicators (2014).

The table above shows that in Cambodia, Lao PDR, Malaysia, and Viet Nam, the share of enrolment in private schools have not even breached five percent, with the share of private enrolment in secondary schooling even declining by 28 percent in Malaysia. However, for the rest of the countries mentioned, the percentage increase in private enrolment has been considerable. For the rest of the AMSs in Table 3, the share of private enrolment in either primary or secondary schooling is between eight

percent (as in the Philippines and Singapore in primary schooling in 2009) to as high as 42 percent (as is the case in secondary school enrolment in Indonesia in 2012).

Of all the four countries mentioned in the previous paragraph, all but Cambodia explicitly encourage the establishment of private schools in their constitutions and other laws. Their establishment is fostered via government support such as preferential loans (as in Lao PDR and Viet Nam), tax exemption on income (Lao PDR), and capital costs (Malaysia), and preferential policies on land fees, insurance, and the like (Viet Nam) (UNESCO 2007, 2008a, 2008b, 2009b, 2010, 2011a). In these countries, there are no subsidies or contributions provided by the state. This is in contrast to the cases cited below for the Philippines, Thailand, and Brunei Darussalam where there are relatively sizeable private enrolments in education.

A common example of PPP in Asia is the Educational Services Contracting (ESC) scheme of the Philippines where the government enters into contracts with private schools for the provision of secondary education. The general principles of the ESC are to: (i) democratise and improve access to secondary schooling; and (ii) demonstrate a strong relationship between the public and private sectors (Fund for Assistance to Private Education [FAPE] 2014b). In particular, the programme aims to reduce the size of classes in public schools in order to improve the learning environment and, at the same time, use the slack capacities of private schools, both for teachers and infrastructure such as classrooms. In addition, the programme is also said to aim for the improvement of the economic viability of private secondary schools. The ESC scheme is jointly administered by FAPE and the Department of Education. The programme was formally launched in 1986 to address the perennial shortages in spaces for high school students. According to LaRocque and Lee (2011), the Philippines' ESC scheme is 'one of the largest educational service-delivery programmes in the world' (p.22).

The ESC programme has two main components: (i) a subsidy for deserving elementary graduates who opt to enroll in private secondary schools; and (ii) a subsidy for salaries of teachers who teach ESC grantees, which is given to participating schools. As of school year 2014–2015, the subsidy from years one through three of high school is pegged at Php6,500.00 (USD146.40) per student per year whilst the subsidy for year four of high school currently stands at Php5,500.00

(USD123.90) per student per year. The amount of subsidy for teachers with ESC students is Php1,000.00 (USD22.50) per month (FAPE 2014b).

Based on an evaluation by Alba (2010), the ESC scheme was found to be a lower-cost alternative vis-à-vis the direct government provision of secondary education, with the per student cost under the ESC scheme amounting to about 60 percent that of what a public high school student costs the government (as of school year 2008–2009). Because the subsidy is not meant to shoulder the entire cost of private secondary education of a student, ESC grantees make copayments for their education (FAPE 2014b).

Similarly, the Thailand's constitution recognises the role of private institutions in the provision of education and they have had experience in PPP in education. By decree, the government provides support through grants, rebates, and other benefits. The Thai PPP scheme for education is mainly in the form of subsidies on a cost-per-student basis and is a major source of income for most private schools (Patrinos, *et al.*, 2009). These subsidies are available from the pre-primary to the upper secondary levels, with the subsidies amounting to USD236 per student per annum at the primary level, USD263 per student per annum for grades seven through nine, and USD286 for grades 10 through 12. The government also provides loans with a subsidised interest rate of four percent and a repayment period of 10 to 15 years subject to the provision of collateral by the schools. An evaluation of this subsidy programme by the Thai government has shown that between 2003 and 2012, the private provision of basic education must have reduced the national government's contribution by USD13 million (Pinyakong, *et al.*, 2007).

Juxtaposed to the Philippine and Thai subsidy programmes for private education, the government of Brunei Darussalam provides educational allowances to households amounting to BND120.00 (USD1.50) per month per student. Households are then free to send their children to government or non-government schools. However, the government has a policy of parental choice and thus promotes private education in order to reduce reliance on the government in providing education (ICDE, n.d.).

Finally, in the case of Indonesia, there is no specific policy encouraging private education but the government provides substantial subsidies in the form of civil service teachers, construction, and other educational inputs such as books and equipment (UNESCO 2010).

Evaluations of the various modes of financing and operation of basic education have been scant owing to the various empirical problems associated with such research. However, various strategies have been employed such as randomisation, instrumental variables, and the Heckman correction model to tease out the effects of these various models (Patrinos, *et al.*, 2009). In their review of various studies, most of the outcome variables have been in the form of standardised test scores. Overall, voucher recipients or an increase in one standard deviation of enrolment in private schools were both observed to have scored anywhere between 0.2 to 0.5 standard deviations higher than non-voucher recipients. Similar results were also observed for private management of schools and for subsidies.

It could be seen therefore that most governments of AMSs have recognised that private schools have an important role in the provision of basic education. This is stated explicitly in their constitutions and related laws, or observed implicitly through different incentives and strategies that are aimed at helping private schools flourish. It could not be said, though, that private education shall be replacing publicly operated schools in the ASEAN in the foreseeable future. However, it may be said that there are complementary roles for these two sectors in education, particularly in terms of the private sector being used as a means to ease the reliance on the state. Indeed, the state still has a major role to play in terms of regulating the educational system and in ensuring that the curricula and minimum standards are met. In terms of evaluating the effects of private education, the evidence is scant but what exist points to private schooling as low-cost alternatives to publicly provided schools. At the same time, there is scope for increasing the resources provided to basic education when public–private interventions are designed carefully.

4. Quality Issues in the Provision of Basic Education

This section will look at the quality issues regarding the provision of basic education. We will first look at inputs such as teachers and classrooms, and outputs such as performance in international assessments and survival rates. We will then look at

national and regional initiatives in addressing quality and conclude with a section on the role of technology in addressing quality issues.

4.1. Inputs

The literature suggests a variety of inputs to education. Here, we look at key inputs such as (i) teachers, (ii) classrooms, (iii) textbooks and other instructional materials, and (iv) technology used.

4.1.1. Teachers

Teachers, in particular teacher quality, are considered to be the most important input in the process of education (Economist Intelligence Unit 2014). At the same time, a review of various studies by Vegas (2012) shows that the quality of teachers is the main predictor of achievement by students and can even offset the 'learning deficits of disadvantaged students' (p. 45). As shown in Table 4, more than half of the AMSs employ a considerable number of teachers, ranging from a little over one quarter of a million in Myanmar to over three million in Indonesia.

Meanwhile, the average pupil–teacher ratio in the ASEAN between 2000 and 2012 is 26 for primary schooling and 21 for secondary schooling (see Tables 5 and 6). Amongst the AMSs, Malaysia and Viet Nam have made the biggest strides in improving their pupil–teacher ratios. In terms of primary schooling, Malaysia and Viet Nam saw reductions of 36 and 34 percent respectively between 2000 and 2012. On the other hand, the Philippines (2000–2009) and Cambodia saw declines of 11 and 9 percent respectively. It should be noted that Cambodia and the Philippines have had the highest ratios of 51 and 34, respectively over the same period. On the other hand, Brunei Darussalam and Malaysia have the lowest ratios at 12 and 16 respectively.

In terms of secondary schooling, Malaysia is still the ASEAN leader in terms of improvements in the pupil–teacher ratio, registering a reduction of 26 percent between 2000 and 2011. This is followed by a 17 percent reduction for Thailand between 2001 and 2011. Myanmar and Indonesia, however, posted increases equivalent to 7 and 17 percent in the pupil–teacher ratio for secondary schooling over the same period. (Data for Viet Nam is unavailable.) At the same time, Cambodia registered a 57 percent increase in the pupil–teacher ratio between 2000 and 2007.

The Philippines has the highest average ratio for secondary schooling at 37 (2001–2009), followed by Myanmar at 33. Brunei Darussalam and Malaysia still have the lowest ratios at 11 and 16 respectively.

Table 4: Number of Teachers in Primary and Secondary Education, 2000–2012

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Brunei Darussalam	6,568	6,639	6,989	7,540	8,400	8,898	7,938	7,902	8,034	8,340	3,896[1]	8,884	9,230
Cambodia	63,882	66,200	70,473	73,042	50,186[1]	50,654[1]	78,282	78,994	48,223[1]	46,658[1]	46,905[1]	47,033[1]	48,002[1]
Indonesia	2,299,161	2,329,801	2,498,712	2,546,584	2,599,608	2,709,651	1,369,424[2]	3,018,463	3,218,754	3,350,027	3,540,479	3,330,224	2,946,349
Lao PDR	39,994	40,351	41,841	42,342	42,407	44,190	44,728	46,714	47,658	49,774	53,280	58,228	32,586[1]
Malaysia	274,722	279,804	288,877	316,417	329,506	342,552	353,395	372,712	388,229	412,948	422,264	428,303	…
Myanmar	219,409	222,927	222,897	222,063	231,155	238,254	246,032	254,152	259,332	261,472	265,369	…	…
Philippines	359,798[1]	510,460	514,181	535,030	545,046	540,784	545,053	571,625	397,468[1]	629,758	…	…	…
Singapore	…	…	…	…	…	…	…	28,429	29,653	32,453	…	…	…
Thailand	293,391[1]	484,967	499,220	…	…	…	528,728	549,859	570,758	…	316,552	565,337	307,446
Viet Nam[1]	340,871	347,833	354,624	358,606	362,627	360,624	353,608	344,547	344,853	345,505	347,840	359,039	366,045

Notes: [1] Primary school teachers only; [2] Secondary school teachers only; … Data unavailable
Source: UNESCO Institute of Statistics (2014).

Table 5: Pupil-to-Teacher Ratio in Primary Schools

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Brunei Darussalam	14	14	13	12	11	10	13	13	13	12	11	11	11
Cambodia	50	53	56	56	55	53	50	51	49	49	48	47	46
Indonesia	22	22	21	20	20	20	…	19	17	17	16	16	19
Lao PDR	30	30	30	31	31	31	31	30	30	29	29	27	27
Malaysia	20	20	19	18	17	17	16	15	15	13	13	12	…
Myanmar	33	32	33	33	32	31	30	29	29	28	28	…	…
Philippines	35	35	35	35	35	35	35	34	34	31	…	…	…
Singapore	…	…	…	…	…	…	…	20	19	17	…	…	…
Thailand	21	19	19	…	…	…	18	18	16	…	16	16	16
Viet Nam	30	28	26	25	23	22	21	20	20	20	20	20	19

Note: … Data unavailable.
Source: UNESCO Institute of Statistics (2014).

Table 6: Pupil-to-Teacher Ratio in Secondary Schools

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Brunei Darussalam	11	11	11	11	10	10	11	11	11	10	…	10	10
Cambodia	18	20	22	24	…	…	30	29	…	…	…	…	…
Indonesia	15	14	14	14	14	12	12	13	12	13	12	15	17
Lao PDR	21	23	24	26	27	25	25	24	23	23	20	20	…
Malaysia	18	18	18	18	17	16	16	15	14	14	14	14	…
Myanmar	32	31	31	33	33	33	34	33	34	34	34	…	…
Philippines	…	36	38	37	38	38	37	35	…	35	…	…	…
Singapore	…	…	…	…	…	…	…	17	16	15	…	…	…
Thailand	…	24	24	…	…	…	22	21	21	…	…	20	..
Viet Nam	…	…	…	…	…	…	…	…	…	…	…	…	…

Note: … Data unavailable.
Source: UNESCO Institute of Statistics (2014).

The different AMSs have various ways of ensuring the quality of teachers. One avenue by which quality could be ensured is via the pre-service training of potential teachers. All of the AMSs have specific bodies that are responsible for the development or revision of teacher education programmes in their countries, all of which are Cabinet level ministries. This is not surprising since the governments of these AMSs are the largest employers of teachers in basic education in their countries. These bodies are typically established or designated by law. Quality is also signalled through the accreditation of teacher education institutions or teacher education programmes.

Across ASEAN, the minimum training required of teachers is varied, ranging from post-primary school training to full-fledged post-graduate degrees. The AMSs mandate different trainings, depending on whether the teacher is in primary school or secondary school. Secondary education is also typically split into lower and upper secondary. Teacher training institutes or higher educational institutions provide these programmes. The following section borrows heavily from UNESCO's (2011b) *World Data on Education* in describing the various modes of teacher training programmes across the ASEAN.

There are more pathways available in training primary school teachers compared to training secondary school teachers. It may also be said that these primary school teacher training programmes are less stringent if one looks at the number of years required. For example, in Lao PDR, a primary school teacher may be qualified after obtaining four years of teacher education or training after primary school, or three years of training after finishing lower secondary school, or just one year of training after completing upper secondary education. In Myanmar, teacher training schools (as opposed to teacher training colleges and institutes of education) can qualify primary school teachers after their completion of a one-year programme leading to a Certificate in Education. Viet Nam meanwhile requires that primary school teachers possess a pedagogical diploma from an upper secondary institution. For these countries, around 11 or 12 years of schooling is required to qualify to be primary school teachers.

At the secondary level, teachers are typically required to finish secondary schooling (i.e. 12^{th} grade for all AMSs but the Philippines) before entering teacher education or training programmes. This results in secondary school teachers having

around 14 to 16 years of schooling (not including practical training) before being qualified as secondary school teachers. However, Indonesia, Malaysia, the Philippines, Thailand, and Singapore have the same minimum requirement of completing secondary schooling for entry into teacher education and training programmes, regardless of whether the programme is for primary or secondary schooling.

In the Philippines, for example, whilst developing or revising the curricula for teacher education programmes is the responsibility of the Commission on Higher Education (CHED), the accreditation of programmes lies on independent accrediting agencies, with different bodies for private, state, and local colleges and universities. This accreditation exercise is voluntary for higher educational institutions. In addition, CHED also organises a Technical Panel for Teacher Education, which is responsible for evaluating all higher educational institutions offering teacher education. The panel then recommends to CHED which schools should be designated as centres of excellence or development in teacher education. It is also responsible for screening the applications of higher educational institutions that want to offer new teacher education programmes. New programmes are approved based on the institution's faculty, resources, and passing rates in the licensure exams. The CHED regional offices are then tasked to monitor the institutions' compliance to the standards required of teacher education programmes. CHED may close programmes if standards are not met.

In the case of Singapore, there is no specific body that is dedicated to monitor the quality of its sole teacher education institution, the National Institute of Education (NIE) of the Nanyang Technological University, a public university. However, the government's policies regarding educational quality are tightly coupled with those of the NIE's (Khoon *et al*., 2013). The quality assurance practices of the NIE involve feedback regarding its programmes. The first mechanism involves feedback from student teachers who have come back to the NIE after their practicum. Second, the NIE conducts meetings with school principals to get their feedback about the student teachers. Finally, several committees are formed within the NIE to review the implementation of the teacher education programmes. The NIE also appoints an external examiner panel to review the initial run of its revised degree programmes. These mechanisms show that 'quality assurance for teacher education at the NIE is a

dynamic process. It responds to current practices, evidence gathered from various sources, alternative perspectives from external experts, and proactive positioning for future challenges' (Khoon *et al*., 2013).

In the Philippines, private accrediting agencies assess programme quality; whilst in Singapore, the government is the responsible agency for quality assessment. In Thailand, meanwhile, public–private arrangements are in place for evaluating quality. The quality of education programmes in Thailand is assessed by the following (Dechsri and Pativisan, 2013):

1. University councils, which approve curricula and the graduation of students;
2. The Commission on Higher Education, which is responsible for policy, planning, regulating, and evaluating higher education institutions; and
3. The Teachers' Council of Thailand, which accredits degrees and certificates, including those for foreign teachers.

Quality assessment for each university begins with an internal assessment that involves standards for graduates, educational management, and knowledge learned. Once this is posted in the public domain, an external body undertakes a third-party assessment of the results. This is done through Thailand's External Quality Evaluation System under the Office for National Education Standards and Quality Assessment, which is a government body. All teacher education institutions are required to submit to an assessment every five years. They are assessed on the following aspects (Dechsri and Pativisan, 2013):

- Philosophy, objectives, and working plans;
- Teaching and learning;
- Student development activities;
- Research;
- Academic services to society;
- Arts and cultural preservation;
- Management;
- Finances and budgets; and
- Quality-assurance systems and mechanisms.

In terms of quality, Malaysia and Singapore are the only AMSs that have teacher education institutions that had ranked in the World University Rankings of Quacquarelli Symonds for 2014. Singapore's Nanyang Technological University, where the National Institute of Education is lodged, ranked 1st (out of 20 ranked institutions) in Asia and 14th in the world for Education. Malaysia's Universiti Kebangsaan Malaysia, Universiti Malaya, and Universiti Putra Malaysia ranked 10th, 11th, and 12th respectively in Asia and 51-100 in the world whilst University Sains Malaysia ranked 18th in Asia and 101–150 in the world.

Other assessments of teacher education institutions in ASEAN are quite lacking, perhaps because of the lack of adequate indicators by which to measure quality. In the Philippines, however, prospective teachers have to pass the Licensure Examination for Teachers (LET) to be duly licensed, which may then be used as an indicator of quality. The LET is administered by the Professional Regulation Commission, the government agency tasked to license all professions in the Philippines. There are two different examinations for those aspiring to be primary or secondary teachers. However, Ogena, *et al.*, (2013) write that whilst passing the LET is all that is required of graduates of teacher education institutions to be licensed, some exclusive schools hire teachers even before they pass with the caveat that the LET is passed soon thereafter.

An analysis of the results of the LET shows that of the roughly 270,000 first-time test-takers between 2009 and 2013, only 54 percent passed the LET. At the same time, around 60 percent of the roughly 1,200 teacher education institutions performed poorly in the sense that less than 54 percent of their graduates passed the examination. On the other hand, only 10 teacher education institutions (with at least 250 test-takers) had at least 80 percent of their respective graduates pass the LET over the same period (Borromeo and Fajardo 2014). According to Borromeo and Fajardo (2014), one of the reasons the performance of teacher education institutions in the Philippines has been dismal is the poor oversight undertaken by CHED and the Professional Regulation Commission (PRC). These two are the relevant government agencies in the country tasked to monitor the quality of these institutions. At the same time, the laws governing teacher education in the Philippines are also not implemented properly.

Thailand also faced an oversupply of graduates in the beginning of the1980s due to the introduction of universal primary education and huge declines in the birth rate necessitating the closure of diploma programmes and the conversion of teacher training colleges into Rajabhat Institutes, some of which have been converted into universities due to the diversity of their programme offerings (Atagi, 2011). Because of the variety of degree offerings, it has been argued that the quality of teacher development in these formerly exclusive teacher-training institutions has been compromised. Indeed, Pillay (as cited in Atagi, 2011) writes that 'there is a general consensus that there is a significant need for upgrading the Rajabhats and, in particular, the faculties of education…[In particular,] Rajabhats were ranked either "fairly good" or "needing improvement" in the first-ever university ranking by OHEC in 2006' (p. 33). This is also a similar situation in the Philippines whereby colleges and universities that are chartered for specific purposes (e.g. for technology, agriculture, or fisheries) have diversified their programme offerings in order to stay financially viable in the face of poor government funding support. With teaching being a low-cost programme offering, many of these colleges and universities have started offering teacher education programmes. Not surprisingly, many of these 'diversified but specialized' higher education institutions are part of the poor performing teacher education institutions cited earlier in the Borromeo and Fajardo (2014) study.

In Thailand, the Teachers Council grants licences. Graduates who hold a Bachelor of Education degree from a certified institution or those with at least 24 units of teacher education courses are automatically granted licences (Dechsri and Pativisan, 2013). On the other hand, whilst there is no licensing in Myanmar, teachers are certified if they receive a diploma from accredited institutions (Thu Thu and Thinn Thinn, 2014). In Cambodia, after students finish their teacher education programme, lifetime certificates of teaching are granted by the Ministry of Education, Youth, and Sports (UNESCO, 2008a).

Indonesia started the process of certifying teachers in the country in 2006. It is said to be the largest process of teacher certification in the developing world and is slated to be completed in 2015 by the two implementing agencies, the Ministry of National Education and the Ministry of Religious Affairs (Fahmi *et al*., 2011). By then, only certified teachers will be allowed to teach in the country. The minimum

qualifications for certification are the completion of a four-year undergraduate degree or diploma, academic performance, years of service, teaching workload, age, rank, and work performance.

On the other hand, Brunei Darussalam, Lao PDR, Malaysia, Singapore, and Viet Nam do not have a system of teacher licensing. In the case of Singapore and Brunei Darussalam, the sole teacher training programmes in these countries are under government control and are thus tightly coupled with government policies on quality (see Khoon *et al*. 2013). In Lao PDR and Viet Nam, teacher postings are determined by the Ministry of Education from graduates of teacher education institutions (Benveniste *et al*., 2007, for Lao PDR; UNESCO, 2007, for Viet Nam). In Malaysia, graduates of teacher education programmes are automatically eligible for placement in teaching positions (Bin Osman and Che Kassim, 2014).

In terms of continuing professional development, all AMSs (except for Lao PDR, for which data was not available) have systematic in-service training for its teachers. This system follows from the notion that professional education is a continuing process and is needed to keep abreast of evolving knowledge and techniques (UNESCO, 2011b). For some countries like Brunei Darussalam, Indonesia, and Thailand, in-service training is provided by national institutes dedicated to such like the Sultan Hassanal Bolkiah Institute of Education in Brunei Darussalam, the Open University in Indonesia, and the National Institute for Development of Teachers, Educational Staff and Personnel in Thailand. Other countries also require mandatory participation in in-service training such as Malaysia, which requires retraining after every five years, with its remuneration system requiring a minimum of seven days of training per year (UNESCO, 2011b).

Aside from the dedicated in-service training institutions cited above, further professional development trainings are offered across the AMSs primarily through teacher education institutions as well as through the various ministries of education. We will, however, talk at length about the system for upgrading and professional development in Malaysia, which has been well documented by Mokshein, *et al.* (2009). They write that these programmes are offered in the form of in-service courses, workshops, and seminars at the school, district, state, and national levels and may be organised by the Ministry of Education, teacher training institutions, or by international organisations such as the Southeast Asian Ministers of Education

Organization. Malaysia's programme for the professional development of teachers also includes the provision of scholarships with paid leave by the Ministry of Education for Masters and PhD degrees. In 2008, the Malaysian government spent MYR200 million (for its professional development programmes.

In terms of compensation, the salaries of teachers tend to be on the lower end of the scale. Such are the documented cases by the UNESCO (2011b) in Cambodia, Indonesia, Lao PDR, and Malaysia. Teacher salaries in Indonesia are said to be 20 percent less than those with similar qualifications or just between 10 to 30 percent that of a typical civil servant's salary. In Lao PDR, teacher salaries average USD39 per month for primary school teachers whilst USD45 per month for lower secondary teachers. In Cambodia, there is no extra remuneration for teachers who take on managerial roles. In Malaysia, on the other hand, whilst teacher salaries are still lower than those of other public servants, there has been an effort to increase it in the past few years. This is similar to the Philippines where teacher salaries are expected to be increased in the coming years, especially with the implementation of the new K-12 system, which will add two years to the educational system. Filipino teachers are currently paid an average of Php18,500.00 to Php25,000.00 (USD416.70 to USD563.1) per month (Lozada, 2014).

4.1.2. Infrastructure and Other Resources

Whilst the more affluent AMSs like Brunei Darussalam and Singapore do not experience shortages in school infrastructure, the lack of school buildings and classrooms with adequate facilities still plague most of the other AMSs (Sadiman, 2004). In the relatively less developed AMSs like Cambodia and Myanmar, the lack of school infrastructure is especially noticeable. In Cambodia, many primary schools face classroom shortages necessitating the holding of classes in three shifts (Japan International Cooperation Agency [JICA] 2013). In Myanmar, it was observed that many children study in classrooms without roofs or walls, and that this situation is more conspicuous in locations outside the urban areas of Yangon and Nay Pyi Taw (Nippon Foundation 2013). In Viet Nam, infrastructure development is hobbled by lack of funds (Viet Nam News, 2014). In addition, many schools in Viet Nam do not even have functioning toilets (Integrated Regional Information Networks 2009).

Even in the more developed AMSs like Malaysia, the Philippines, and Thailand, developing school infrastructure remains a big challenge. For example, the practice of holding classes in shifts also occurs in Malaysia and the Philippines due to classroom shortages (see Ministry of Education 2012 and Alcober, 2014). In Malaysia, around 300 schools lack round-the-clock electricity; 1,500 schools do not have access to potable water; 2,700 schools do not have computer laboratories; and 2,000 schools lack science laboratories (Ministry of Education, 2012).

To address these issues, AMSs have started to increase their allotments to education in their budgets to deal with the financing gap (for example, the doubling of the education budget of Cambodia by 2018, as cited in Thai Public Broadcasting Service 2014) and to employ PPPs (for example, the Philippine case which established a PPP Center to monitor and facilitate the country's PPP program, providing training and capacity building to local government units, conducting feasibility studies, as well as maintaining and providing avenues to ease processes, as cited in Pricewaterhouse Coopers, 2014). In addition, the United States Agency for International Development (USAID) has been active in providing building infrastructure through its work in Cambodia, Lao PDR, Thailand, and Viet Nam through its Lower Mekong Initiative (see USAID, 2014) and in the Philippines (see USAID 2012). School construction projects are also undertaken in Indonesia and the Philippines through the work of the former Australian Agency for International Development (AusAID), now Australian Aid (AusAID, 2013). The Asian Development Bank (ADB) has also undertaken numerous projects on education infrastructure in the region (ADB, 2012).

According to Sadiman (2004), there is still a lack of good textbooks and other learning materials in Southeast Asia and this problem is especially conspicuous in remote areas. According to UNESCO (2011b), AMSs have a dedicated department, council, or committee within their respective Education Ministries, which is responsible for the content and provision of textbooks and other instructional materials. Sometimes, these councils are also responsible for curriculum design as in Brunei Darussalam, Malaysia, and Myanmar. Various AMSs have different approaches to the provision and design of these materials. For example, Brunei already makes these materials available in electronic form. This is also the case in Indonesia where the Ministry of National Education has implemented the Buku

Sekolah Elektronik programme, which aims to provide ‘standardized, high-quality, affordable and easy-to-access school textbooks. The Ministry of National Education has purchased the copyrights of textbooks and made them downloadable for free’ (UNESCO, 2013, p.89). The Lao PDR Ministry of Education, meanwhile, encourages provincial and district level participation in the textbook development process to ensure the applicability of the content to local conditions (UNESCO, 2011b).

Meanwhile, practically all AMSs have a policy of using ICT to enhance the delivery of education. UNESCO (2011b) highlights a number of interesting cases. In Cambodia, the policy of using technology is enshrined in its constitution: ‘The state shall adopt an educational programme according to the principle of modern pedagogy including technology and foreign languages’ (Article 67). Other countries like Malaysia, Singapore, and Lao PDR have a dedicated department within their ministries of education that is tasked to provide for the use of various educational technologies in public schools. The Philippines, meanwhile, has embarked on a massive computerisation programme and has mandated the use of ICT in every learning area. Of course, it should be noted that whilst policies are in place, implementation is typically a different matter. Most AMSs are plagued by poor infrastructure in terms of telecommunications and electricity (UNESCO, 2013). This is in addition to the perennial budgetary shortfalls experienced by some member states. For example, only 0.12 percent of the total programme-based budget for education was devoted to ICT (UNESCO, 2013). In Viet Nam, ICT has not been used effectively and a more strategic policy is needed, particularly in its applications to service delivery (UNESCO, 2011b). Myanmar, meanwhile, has to implement its proposed amendments to its laws and rules to allow for more openness before the full benefits of ICT to education may be reaped. On the other hand, UNESCO (2013) writes that Indonesia, Malaysia, and Singapore have been quite advanced in terms of deploying ICT for education. For example, Malaysia, via its 1BestariNet programme, provides all teachers, students, and parents across the nation with access to a cloud-based virtual learning environment. Under the programme, all 10,000 schools in Malaysia will be equipped with high-speed Internet. The ADB, AusAID, International Development Research Centre, JICA, USAID, and World Bank have been active partners in the development of ICT use for basic education (UNESCO, 2013).

4.2. Quality of Educational Outputs

Turning to the other half of the education process, we look at the quality of educational outputs in the AMSs. Here we will look at primarily on the performance in national or international achievement examinations.

4.2.1. Achievement examinations

No standardised learning assessment tool exists for Cambodia and Viet Nam, hampering the effective evaluation of teaching and learning. However, their respective ministries of education monitor national examinations (UNESCO, 2011b). Viet Nam has participated in the latest round of the Organisation for Economic Co-operation and Development's (OECD) Programme for International Student Assessment (PISA) in 2012, along with Indonesia, Malaysia, Singapore, and Thailand.

In the Philippines, the Department of Education, through the National Education Testing and Research Center, administers the National Achievement Test to assess learning achievement (Luistro, 2014). According to the Department of Education (2013), the overall passing rate for third graders was 56.98 percent for school year 2011–2012, the lowest result since school year 2007–2008. However, it was observed that the third graders performed best in Mathematics and in Filipino. For the same school year, sixth graders showed a passing rate of 66.79 percent, which represents a 'status quo performance for the past three years' with students performing best in Filipino and worst in Social Studies. There was also a marked improvement in Science over the previous year's result (Department of Education, 2013). Finally, fourth year high school students reported an overall average passing rate of 48.90 percent, an improvement over the previous years' performance of 44.3 in 2006 and 46.8 in 2005. The high school seniors performed best in Social Studies and worst in Science. In the last Trends in International Mathematics and Science Study (TIMSS) assessment in which the Philippines participated (2003), the country ranked 34th out of 38 counties in terms of performance in Mathematics and 43rd out of 46 countries in Science for both high school II. For grade four, the country ranked 23rd out of 25 countries in both Mathematics and Science (UNESCO, 2011b). Lao PDR, meanwhile, has only recently instituted a system of learning assessment and has conducted it only in 30 schools as of 2007, reporting an average of 42 percent in: (i)

Mathematics, (ii) English, and (iii) the world around us. The Educational Standards and Quality Assurance Center of the Ministry of Education has recommended that this system be implemented nationwide (UNESCO, 2011b).

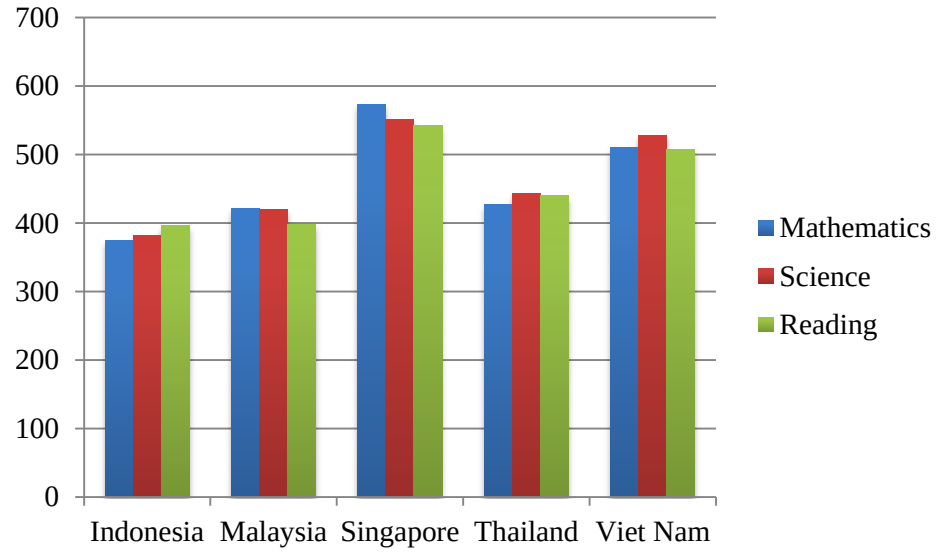
Thailand also has a system of assessing learning achievement. According to UNESCO (2011b), students in the sixth and ninth grades in 2004 were found to be 'not satisfactory' in the following subjects: (i) Thai language, (ii) English, (iii) Mathematics, and (iv) Science. Unsatisfactory results were also observed in the students' thinking, knowledge-seeking and working skills. However, satisfactory results were observed for Social Studies and the 'learners' qualities of good citizenship.' Malaysia and Brunei Darussalam meanwhile assess national achievement through the school achievement tests, which measure performance in: (i) the national language, (ii) English, (iii) Mathematics, and (iv) Science (UNESCO, 2011b).

In Indonesia, the UNESCO (2011b) writes that between 2004 and 2006, average examination scores in English, Mathematics, and *Bahasa* Indonesia have improved markedly but that Indonesian students still rank poorly in international rankings such as the PISA, the 2003 assessments for the TIMSS, and the Progress in International Reading Literacy Study (PIRLS).

Brunei Darussalam and Singapore also assess quality by looking at the proportion of students who pass the General Certificate of Education O- and A-level examinations. In Singapore, at least 80 percent of its students who took up O-level examinations passed at least five examinations at that level while around 88 percent obtained at least three A-level examinations (UNESCO, 2011b). As will be seen later, Singapore has also fared very well in the TIMSS and PIRLS assessments, and the PISA.

The PISA is an assessment of student achievement undertaken by the OECD. As can be seen in the figure below, Singapore has fared best compared to the other AMSs that participated in the 2012 round. Singapore surpassed Indonesia, Malaysia, Thailand, and Viet Nam across the three subjects of Mathematics, Science, and Reading. Across the board, Singapore is followed by Viet Nam then trailed by Thailand, Malaysia, and Indonesia, on average.

Figure 2: Performance of Selected ASEAN Countries in the 2012 PISA



Source: OECD Education GPS Database (2014).

Apart from Singapore and Viet Nam, the participating AMSs performed poorly in the 2012 PISA. Out of 65 countries, Indonesia ranked 64th in Mathematics and Science, and 60th in Reading. Malaysia ranked 52nd in Mathematics, 59th in Reading, and 53rd in Science whilst Thailand ranked 50th in Mathematics and 49th in Reading and Science. On the other hand, Viet Nam is in the upper ranges, ranking 17th in Mathematics, 19th in Reading, and 8th in Science. Singapore has been a stellar performer across the 65 countries assessed in the 2012 PISA, ranking second in Mathematics and third in Reading and Science.

In the latest round of the TIMSS assessment conducted in 2011, only Singapore and Thailand participated, ranking 1st and 33rd out of 45 countries respectively (Mullis *et al*., 2012a). Singapore extends this exceptional performance in the 2011 PIRLS, ranking third amongst 49 countries. However, the only other participating AMS, Indonesia, ranked 46th out of 49 countries in the PIRLS assessment (Mullis *et al*. 2012b). It should be noted, however, that between the 1999 and 2007 assessments of the TIMSS, the Philippines saw the highest average growth in Math scores, with a 9.6 percentage change whilst Indonesia posted an improvement of 0.3. Singapore, Thailand, and Malaysia saw percentage changes equal to -0.9, -2.8 and -4.4 respectively (Macdonald, 2012).

It should be noted, however, that for student assessment to be informative and eventually effective, the assessment exercise should be aligned to the education system. Porta (2012) writes that alignment goes beyond matching what is assessed and what is in the curriculum, especially since it expected that the correspondence between a particular country's curriculum and what is tested on international assessments like PISA or TIMSS is limited. However, he maintains that the assessment may still be aligned with the overarching objectives of a country's educational system.

The initiatives on the standardisation and harmonisation of curricula across AMSs have as their primary goal the fostering of a common ASEAN awareness and identity (East West Center, 2009). One of the key outcomes of this exercise is the creation of an ASEAN Curriculum Sourcebook which contains a common set of content for use in different AMSs. The sourcebook contains materials on content and pedagogical styles in the following subject areas (ASEAN/SEAMEO, 2012):

1. Technology Education;
2. History and Social Studies;
3. Science and Mathematics;
4. Civic and Moral Education;
5. Languages and Literature;
6. Arts; and
7. Health and Physical Education.

According to Reeve (2013), it is noteworthy that the sourcebook recognises the importance of including Technology Education, in light of the need for AMSs to keep pace with globalisation and international competition. In addition, he adds that the sourcebook contains 'very good' learning outcomes for Science, Mathematics, and Technology Education (p. 9). At the same time, the issue of what language to use in the ASEAN is murky. Indeed, the ASEAN Charter states, 'The working language of ASEAN shall be English' but one of the principles of the same Charter is 'respect for the different languages of the peoples of ASEAN.' Kirkpatrick (2012) adds that no regional language has been chosen nor has a language education policy been identified for which the principle of respect for the various ASEAN languages might

be realised. However, he adds that within ASEAN, bilingualism seems to have caught on, whereby the national language and English are taught in school.

The adoption of a regional curriculum for ASEAN is a considerable exercise and should involve much greater study. Surely, such will only be implemented if the advantages outweigh the disadvantages. There are no clear benchmarks, however, when it comes to adopting a region-wide curriculum but we can look at certain pros and cons based on implementations of national curricula. In a review of the effects of implementations of national curriculums in a number of countries, the Independent Schools Council (2008) found that the advantages of implementing a national curriculum are (p.18) (i) economic growth; (ii) pupil enjoyment and engagement; (iii) national consistency of standards; (iv) shared values, helping community cohesion; and (v) teacher support.

On the other hand, the disadvantages are (p.18): (i) economic growth limited by lack of flexibility in curriculum content; (ii) disengagement of bright pupils who are not challenged and less able pupils who are not supported; (iii) parents are not satisfied and remove their children from state education if possible, leading to geographical immobility and potential social inequality; (iv) some groups feel excluded from the education system, leading to a lack of community cohesion; and (v) teachers are disempowered and disengaged.

Indeed, there are a lot of issues to consider before standardising an ASEAN curriculum such as the huge disparities in cultures, attitudes, and even income levels. These are concerns that have to be thoughtfully considered before considering any policy on a regional curriculum.

4.3. National Initiatives on Quality

Amongst others, education reform and quality assurance systems were observed by UNESCO (2014) to be important determinants in the quality of basic education. UNESCO writes that AMSs have introduced changes in the curriculum and the educational system in order to address problems on quality. Education reforms in the ASEAN have tended to be in the following areas: (i) changes in the orientation of education, (ii) curriculum content, (iii) teaching methods, and (iv) educational management and administration.

The key legal commitment underpinning the importance given by AMSs to basic education is their universal ratification of the Convention on the Rights of the Child, which commits countries to provide free primary education to all children. This commitment has subsequently been written into legislation for most AMSs, which in turn have guided the reforms listed in Table 7 below (UNESCO, 2014).

In terms of curricular content, the UNESCO (2014) used as a proxy for reform the frequency of curriculum revisions undertaken by AMSs. It found that for all AMSs save for Indonesia, reforms really only began in the 1980s. We reproduce from the UNESCO (2014, pp.23–24) an abridged version of a table containing the educational reform initiatives of selected AMSs:

Table 7: Educational Reform Initiatives of Selected ASEAN Member States

Country	Reform
Indonesia	1960, 1975, 1984, 1999, 2006: Curriculum reform 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: 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 in Stage/Phase I (grades 1-3) building on the Integrated Curriculum for Primary School introduced in the late 1990s.
Philippines	1982: Implementation of New Elementary School Curriculum 1999: Decongestion of 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: UNESCO (2014).

Some aspects of teacher quality were already mentioned in the previous section. However, teaching methodologies also form part of teacher quality. In order to support quality initiatives, particularly in teacher development and management, certain AMSs have started to implement classroom observation. It was also reported that all AMSs have incentive systems for good performance of teachers. For example, in Singapore, salary increases are determined by performance and the achievement of certain professional standards (UNESCO, 2014).

One possible pathway by which teacher quality could be improved is by engaging the private sector at the pre-service level. In the Philippines, the Philippine Business for Education, a non-profit corporation, implements a scholarship programme for students to take up teacher education courses in top-performing teacher education institutions in the country. The graduates of the programme are subsequently given priority in hiring by the Department of Education for placement in public schools across the country. The primary goals of the programme include the improvement of the cadre of teachers in the public education system as well as allowing needy but otherwise deserving students access to the best teacher education institutions in the country. Funding support for allowances is sourced from donations provided by some of the leading businesses in the Philippines (e.g. Shell Companies in the Philippines, SGV & Co., Ernst & Young Philippines, *et al*.), whilst the tuition fees are waived by partner teacher education institutions, both public and private. To date, the programme has produced close to 200 alumni, most of whom are already teaching in the Philippine public school system. The programme also boasts of a passing rate of close to 100 percent in the licensure examination for teachers.

On educational management, it was observed that most ASEAN countries have adopted decentralisation whereby key functions and responsibilities were devolved from the national level to various lower levels. In particular, school-based management was highlighted as an important tool in empowering communities to make decisions. Decentralisation is said to be an important component of improving quality, with school autonomy having a causal link to efficiency in the use of resources (Arcia, 2012). Decentralisation may be seen in various dimensions such as (i) budget autonomy (raising funds and managing budgets), (ii) personnel autonomy (hiring and firing school managers and staff), (iii) participation of the school board/council in school finance, (iv) assessment of school and student performance,

and (v) school accountability to stakeholders. Overall, Indonesia, Malaysia, Singapore, and Thailand were observed to have reflected good practices (i.e., *Established*) in terms of the various dimensions cited earlier, whilst Cambodia, the Philippines, and Viet Nam show some good practices (i.e. *Emerging*) (Arcia, 2012). For the established AMSs, Indonesia, Singapore, and Thailand were observed to have been following international best practices in terms of student assessment, whilst Malaysia was seen to have been following international standards in terms of participation of the school board/council in school finance and school accountability to stakeholders. Singapore and Thailand, meanwhile, were also observed to have been following international standards in terms of participation of the school board/council in school finance.

In terms of quality assurance systems amongst the different AMSs, UNESCO (2014) writes that the following three modes are used: (i) assessment, (ii) audit, and (iii) accreditation. However, the distinctions amongst the three are not always clear, especially when used all at one time, and within each of the modes, sub-activities are also conducted such as ranking, benchmarking, testing, and assessment via performance indicators. The table below shows the various accrediting agencies and quality assurance bodies for basic education in the various AMSs:

Table 8: Accrediting Agencies and Quality Assurance Bodies for Basic Education in ASEAN Member States

Country	Institution
Brunei Darussalam	National Accreditation Council, Technical Vocational Education Council
Cambodia	Accreditation Committee of Cambodia
Indonesia	National Board of School Accreditation
Lao PDR	Educational Standards and Quality Assurance Center, Standard for Quality Education in Malaysia
Malaysia	National Accreditation Board
Myanmar	Department of Technical and Vocational Education, National Education Testing and Research Center
Philippines	Federation of Accrediting Agencies of the Philippines (including its four constituent members)
Singapore	Preschool Accreditation Framework
Thailand	Office for National Standards and Quality Assessment
Viet Nam	General Department for Educational Testing and Accreditation

Source: UNESCO (2014).

It can be seen from the reforms that have been undertaken that AMSs have benchmarked with the world's best performers in terms of education. Indeed, evidence culled from studies of high-performing educational systems all over the world have shown that two key policy reforms have been crucial to the success of the good performers in education: (i) improving teacher policies, ranging from teacher training, recruitment, and methodologies; and (ii) decentralisation (Macdonald and Patrinos, 2012). It can be seen therefore that a bulk of the reforms that have been cited thus far could typically be grouped into these two overarching classifications. The focus on these reforms have also allowed comparative analyses of the education systems between and amongst AMSs and other countries worldwide which are crucial to ensuring continuous improvement (Brearley, 2012). The focus on these two overarching policy reform areas generally follow from the guidance set out by the international agencies such as the World Bank and UNESCO, which aim to enable developing countries to catch up with high-income countries in terms of educational outcomes by focusing on 'best-practice policy' (Brearley, 2012, p.xv). To this end, continuous benchmarking should be undertaken by AMSs in order to find out where each one stands in terms of educational reform. After all, improvements cannot be implemented without adequate indicators that are measurable and comparable.

One initiative that is expected to be very helpful in this regard is the establishment of the Regional Platform on Innovations in Education and Human Resources Development for Competitiveness towards an Integrated ASEAN Community, which is to be funded by ADB. This is envisioned to be a high-level dialogue on policy and strategy on education and human resource development amongst AMSs, which is to be implemented by SEAMEO via the creation of a SEAMEO College. The College shall focus on (i) the huge gaps in education and skills attainment across the AMSs, (ii) harmonised frameworks for educational and training standards for the region, and (iii) labour demand in the ASEAN with a view towards creating a regional labour market (ADB, 2013).

In terms of the orientation of education, it has been observed that the notion of outcomes-based education has been thrust front and centre through the creation of the National Qualifications Frameworks (NQFs) for all AMSs save for the Lao PDR and Myanmar. However, the NQFs for these two latter countries have already been drafted. Under this orientation, learning outcomes are highlighted in the educational

process. That is, this approach focuses on the competencies that students must have gained as a result of undergoing the educational process.

NQFs for the various AMSs were prepared for various reasons. But when the ASEAN Economic Community (AEC) was created in 2015 and it included as one of its goals the free movement of labour, NQFs allowed for the alignment of qualifications across the different AMSs, particularly via the ASEAN Qualifications Reference Framework. In this regard, the shift in orientation may have been influenced by the goal of improving labour mobility in the ASEAN as well as developing a trained workforce for local needs. In addition, with learning outcomes being the conceptual basis of qualifications frameworks (see European Training Foundation [ETF] 2013), a shift towards outcomes-based education may well have been inevitable. This could be seen as a welcome development given that countries across the ASEAN have started to add more resources into education as part of their preparations for the AEC. Policymakers will have to be careful into thinking that more resources plowed into education will necessarily and sufficiently improve educational quality. In fact, studies have shown that the relationship between school inputs and student outcomes has been limited (Hanushek, 2003). At the same time, the focus on learning outcomes allows for the identification of the most appropriate assessment criteria and for a clear focus on the acquisition of specific competencies and skills (ETF, 2013). However, the most obvious drawback to this orientation is that teaching and learning may be reduced to mere delivery of a prescribed module or set of specifications to the detriment of innovation and flexibility.

All the qualifications frameworks for the different AMSs state explicitly that their NQFs should allow for lifelong learning, which may already subsume personal, social, and cultural development. However, it may be helpful if these NQFs explicitly address these needs. After all, the ASCC Blueprint highlights the need for promoting human and social development whilst respecting the different cultures, languages, and religions within the ASEAN region. Indeed, education plays a central role in socialisation and the transfer of culture.

4.4. The role of technology in addressing quality issues

As mentioned earlier, ICT has been identified by the different AMSs as integral in the delivery of education. Apart from the initiatives mentioned earlier in this

chapter, we focus further on the emergence of alternative learning systems and MOOCs, both of which are offshoots of the digital age.

UNESCO (2014) writes that AMSs have adopted alternative (or non-formal) learning systems (ALS) in order to expand access to education, particularly to those who have been excluded from the formal education system due to gender, ethnicity, poverty, geography, and other reasons. Initially introduced as distance education programmes, developments in ICT have practically gotten rid of the problem of physical separation (Soekartarwi, and Librero, 2002). An example of one such ALS is the Philippines' e-IMPACT (Instructional Management by Parents, Community, and Teachers). This programme was initiated by SEAMEO INNOTECH in the 1970s with funding from Canada's International Development Research Centre to address quality and access issues in basic education. The system uses the self-learning modules by the Department of Education, which are enhanced by multimedia components such as audio and video, and self-learning modules on computer education. The e-IMPACT also allows for the following modes of instructional delivery: (i) programmed teaching, (ii) peer-group learning, and (iii) individual study (SEAMEO, 2010).

Meanwhile, MOOCs are relatively new educational innovations. Although originally created by higher educational institutions to provide online delivery of various courses, K-12 educators and administrators have already begun to experiment with MOOCs (Jackson 2013). One of the uses for MOOCs is in blended learning, where face-to-face meeting sessions are complemented by the students' enrolment in MOOCs, though these started informally with teachers doing the organising rather than the school itself. Another use for MOOCs is for career exploration. Enrolment in these courses allows high school students to experience areas and courses that are not typically available in the high school curriculum. Finally, the author adds that MOOCs allow students who are so inclined to augment the education they receive in school. On the other hand, these courses may also be a solution to students who need more time to catch up with lessons.

MOOCs could also be used for the professional development of teachers. This is already undertaken in the United States of America (USA) via edX, with courses developed by its partner institutions such as the University of California, Berkeley, Columbia University, Harvard University, and the Massachusetts Institute of

Technology. Teachers who complete the edX MOOC will be issued teacher certificates. The courses will focus on the following: (i) using technology in the classroom, (ii) teaching in blended environments, and (iii) learning theory and leadership (Schaffhauser, 2014).

Private higher educational institutions in certain states in the USA have also began to offer MOOCs in support of teacher preparation initiatives in their respective states. One such example is the one being implemented by the Ayers Institute of Lipscomb University in Tennessee, which offers MOOCs on teacher preparation that could be integrated with teacher education programmes in other universities in Tennessee. The courses also have stand-alone versions that can be used by the teachers themselves. One of the focuses of the MOOCs being offered is on the Tennessee Academic Standards and how these can be integrated into basic education (Lipscomb University, n.d.).

To assess the suitability of MOOCs in the ASEAN setting, we undertook a SWOT analysis in what follows:

Figure 3: SWOT Analysis of MOOCs in the ASEAN

STRENGTHS	**WEAKNESSES**
• Scalability • Low cost	• Assessment • Lack of interaction
OPPORTUNITIES	**THREATS**
• Emerging youth dividend • Potential revenue stream	• Digital divide • Reactive policies towards MOOCs

The inherent strength of MOOCs that is particularly relevant to AMSs and their huge populations is its scalability. For a particular course, potentially millions of students can have access, allowing for widespread training opportunities, particularly for the teaching force in the ASEAN. Related to its scalability is that MOOCs can be offered at very low cost or even for free.

However, there is no universally accepted assessment tool for MOOCs, which leads to it not having that widespread credibility yet. MOOCs tend to be looked at as being supplementary to some other programme, typically to classes in brick-and-mortar classrooms, rather than as stand-alone programmes. The lack of interaction between the students and the professors as well as amongst the students themselves is

an inherent weakness. Interaction will be very important especially with regard to sharing best practices or coming up with collaborative solutions to shared problems.

MOOCs also stand to benefit from the emerging youth dividend in the ASEAN, which should allow for an easier transition into using ICT for learning. With a youth population that is well versed with the World Wide Web and social media, future MOOC students would have no trouble adjusting to a virtual classroom. MOOC providers and their higher education partners could also stand to reap additional revenue since MOOCs could be seen as 'try then buy' products. Students may get to experience the quality of a particular higher educational institution through their offerings in a particular MOOC platform and then decide to enrol in further courses should they adjudge the quality to be good.

Perhaps the biggest threat to the widespread use of MOOCs in the ASEAN is the huge digital divide amongst AMSs. For example, according to UNESCO (2013), basic electrical and telecommunications infrastructure should not be assumed as being universally available in educational facilities for most AMSs. At the same time, learner-to-computer ratios in basic education are very poor. Finally, policies regarding MOOCs still tend to be reactive, perhaps because not much is known about MOOCs at this point. For example, policies as to whether MOOCs can be considered for credit in universities and colleges are still not clear, or whether MOOCs can substitute for actual training. These are undoubtedly huge constraints that have to be overcome even before MOOCs can have widespread availability in the region.

In summary, it could be seen from the above that there are huge variations in quality amongst the different AMSs in both the inputs to and outputs of education. Indeed, there are AMSs that still have a long way to go in improving their quality indicators. The challenge, therefore, is ensuring that all AMSs achieve the stellar outcomes that have heretofore been experienced by only one or two AMSs. It may be said, though, that the prospects of this occurring is good since all AMSs have recognised that quality and access should be improved in tandem. In this regard, the AMSs have enacted laws and regulations to achieve these improved outcomes. These individual initiatives are then complemented by regional cooperative initiatives and by harnessing new technologies. There is apparently a conscious effort to improve education in a systemic manner.

5. Equity Issues in the Provision of Basic Education

Equity in education has two primary dimensions: fairness and inclusion (OECD, 2008). Fairness entails that all citizens in a country, regardless of gender, ethnicity, or location, have the opportunity to be educated. Inclusion entails that every citizen in a country should be literate (able to read, write, and perform simple arithmetic).

However, problems of equity in education arise between rural and urban areas, public and private education, as well as across various demographics. Sadiman (2004) summarises these problems that restrict the access to education as follows:

a.) Lack of educational facilities such as school buildings, classrooms, textbooks, supplies and learning materials, and insufficient public funding to provide these necessities;
b.) Shortage of teachers in remote areas as well as across grade levels;
c.) Disparate distribution of the population across provinces as well as remote areas that have difficult access to town centres or schools; and
d.) Families in poverty and parents' dilemma between sending their children to school and making them work.

The access of females to basic educational opportunities has improved and is performing well compared to the world average. Table 9 shows that the percentage of female students enrolled in primary education has improved, or has remained at par with the world and East Asian rates. This is an indication of the degree of equity of primary education in the region with regard to gender. Female students have access to the same educational opportunities as males. Table 10 also shows that the percentage of female students enrolled in secondary education has improved as well.

Table 9: Percentage of Female Students in Primary Education

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	47.38	47.88	47.89	48.10	48.30	48.38	48.39
Cambodia	45.85	47.24	47.39	47.41	47.79	47.64	47.75
Indonesia	…	48.26	48.45	48.27	49.53	49.51	48.50
Lao PDR	45.18	45.98	46.62	46.93	47.18	47.44	47.61
Malaysia	48.70	48.58	48.53	48.48	48.48	48.50	…
Myanmar	49.28	49.86	49.63	49.35	49.51	…	…
Philippines	…	48.61	48.47	48.30	…	…	…
Singapore	…	…	48.18	48.26	…	…	…
Thailand	48.29	48.14	48.36	48.41	48.36	48.36	48.34
Viet Nam	47.71	47.48	..	47.93	47.26	47.35	48.55
World	46.59	47.22	47.53	47.62	47.66	47.68	47.66
East Asia and the Pacific	47.86	47.51	47.31	47.22	47.36	47.34	47.23

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 10: Percentage of Female Students in Secondary Education

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	49.91	48.82	48.63	48.52	48.58	48.15	48.48
Cambodia	34.90	…	44.93	…	…	…	…
Indonesia	..	48.96	49.01	49.01	49.26	49.13	49.56
Lao PDR	40.54	42.47	43.87	44.28	44.68	45.21	45.81
Malaysia	51.16	51.26	50.66	50.59	50.53	50.63	…
Myanmar	51.19	49.13	..	50.33	51.12	…	…
Philippines	…	51.73	51.12	50.88	…	…	…
Singapore	…	..	48.17	48.18	…	…	…
Thailand	…	50.50	50.98	51.05	50.83	50.80	50.68
Viet Nam	…	…	…	…	…	…	…
World	46.57	47.20	47.46	47.68	47.52	47.58	47.60
East Asia and the Pacific	47.38	47.98	48.22	48.31	47.82	47.85	47.97

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 11 shows that the youth literacy rate in ASEAN countries has remained high (mostly greater than 95 percent), particularly in Singapore and Brunei Darussalam which nearly approach 100 percent literacy in their youth (aged 15–24). It is notable, however, that a few countries are performing way below the region's average as well as the world average, in particular, Cambodia (87.13 percent in 2009) and Lao PDR (83.93 percent in 2005).

Table 11: Youth Literacy Rate in ASEAN Countries (%)

	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	…	…	…	…	…	…	99.78
Cambodia	…	…	87.47	87.13	…	…	…
Indonesia	…	…	99.46	99.47	…	98.78	…
Lao PDR	80.60	83.93	…	…	…	…	…
Malaysia	97.24	…	…	…	98.42	…	…
Myanmar	94.59	…	..	…	…	…	96.03
Philippines	95.09	…	97.75	…	…	…	..
Singapore	99.50	…	…	…	99.75	99.82	99.85
Thailand	97.98	98.05	…	…	96.60	..	..
Viet Nam	94.84	…	…	97.09	..	..	..
World	87.31	89.42	89.42	89.42	89.42	89.42	89.42
East Asia and the Pacific	98.01	98.87	98.87	98.87	98.87	98.87	98.87

Note: .. values are unavailable.
Source: UNESCO Institute of Statistics.

Table 12 shows the number of primary education teachers in the ASEAN. Notably, Indonesia has the largest number of teachers – more than 1.9 million in 2011, but declined to around 1.655 million in 2012. This reflects the very large population of the country which would necessarily need more teachers. Indonesia is followed by the Philippines, Thailand, Viet Nam, and Malaysia, but the difference is very large. The number of teachers, however, does not reflect how the resource is spread over the demand but rather the number of students in primary education. In general, the same may be said for secondary education (Table 13). The number of

teachers in Indonesia far outnumber those in other ASEAN countries. This is followed by Thailand and Malaysia.

Table 12: Teachers in Primary Education in ASEAN Economies

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	3,324	4,548	3,595	3,739	3,896	3,861	4,038
Cambodia	44,852	50,654	48,223	46,658	46,905	47,033	48,002
Indonesia	1,288,965	1,427,974	1,687,371	1,799,973	1,899,946	1,923,189	1,655,764
Lao PDR	27,592	28,299	29,541	31,176	31,782	33,576	32,586
Malaysia	154,720	189,521	209,850	226,467	231,683	234,797	…
Myanmar	148,254	160,110	177,331	179,268	181,666	…	…
Philippines	359,798	373,035	397,468	435,385	…	…	…
Singapore	…	…	15,525	16,893	…	…	…
Thailand	293,391	…	347,959	…	316,552	319,568	307,446
Viet Nam	340,871	360,624	344,853	345,505	347,840	359,039	366,045

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 13: Teachers in Secondary Education in ASEAN Economies

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	3,244	4,350	4,439	4,601	…	5,023	5,192
Cambodia	19,030	…	…	…	…	…	…
Indonesia	1,010,196	1,281,677	1,531,383	1,550,054	1,640,533	1,407,035	1,290,585
Lao PDR	12,402	15,891	18,117	18,598	21,498	24,652	…
Malaysia	120,002	153,031	178,379	186,481	190,581	193,506	…
Myanmar	71,155	78,144	82,001	82,204	83,703	…	…
Philippines	…	167,749	..	194,373	…	…	…
Singapore	…	…	14,128	15,560	…	…	…
Thailand	…	…	222,799	…	…	245,769	..
Viet Nam	…	…	…	…	…	…	…

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 14 shows the pupil–teacher ratio in primary education which is a more accurate reflection of how teachers are spread over the student population. The lowest pupil–teacher ratio in 2012 was in Brunei Darussalam, followed by Malaysia, Thailand, and Singapore, which is a good indication that there are many teachers who go around and tend to students. These countries have more favourable ratios than the East Asian and world averages. It is a different picture for countries like Cambodia, Myanmar, Philippines, and Lao PDR which have high ratios, indicating that there are few teachers who go around. Nearly the same landscape may be seen in secondary education (Table 15). The ASEAN is divided between countries that have very low pupil–teacher ratios (Brunei Darussalam, Indonesia, Lao PDR, Malaysia, Thailand, and Viet Nam) and those that have higher ratios (Myanmar and the Philippines). This is an indication that the ASEAN in general has produced enough teachers to cater to the enrolment in each country.

Table 14: Pupil–Teacher Ratio in Primary Education

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	13.67	10.12	12.55	11.95	11.35	11.34	10.59
Cambodia	50.12	53.21	48.54	49.08	48.45	47.29	45.72
Indonesia	22.12	20.41	17.48	16.61	15.97	15.94	18.59
Lao PDR	30.14	31.48	30.49	29.15	28.83	26.81	27.13
Malaysia	19.56	16.90	14.55	13.25	12.72	12.45	…
Myanmar	32.77	30.90	28.81	28.42	28.22	…	…
Philippines	35.32	35.07	33.74	31.44	…	…	…
Singapore	…	…	19.30	17.44	…	…	…
Thailand	20.79	…	15.99	…	16.26	15.78	16.28
Viet Nam	29.52	21.56	19.93	19.52	19.90	19.63	19.40
World	26.31	25.22	24.67	24.33	23.96	23.71	24.24
East Asia and the Pacific	23.87	20.24	18.75	18.26	17.89	17.79	19.14

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 15: Pupil–Teacher Ratio in Secondary Education

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	10.85	10.09	10.55	10.46	..	9.94	10.09
Cambodia	18.46	…	…	…	…	…	…
Indonesia	14.57	12.48	11.96	12.59	12.18	14.77	16.62
Lao PDR	21.33	24.78	22.76	22.77	20.22	19.89	…
Malaysia	18.38	16.27	14.22	13.65	13.72	13.58	…
Myanmar	31.88	33.14	34.50	34.22	34.08	…	…
Philippines	…	37.87	..	34.81	…	…	…
Singapore	…	…	16.36	14.91	…	…	…
Thailand	…	…	21.22	…	…	19.91	…
Viet Nam	…	…	…	…	…	…	…
World	17.98	17.92	17.08	16.87	16.90	17.12	17.08
East Asia and the Pacific	17.67	17.86	16.16	16.05	15.77	15.95	15.74

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

5.1. Participation Rates

Table 16 shows the net primary enrolment rate for the ASEAN countries. Comparing the East Asian average to the world average, it can be seen that as of 2012, the regional net enrolment rate (94.29 percent) is significantly higher than the world average (89.08 percent). Looking at the country level net enrolment rates, many countries have net enrolment rates higher than that of the region. Overall, they have experienced fluctuating rates (particularly Brunei Darussalam, Indonesia, Philippines, and Viet Nam). Though these values reflect a relatively high net enrolment rate, many of these ASEAN countries are still far off from achieving the second MDG of universal access to primary education. What is true for primary education, however, does not appear to be same for secondary education (Table 17). Brunei Darussalam appears to have maintained a very high net enrolment rate, but for most of the ASEAN countries, the net enrolment rate has been quite low (ranging from 41–76 percent).

Table 16: Net Primary Enrolment Rate for ASEAN Countries (%)

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	…	…	92.97	93.40	93.21	92.69	91.66
Cambodia	91.96	…	98.20	..	98.19	98.28	98.38
Indonesia	…	90.41	94.57	94.92	94.90	93.67	92.22
Lao PDR	74.90	78.71	85.24	88.49	94.35	95.35	95.88
Malaysia	97.81	97.03	…	…	…	…	…
Myanmar	…	…	…	…	…	…	…
Philippines	…	89.03	87.55	88.22	…	…	…
Singapore	…	…	…	…	…	…	…
Thailand	…	…	94.63	95.61	…	…	…
Viet Nam	95.81	90.30	98.53	98.58	98.01	99.32	98.06
East Asia and the Pacific	94.20	93.53	94.40	94.65	94.65	94.58	94.29
World	83.59	86.71	88.76	89.06	89.18	89.12	89.08

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 17: Net Secondary Enrolment Rate for ASEAN Countries (%)

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	…	85.49	88.19	90.02	…	92.59	94.74
Cambodia	15.36	…	38.15	…	…	…	…
Indonesia	…	54.80	65.64	66.43	68.39	74.81	76.10
Lao PDR	27.42	34.78	35.27	36.57	38.16	38.73	41.37
Malaysia	66.00	68.38	65.76	65.15	66.41	66.32	…
Myanmar	32.08	40.66	46.01	46.06	46.99	…	…
Philippines	…	58.96	60.69	61.40	…	…	…
Singapore	…	…	…	…	…	…	…
Thailand	…	…	74.27	77.03	78.09	81.69	79.47
Viet Nam	…	…	…	…	…	…	…
East Asia and the Pacific	52.51	56.63	60.62	61.31	62.85	64.31	64.63
World	56.49	60.43	67.95	70.12	72.50	75.10	76.43

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Several factors influence enrolment in a country. At the national level, education sector reforms and early childhood education programmes are tailored to achieve MDG 2 in 2015. This includes scholarship programmes, subsidies, and state-provided education institutions to increase the access to primary education. However, aside from these national initiatives, household-level factors also play an important role in increasing participation in the school age population.

Studies of primary education in Kenya by Kikuchi, *et al.*, (2012) and in Lahore, Pakistan by Baluch and Shahid (2008) summarise the factors that determine the decision of households to send their children to school. Family-related factors such as being orphaned have greatly discouraged participation in Kenya. Economic factors such as child labour and educational expenses such as uniforms, books, and allowances especially in the midst of poverty are extremely strong discouraging factors to send children to school. However, owning a dwelling reflects better economic standing for families and allows children to enrol. Demographic factors such as family size, the dependency burden of the family, and the educational attainment of the household head encourage the enrolment of children. Infrastructure allowing children to access schools may be insufficient in remote areas especially if there are no stable modes of transportation or paved roads going to town centres.

Meanwhile, government support programmes, including conditional cash transfer (CCT), have been used to promote educational goals. The positive effect of CCT programmes on school enrolment has already been established in the literature (Filmer and Schady, 2010). At the same time, a majority of these studies have focused on Latin America, perhaps because CCT programmes were first introduced in that region and, therefore, have had a longer time period with which to base evaluations. Needless to say, relatively recent studies have shown that CCT programmes such as Brazil's *Bolsa Escola/Familia* increased enrolment by about 5.5 percent in grades one to four, and by 6.5 percent in grades five to eight. It also raised grade promotion rates by 0.9 percentage point in grades one to four and by 0.3 percentage point in grades five to eight (Glewwe and Kassouf, 2011). The Nicaraguan case shows, meanwhile, a robust and statistically significant half-grade increase in highest grade attained of boys aged 9 to 12 and a reduction by four days in the number of missed school days in the past month (Barham, *et al.*, 2013).

In terms of the AMSs, Cambodia, Indonesia, and the Philippines have been implementing CCT programmes. The Cambodia Education Sector Support Project Scholarship Program has been shown to increase attendance by anywhere from 23 to 28 percentage points when support amounting to USD45 was granted to those who had just completed sixth grade, though the impact of a USD60 scholarship does not change the results much (Filmer and Schady, 2011). Indonesia's *Keluarga Harapan* programme was evaluated to have the following effects on basic education (Alatas, 2011):

1. Increased primary school gross enrolment of children aged 7–12 by five percentage points;
2. Increased the attendance of children enrolled in primary school by 10 percentage points;
3. Reduced the dropout rate by five percentage points; and
4. Reduced the class repetition rate by five percentage points.

An evaluation of the Philippines's *Pantawid Pamilyang Pilipino* programme shows similar results. Enrolment rates increased by 10 percentage points for students aged three to five years and by 4.5 percentage points for those aged 6 – 11 years, resulting in almost universal enrolment of 98 percent with respect to the 3 – 11 year old age group (The World Bank 2013/2014). However, future research should aim to get a better understanding as to whether the benefits outweigh the costs (see Glewwe and Kassouf, 2011).

CCT programmes have also been shown to improve the health and nutrition in recipient households, particularly in terms of weight, nutrient supplementation, better feeding practices, and improved nutritional statuses (Gaardera, *et al.* 2010). At the same time, there is an empirical connection between education and health, which goes both ways. In what follows, we will briefly focus on the effect of health (in general) on education. It has been highlighted in the literature that interventions designed to improve the health of students have resulted in similarly improved educational outcomes. For example, the introduction of a school feeding intervention improved school attendance in elementary schoolchildren in Kenya (Omwami, *et al.*, 2010); Ghana (Essuman and Bosumtwi-Sam, 2013); and Uganda (Alderman, *et al.* 2012). Similar effects were observed in the case of targeted deworming programmes in Africa, South Asia, East Asia, and Southeast Asia, which increased mean attendance

by five percent (Sudarsanam and Tharyan, 2013). Finally, early health and nutrition interventions, such as Mexico's *Oportunidades* CCT programme, have been shown to raise the probability that a child will enrol in primary school on time (Todd and Winters, 2011).

5.2. Public and Private Differences

Table 18 shows the proportion of primary enrolment in private institutions. Most countries in the ASEAN only have a small portion of their primary enrolment in private institutions, implying that public education covers a lot more. This is especially true for Viet Nam (0.55 percent), Cambodia (2.38 percent) and Lao PDR (4.13 percent) where only a very small portion of their primary enrolment is in private institutions. Countries like Brunei Darussalam, Thailand, and Indonesia on the other hand have larger portions of their primary enrolment in private institutions, especially Brunei Darussalam with 37.27 percent, whereas Thailand has 19.87 percent and Indonesia 17.33 percent. As for enrolment in secondary education in private institutions (Table 19), mixed results may be seen across the ASEAN. The statistic is lower for Brunei Darussalam, Lao PDR, and Thailand, but is higher for Indonesia, the Philippines, and Malaysia.

Table 18: Proportion of Enrolment in Primary Education in Private Institutions (%)

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	35.10	35.72	37.29	36.71	36.41	36.61	37.27
Cambodia	1.62	0.49	1.26	1.18	1.40	1.49	2.38
Indonesia	15.72	16.65	16.11	16.38	16.82	17.13	17.33
Lao PDR	2.03	2.36	3.00	3.34	3.46	3.80	4.13
Malaysia	…	0.83	1.26	0.94	0.97	1.53	…
Myanmar	…	…	…	…	…	…	…
Philippines	7.25	7.62	8.15	8.13	…	…	…
Singapore	..	..	6.82	7.59	…	…	…
Thailand	13.06	15.81	18.01	18.36	18.22	18.93	19.87
Viet Nam	0.30	0.37	0.58	0.60	0.58	0.53	0.55
East Asia and the Pacific	4.38	5.86	6.60	6.93	7.21	7.56	7.80
World	10.13	11.47	11.85	12.14	12.47	12.56	12.70

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

Table 19: Proportion of Enrolment in Secondary Education in Private Institutions (%)

Country	2000	2005	2008	2009	2010	2011	2012
Brunei Darussalam	10.66	12.79	12.89	13.25	13.52	…	14.80
Cambodia	0.54	…	…	…	…	…	…
Indonesia	…	44.17	42.89	43.27	41.83	41.45	41.71
Lao PDR	0.87	1.57	1.92	2.20	2.69	2.89	3.14
Malaysia	5.81	3.21	4.01	3.10	4.49	4.68	..
Myanmar	…	…	…	…	…	…	…
Philippines	…	19.90	20.48	19.84	…	…	…
Singapore	…	…	5.96	6.37	…	…	…
Thailand	…	13.40	…	16.11	15.66	16.21	16.40
Viet Nam	…	…	…	…	…	…	…
East Asia and the Pacific	…	13.71	15.07	15.65	15.81	16.39	16.80
World	19.17	19.60	20.76	21.18	21.63	22.04	22.43

Note: … values are unavailable.
Source: UNESCO Institute of Statistics.

5.3. Survival rates, gross intake ratios in basic education and educational attainment

Another indicator of the equity dimension of education is the survival rates of those accepted. According to UNESCO (2009a), the survival rate measures the 'percentage of a cohort of pupils (or students) enrolled in the first grade of a given level or cycle of education in a given school year who are expected to reach successive grades.' It should be noted that this is not the graduation rate but the survival rates close to 100 percent point to high levels of retention and consequently, low dropout; and that this measure 'is of particular interest for monitoring universal primary education, a central objective for Education for All and the Millennium Development Goals.'

Tables 20 and 21 show the survival to the last grade of primary and secondary education in the different AMSs (except for Thailand, for which no data is available). It is apparent from these tables that the average survival rate for primary education in the ASEAN ranges from 57 percent in Cambodia to the upper 90 percent in Brunei Darussalam, Malaysia, and Singapore. It should be noted that Cambodia improved its survival rate in primary education from 55 percent in 2002 to 66 percent in 2011. Lao PDR and Myanmar have had relatively middling performance over the same period whilst the Philippines barely saw any improvement.

Table 20: Survival Rates in Primary Education (%)

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Brunei Darussalam	…	97.12	97.05	96.54	95.83	96.25	96.67	96.14	96.58	96.37	96.50
Cambodia	55.02	53.52	56.92	55.09	54.48	54.46	…	…	61.34	65.95	57.10
Indonesia	86.37	85.10	83.45	…	…	79.98	87.87	91.80	88.00	88.98	86.44
Lao PDR	64.47	62.90	63.33	62.23	61.61	66.98	68.45	71.05	68.02	69.95	65.90
Malaysia	97.14	…	99.19	89.34	92.23	95.91	97.66	99.24	…	…	95.82
Myanmar	65.40	68.96	…	71.51	…	…	69.65	74.79	…	…	70.06
Philippines	73.39	72.16	71.52	70.43	73.24	75.26	75.78	…	…	…	73.11
Singapore	…	…	…	…	…	…	98.68	…	…	…	98.68
Thailand						n/a					
Viet Nam	85.17	…	…	92.12	…	…	…	…	93.78	97.47	92.13

Note: … values are unavailable.
Source: UNESCO Institute of Statistics (2014).

In terms of secondary education, survival rates tend to be higher than those for primary education. However, the Cambodian experience, in stark contrast to its performance in improving the survival rates for primary education, has seen its survival rate for secondary education drop from 72 percent in 2002 to 63 percent in 2011. A similar case was also observed in Lao PDR where the survival rate in secondary education went from 81 percent in 2002 to 70 percent in 2011.

Table 21: Survival Rates in Secondary Education (%)

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Brunei Darussalam	…	94.98	95.62	94.73	93.60	94.59	97.22	…	99.44	98.75	96.12
Cambodia	72.08	66.04	66.70	63.89	61.61	63.96	…	…	65.78	63.40	65.43
Indonesia	97.89	95.66	84.03	97.37	…	75.24	92.81	98.40	94.72	94.58	92.30
Lao PDR	81.40	81.81	78.25	75.90	76.68	76.49	78.09	75.22	68.68	70.30	76.28
Malaysia	94.10	90.97	77.59	93.75	85.97	91.51	91.51	90.72	91.08	…	89.69
Myanmar	67.31	85.90	75.20	77.95	65.73	…	66.62	69.27	…	…	72.57
Philippines	82.39	83.96	82.86	76.87	84.32	85.76	86.24	…	…	…	83.20
Singapore	…	…	…	…	…	99.59	99.73	…	…	…	99.66
Thailand						n/a					
Viet Nam	…	…	…	…	…	…	…	…	85.93	82.74	84.33

Note: … values are unavailable; n/a – not applicable.
Source: UNESCO Institute of Statistics (2014).

Tables 22 and 23 show the gross intake ratio to the last grade of primary and secondary education respectively. A measure of completion, this statistic denotes the 'total number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the population at the theoretical entrance age to the last grade of primary education' (UNESCO 2009a). A similar definition may be applied to secondary education. Of course, the definition allows for the percentages exceeding 100 due to over- and under-aged students. Note, however, that whilst there is a 'gross graduation ratio' statistic, this is not reported in this paper due to poor data availability across the AMSs.

In terms of primary education, it could be seen from Table 22 that the AMSs (except for Singapore and Thailand for which data are unavailable) have been performing well. Notice that whilst Lao PDR posted a 76 percent average gross intake ratio to the last grade of primary education, this statistic improved from 67 percent in 2002 to 95 percent to 2012. A similar finding may be observed for Cambodia, which saw this measure improve from 59 percent in 2002 to 98 percent in 2012; and in Myanmar, which saw an improvement to 95 percent in 2010 from 76 percent in 2002. Curiously, however, this measure gradually declined in the case of the Philippines between 2002 and 2011. At any rate, the figures reported for Tables 22 and 23 for primary education suggest that whilst there are differences across AMSs, the region is well on its way to achieving its EFA goal.

Several factors influence survival and dropout rates as well. Having low income, potentially coming from a racial or ethnic minority group, being older than the average age cohort, and being male are a few demographic factors that increase the risk of students dropping out (Burrus and Roberts, 2012; Allensworth, 2005; Rumberger, 2004; Roderick, 1994). An Ugandan study, Mike, *et al.* (2008) found that the risk of dropping out decreases with rural to urban migration (due to easier access), the age of the household head as well as the educational attainment of parents (pointing to the role of parental decisions in influencing the child to stay in school), and the size of a household, but increases with the distance of schools and higher fees paid for educational services. A survey conducted by Nava (2009) in the Philippines reveals several reasons across gender groups, school levels, and locations that influence dropping out. Many respondents enumerated having no pocket money for lunch, taking care of siblings

(especially in elementary school students), work (especially in rural and male respondents), laziness, as well as the distance from the school (particularly in female and rural students) as factors that led to their dropping out. Laziness is also a significant reason for dropping out, especially in males.

Up to some extent, psychosocial factors can play a role in determining the probability of dropping out. Psychosocial factors pertain to the personality and the motivation of the student (Burrus and Roberts, 2012). If a student perceives school to be uninteresting, then there is a greater risk of dropping out (Bridgeland, *et al.*, 2006). If there is no adult engagement, that is, if parents do not recognise the value of education and lack involvement (White and Kelly, 2010), or if teachers have no passion for their work (teaching for the sake of work and not for the sake of helping children), there is a higher risk for dropping out as well (Bridgeland,*et al*, 2009). In addition, Huan, *et al.* (2015) find that children in northwest rural China have a larger risk for dropping out if they have poorer mental health – that is, if they have higher learning anxiety, personal anxiety, loneliness, self-blaming tendencies, sensitivity tendencies, body anxiety, phobia anxiety, and impulsiveness.

Table 22: Gross Intake Ratio to the Last Grade of Primary Education (%)

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Brunei Darussalam	116.70	118.95	110.53	106.96	108.37	109.49	109.31	107.05	108.94	109.61	101.94	109.81
Cambodia	59.41	65.86	76.53	85.76	89.09	92.36	89.06	87.98	91.28	93.44	98.13	84.45
Indonesia	96.58	97.41	97.42	95.96	94.16	98.42	98.70	100.70	102.75	99.70	104.54	98.76
Lao PDR	67.05	66.29	66.38	68.37	71.72	73.61	75.48	78.37	82.92	90.14	95.12	75.95
Malaysia	92.18	92.51	96.87	100.50	…	…	…	…	…	…	…	95.51
Myanmar	76.42	78.99	81.57	…	88.08	89.21	91.33	92.03	94.97	…	…	86.58
Philippines	94.55	95.20	93.98	93.86	91.49	91.34	91.98	91.28	…	…	…	92.96
Singapore							n/a					
Thailand							n/a					
Viet Nam	99.81	98.46	…	91.98	96.54	…	…	…	…	103.17	101.24	98.53

Note: … values are unavailable.
Source: UNESCO Institute of Statistics (2014

The figures for the gross intake ratio to the last grade of lower secondary education or 10th grade show a different story save for the usual good performers, Brunei Darussalam, Malaysia, and Viet Nam. Across the board, gross intake ratios are lower compared to secondary education. However, marked improvements were observed in the AMSs between 2002 and 2012.

Table 23: Gross Intake Ratio to the Last Grade of Lower Secondary Education (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Brunei Darussalam	…	…	96.96	94.89	94.65	92.85	90.66	108.86	105.35	107.59	116.12	100.88
Cambodia	26.65	33.45	38.38	41.14	45.63	50.21	54.66	…	55.89	49.93	45.73	44.17
Indonesia	71.49	73.95	74.46	69.70	69.90	75.45	70.22	75.24	76.03	78.95	73.90	73.57
Lao PDR	34.79	39.58	44.17	45.51	45.61	47.09	48.96	51.37	45.44	45.25	45.01	44.80
Malaysia	78.28	89.52	87.99	85.07	87.22	89.52	91.82	93.80	95.20	98.66	…	89.71
Myanmar	35.95	36.22	41.19	41.00	43.43	42.41	…	48.55	49.55	…	…	42.29
Philippines	58.78	61.91	70.04	67.59	64.99	58.41	69.37	67.31	…	…	…	64.80
Singapore							n/a					
Thailand	…	…	…	…	…	93.69	…	…	…	…	…	93.69
Viet Nam	82.19	…	…	128.55	…	…	…	…	…	84.92	78.67	93.58

Note: … values are unavailable.
Source: UNESCO Institute of Statistics (2014).

Table 24 shows the proportion of the population aged 25 years and older according to their highest educational attainment. It can be seen that there is quite a variation when it comes to the proportion of the population with a certain highest educational attainment. Generally, the largest portion of the population across the ASEAN countries was able to attain a degree in secondary education (combining both lower secondary and upper secondary). But if secondary education is disaggregated into lower and upper classifications, it can be seen that the largest proportion of the population in several ASEAN countries finished only primary education. This is true for Cambodia, Indonesia, and Thailand whose population dominantly finish primary education only. A significant portion of Viet Nam's population has the highest educational degree of lower secondary. In Malaysia and the Philippines, a significant portion of their population managed to finish until upper secondary education. On the other hand, a significant and the largest portion of Singapore's population (39.6 percent) was able to finish until tertiary level. Despite the proportion of the highest educational attainment in the region being dominantly secondary, Malaysia, Philippines, Thailand, and Singapore still have a very large proportion of their population whose highest educational attainment is tertiary, which reflects relatively better productivity in their workforce.

Table 24: Educational Attainment for Ages 25 years and Older Given Latest Available Reference Years(as percentage of population aged 25 and older)

Country	Primary	Lower Secondary	Upper Secondary	Tertiary
Brunei Darussalam		n/a		
Cambodia (2009)	20.1	9.2	4.2	…
Indonesia (2011)	30.15	15.25	20.63	7.8
Lao PDR (2009–2010)	…	29.7	…	…
Malaysia (2012)	22.7	17.4	32.5	20.1
Myanmar		n/a		
Philippines (2008)*	31.7	…	35.1**	24.2
Singapore (2012)	22.6	9.7	19	39.6
Thailand (2010)*	21.8	11.2	14.2	11.8
Viet Nam (2009)*	28.3	39.3	13.6	6.7

Notes: *Data taken from UNESCO Institute of Statistics
**Figure combines both lower secondary and upper secondary
… Data unavailable

Source: ASEAN Secretariat, (2014), *State of Education Report 2013.*

5.4. National Initiatives in Addressing Equity Issues

This section covers a listing of various programmes initiated by AMSs in improving access to basic education to make it more non-exclusive and target sectors that may likely be indifferent to education. Various measures were used by AMSs – from legislations to targeting initiatives as well as implementation of alternative financing and delivery systems to make the provision of basic education more equitable.

In terms of legislative measures and policy guidelines, Brunei Darussalam provides free schooling for all citizens through the Compulsory Education Order 2007 of the Ministry of Education. The government directive mandates six years of compulsory primary and three years of lower-secondary education for a child six years of age (Ministry of Education, 2008). Meanwhile, Myanmar's 1993 Child Law is intended to provide free and compulsory primary education as well as carry out measures to improve retention in schools (UNESCO 2011).

In terms of targeting initiatives, Myanmar has a list of measures for making basic education more accessible to children including: School Enrolment Week Programme, All School Going Age Children in School Programme; Special Programme for Over-Aged Children in Primary Classes with accelerated curriculum; and opening more schools in remote, border and mountainous areas, monastic schools, mobile schools, orphanage home schools, and voluntary night schools (Ministry of Education, 2008b).

In Cambodia, the School Feeding Program (SFP) was introduced in 1999 with support from the World Food Program. An integrated cash school subsidy under the Japan Fund for Poverty Reduction, Asian Development Bank (ADB) scholarship programme for girls and ethnic minority children was also introduced. These were components of the Priority Action Program in 2000 which focused on demand-side-oriented policy to improve the access to primary education in the country (Barrera-Osorio and Filmer, 2013; Bienveniste and Ridao-Cano, 2005).

In Lao PDR, one of the objectives of the Basic Education Quality and Access in Lao PDR (BEQUAL) is to increase school participation of all sectors. This initiative is intended to assist disadvantaged children, girls, disabled, impoverished, and those with health and nutritional barriers that hinder their full participation in education. This particular key area will be implemented via two components. The first is

participation and access which focuses on extending primary education to the said targets of BEQUAL through a consortium with non-government organisations (NGOs). The consortium will develop activity designs, scope of services, and basis of payment, as well as activities and research initiatives geared towards inclusive education, Lao-language, multi-lingual teaching, local curriculum development, health/disability screening, and the like. Despite this, there are still no scholarship programmes under this reform. The second is through the provision of school meals to targeted schools, in cooperation with the World Food Programme, to increase primary school enrolment and attendance sustainably. The meals are perceived to act as incentives to send children to school, help sustain attendance, improve survival rates, and address short-term hunger and micronutrient deficiencies. (BEQUAL Investment Design Document 2014)

In Malaysia, the country has implemented long-standing programmes geared towards improving access and retention since the 1970s in its series of Malaysia Plans. Such programmes include the Supplementary Food Programme which provides breakfast in order to improve attendance and address malnutrition, and programmes for loaning textbooks to students from low-income families (a brief discussion of these programmes can be found in Symaco, n.d.). Another is the Poor Students Trust Fund 2003 which is a funding programme aimed at lower-income families, and a 2004 Tuition Aid Scheme which provides extra weekend or after-school lessons to underperforming students from government schools. There is also a 2006 School Milk Program to reduce financial pressures of parents to reduce dropout rates. There are also Special Education Programmes to extend the access to education to children with special needs and handicaps, and a 2006 Early Intervention Reading and Writing Class which identifies children that have difficulty reading and writing for intensive tutoring to ensure retention. There is also a wide array of bilateral agreements (e.g. Indonesia sending teachers) and NGOs (e.g. Humana) that assist in the promotion of access to primary education by establishing learning centres in particular areas.

Scholarship grants and subsidies have also been used by other AMSs as intervention measures to improve access to basic education. Indonesia has an array of scholarship programmes including the 1998–2003 School Grants Programme, the 2001–2005 Oil Subsidy Savings Scholarships, the 2005–2007 post-*Bantan*

Operasional Sekolah, School Operations Assistance, and the 2008–present re-expansion of scholarship programmes (Agustina, *et al.* 2009). The most recent set of scholarship programmes have focused more on reaching the poor rather than giving scholarships on the basis of academic competence. There are two primary level scholarships: MoNE's Primary Education (SD) and the Ministry of Religious Affairs' *Madrasah Ibtidaiyah* (MI). The targets of SD include impoverished and highly-populated provinces whereas the target of MI is to enhance enrolment with general scholarships for poor and academically outstanding students and special scholarships for students in remote areas and those with disabilities.

In trying to achieve the goals of EFA 2015, Viet Nam included as one of its policy goals the provision of one year of full-time preschool education with free lunch for disadvantaged students, as well as the phasing out user fees for poor families (Viet Nam EFA Action Plan 2003–2015 2012). Education for children aged 6–11 is free, after which parents are required to pay tuition fees. Disadvantaged children aged five receive a full school year of preparation classes for primary education. The country also aims to reintegrate 95 percent of their primary level dropouts by 2015 with the use of more flexible curricula and timetables, as well as new materials, methods, and self-instruction guides. Programme 135 provides a semi-boarding school student cash transfer scheme to support the poorest in isolated areas.

Interventions in the Philippines are made through the use of alternative measures of financing and delivery system. The Alternative Learning System (ALS) is in place to address Filipino children and youth that are not part of the formal education system. The country has a wide array of policies and programmes to improve access and retention. The Department of Education's DO No. 38 s.1993 is a multi-grade program that aims to reach school-age children in remote areas and offers six free grade levels to children. Alternative Delivery Modes are also available to prevent school dropouts. These include: IMPACT, which is a collaboration between parents, teachers and community members that institutes peer learning, self-instruction, tutorial and remediation; the Modified In-School Off-school Approach, which is a combination of formal and non-formal learning where children may learn from home or their community in light of the lack of classrooms and learning materials; and the Open High School Program (OHSP), which is a component of the Dropout Reduction Program which uses distance learning to accommodate students with disabilities,

jobs, financial situations, and remote residences. DO No. 62 s. 2008, or the 'Early Registration Day', is also in place. This enables children to be enrolled on time, and allows the Department of Education to prepare logistics in time for the opening of classes. The Department of Education also has DO No. 48 s. 2009, or the 'No Collection Policy', which prohibits the collection of certain school fees and schedules the collection of necessary fees. This is in tandem with DO No. 41 s. 2012, or the 'Revised Guidelines on the opening of Classes', which enforces that no fees are to be collected from students of kindergarten to grade four, and only voluntary contributions may be collected for students from grade five up to high school. The country also has a conditional cash transfer programme, *Pantawid Pamilyang Pilipino Program* (4Ps), which gives the poorest households a PHP300 (USD6.756) education subsidy per month per child for a maximum of three children. There is also Republic Act 8545 which mandates the Education Service Contracting Scheme and the Education Voucher System which target deserving elementary graduates who wish to continue studying in private high schools, and give financial assistance to those that wish to avail of OHSP. There are also PPPs with NGOs and private institutions such as Adopt-a-School and *Brigada Eskwela* which encourage investment or support for schools from these private partners.

Similarly, Thailand has adopted alternative measures of financing and delivery systems for improving access to education. The Ministry of Education has begun to incorporate technology into their classrooms to promote distance learning and has provided students access to financial resources such as the 'Smart Card' Project and the 'Income Contingency Loan Program' which allow repayment based on income earned after graduation (Education for All 2015 National Review Report: Thailand). To accommodate students with disabilities and those in remote areas or minorities, the Ministry of Education has the 'Home as Classroom, Parents as Teachers Project', 'Inclusive Education' Project, as well as provide per-head payments to schools to support these marginalised students. Other projects include the Projects to Develop Children and Young People under the Patronage of Her Royal Highness Crown Princess Sirindhorn, and Border Patrol Police Schools.

5.5.Role of Technology in Addressing Inequity Issues

With the advancement of technology comes newer solutions to increasing the access of students to primary education and hence equity. National initiatives are no longer limited to just scholarships, grants-in-aid programmes, or feeding programmes. With technology and ICT, innovative solutions are possible such that distance, or financial constraint, or employment may no longer be a hindrance to getting an education.

5.5.1 SEAMEO Regional Centre for Innovation and Technology

An example of a regional initiative using technology to address equity issues is the establishment of the Regional Centre for Innovation and Technology (INNOTECH) under the Southeast Asian Ministers of Education Organization (SEAMEO). SEAMEO INNOTECH is dedicated to solving the education problems and addressing the needs of the ASEAN countries using innovative and technology-based solutions, training and human resource development, research and evaluation, ICT, and other special programmes (SEAMEO INNOTECH 2014). Since its establishment in 1970, it has completed a number of projects that give ICT-based solutions to educational problems. An example is the School-Based Education (SBE) project which teaches distance education courses to participants using self-learning modules and instructional video tapes. Another is the compilation of school achievements of students in Asia into a database for analysis, presentation, and formulation of country reports. Another is the Community-Based Basic Learning Package which provides out-of-school youths and adults relevant basic learning in a shorter period using individualised instruction and group learning with the help of learning packages on communication skills in dealing with quantitative data, self-improvement, et cetera.

5.5.2 International Council for Open and Distance Education

ICT and various forms of technology enable distance learning, which is a mode of delivering education to students that are not able to study or attend traditional or formal forms of education such as classrooms. E-learning is a form of distance learning which uses ICT infrastructure to facilitate the learning process. Usual forms of distance and e-learning are MOOCs and open educational resources wherein

students may access materials such as filmed lectures, readings, and problem sets and, at times, interactive forums and dialogues with students and educators.

In 1983, ICDE was established to promote greater educational opportunity for all with the use of open, distance, flexible and online education (e-learning) (ICDE 2014). Most of the activities and initiatives of ICDE are conducting conferences and meetings on open and distance learning as well as promoting it to developing economies that could use more options in trying to spread the access to education.

ICDE has kept track of noticeable distance learning initiatives in some ASEAN countries (more information is available in their website www.icde.org).

The Brunei Darussalam Information Technology Council was established in 2000 to develop, formulate, and implement strategies to develop and use ICT for the needs of the country's various sectors. In 2010, the country formulated a major road map for ICT development, the e-*Hijrah* Blueprint, which aims to transform education in Brunei Darussalam with the use of ICT.

Indonesia, on the other hand, has a long history in correspondence-based teaching training courses dating back in the 1950s. Teacher training and educational sciences are two of the courses offered in the national open university, *Universitas Terbuka*. Distance learning programmes for secondary education in the 1970s used audio-cassettes, radio broadcasts, TV programmes, and video tapes as instructional media, and this practice has continued in recent years with projects such as the Open Senior Secondary Schools Initiative. With the help of the SEAMEO Regional Open Learning Centre, teachers availed of open and distance learning programmes through an integrated e-learning environment. Distance learning and OER have spread to other universities as well. Another project, the School of Internet Asia, uses satellite-based Internet to deliver live lectures from Japanese higher-educational institutions.

In Malaysia, the first provider of higher education by distance was the *Universiti Sains Malaysia* in 1971. However, its progress was slow until the implementation of 1996–2000 Seventh Malaysia Plan which enabled a rapid expansion of distance learning. To date, the use of distance education in Malaysia remains scarce due to unappreciative perspectives of parents towards distance learning. Distance learning is perceived to be more of a means for adult learners. Many universities use correspondence courses, email, online chat, bulletin boards, and video-conferencing to facilitate learning. A flagship programme on the use of ICT in learning is the

Sekolah Bestari or the Smart School initiative launched in 1996 which aimed to shift teaching culture from exam-based evaluation to more creative use of knowledge. Smart schools have decreased in use and have shifted towards Cluster Schools that encourage teachers to share resources and knowledge. The *University Tun Adbul Razak* was Malaysia's first virtual university in 1998 that used CD-ROMs to deliver its programmes. Only a few universities in Malaysia enable OER.

In Thailand, the earliest educational institutions that provided distance learning were *Ramkamhaeng University* in 1971 and *Sukhothai Thammathirat Open University* in 1978. The Thai Department of Non-Formal Education began offering distance learning programmes in the 1980s. The Royal Thai Distance Learning Foundation implemented the Distance Learning Television Station which provides educational programmes for primary and secondary school children 24 hours a day. SchoolNet Thailand@1509 provides dial-up Internet connections and, more recently, asymmetric digital subscriber lines, commonly called ADSL, link to secondary schools. This comes with forums, competitions, an online library, and online courses on various subjects. The Thailand Cyber University supports OER through Accessible Courseware Development and e-Learning Thai Language.

In Viet Nam, distance education started with post-secondary correspondence programs in the 1950s. In 1988, the first higher educational distance learning institution, the Viet Nam Institute of Open Learning, was established. There is limited use of distance education at the primary and secondary levels, but it has been very relevant in higher and technical vocational education, especially in several academic faculties. Viet Nam has been very active in contributing OER to the Fullbright Economic Teaching Program OpenCourseWare for Viet Nam.

6. Conclusion and Policy Recommendations

In developing basic education as a major component of human resource development in the promotion of socio-cultural pillar of the ASEAN community, there is a need to articulate some of the basic issues that confront it in general and its status in the region in particular. This section will discuss clear policy

recommendations for enhancing basic education in the region based on the issues we have identified in the previous sections, including the variability of orientation of basic education, the role of education in regional integration, the implications of public–private components of education, and the role of teachers in enhancing quality of basic education. We conclude with the enumeration of various regional initiatives that can be pursued to improve quality and expand access to basic education.

6.1. Differing Orientations in Basic Education

Education is a process of transforming citizens, mostly young students, into desired personal and social outcomes through the use of various inputs. One of the major debates in education is the focus of interest in pursuing this social institution. Many education specialists tend to focus on outcomes because outcomes are measurable answers to the objectives of providing education. On the other hand, since education is a process of assigning various prospective social roles to citizens, there are those who concentrate on the process. Process-based education is premised on the belief that the more important outcomes of education are realised in the future and that these long-term outcomes are difficult to measure currently. In addition, even if short-term educational outcomes are important and measurable, many of these are embedded in outcomes that are not measurable currently. Moreover, the ways through which these outcomes are embedded do not exhibit any predictable pattern. High reading scores amongst students, for example, may or may not predict sociability, good citizenship, productivity at the workplace, and other important long-term educational outcomes. Even if they can predict, a negative relationship may have problematic implications for teachers and educational managers. As a result, we come out with very limited and sometimes inconsequential measurable outcomes. Thus, even if robust econometric models on the production functions on education have strong predictive values, they are still based on narrow measurements of short-term educational outcomes.

If outcome-based education should be stressed, which outcomes are more important? Present or future outcomes? Outcome-based educational policies are student-centred and stress on the acquisition of skills and the development of competencies. But education, particularly basic education, is more than just the acquisition of skills. Basic education is also about experiences on the socialisation

process – the nurturing of friendships, the formation of alliances, and the building of community spirit. In addition, the process of education entails a number of encounters including exposure, revelation, discovery, affirmation, process, initiation, interaction, interface, communication, relationship, awakening, appreciation, confession, realisation, and commitment. Many of these important educational outcomes cannot be measured. And even if they can be measured, they are measured inadequately. These important outcomes are beyond numeracy, literacy, and reading comprehension which are normally measured educational outcomes that are subjected to analysis and international comparison.

Educational outcomes are not static. Although these outcomes are initiated at the classroom and school level, they continue in the future; and measuring them currently may be inadequate because their more important impacts are realised in the future. Most educational outcomes are dynamic because they are not realised immediately after the completion of a class or a course or an academic programme, but transcend the spatial and temporal boundaries of schools. Most of these important and relevant outcomes are carried by the individual into his productive years in the future.

Because of the difficulties in the identification and measurement of educational outcomes, many analysts tend to focus on education inputs instead. Borrowing from the lessons on production functions, many economists consider education as a product that has to be produced with educational inputs. Thus, whatever outputs are being produced in schools, the assumption is that improving education inputs will make better and improved outputs. The theory of productivity may be at hand here. It is not important what outcomes we want to pursue, but improvement in inputs can result in better outputs.

6.2. Can Basic Education be used as a Tool for Regional Integration?

As part of building a socio-cultural community, basic education is included under the human resource development dimension that ultimately ends with employment. In this light, it is important to look into the primary purpose of enhancing the quality of basic education. On the surface, it appears that it is meant to improve labour productivity and ultimately contribute to the mobility of workers that can enhance the competitiveness of the ASEAN region in the future.

There is nothing wrong with improving the quality of basic education for labour productivity since education has been recognised as an investment in human capital that can enhance future earnings of individuals (Becker 1964). But as discussed in the previous sections, education is not only for employment purposes but also for personal, social, and cultural development. Education has been used as a tool for socialisation and an agent for cultural standardisation (Katz 1976). It is also a social mechanism for citizenship formation that provides social status to the individual and shapes his future life (Boli, *et al.* 1985).

If basic education is meant to cover future employment including regional mobility, is this objective congruent with the thrust of an AMS to use education for legitimate non-market goals like pursuing citizenship training and building cultural awareness amongst its young citizens?

Is ASEAN moving towards a common approach in pursuing basic education under the socio-cultural pillar of ASEAN community? If so, are the AMSs willing to realign their national goals with the regional human resource development thrust in the name of building a socio-cultural community? It is difficult to make a national commitment towards a regional approach on the training of young citizens since there are a host of differences in pursuing basic education in the each of the AMSs.

Similarly, is the process of improving basic education in the region meant to have a competitive academic environment so our students can score better in international exams in Mathematics and Science, or is it intended to instil awareness amongst our students to become well-informed citizens, trainable individuals in the workplace, life-long learners, and adaptable to changes in the work place? Given the differences in the educational goals and inputs of AMSs on the one hand and the important role of flexibility in the delivery of educational services on the other, is the initiative towards the standardisation of curriculum in basic education in ASEAN practicable? In addition, how can standardisation of curriculum address the need for decentralisation and the need to give more flexibility to teachers in implementing the syllabus and the curriculum? More importantly, can a standard curriculum contribute to the formation of citizens who are respectful of the diversity of peoples and cultures in the region which is the foundation of a socio-cultural community?

Lastly, in building a regional community, is ASEAN aiming for convergence of qualifications of workers or is it targeting the formation of educated adults who can

be respectful of the differences of peoples within the region? For example, there is a move to have harmonisation in the qualifications of teachers similar to the Mutual Recognition Agreements (MRA) in selected professions under the ASEAN Framework Agreement on Services (AFAS). Is this convergence meant to facilitate trade in services or intended to improve the quality of teaching?

6.3. The Potentials of Public–private Partnership in the Provision of Basic Education

Since education has failed to fit the strict criteria of non-rivalry and non-exclusivity, it cannot be classified as a pure public good. However, because of its enormous social benefits, it can be considered a public good by design (Levin 1987; Kaul and Mendoza 2003). Thus, governments have committed enormous resources to make basic education universally accessible. Although the public sector can make education non-exclusive, there are private individuals who may want and who are willing to finance the basic education of their children, fully or partially, to enhance their private returns.

This mix of private and social benefits of education can serve as an opportunity for improving access to education as well as for pursuing efficient use of public resources. Various modes of PPPs in the financing and operation of basic education can be implemented. More specifically, a public–private mix in financing and operation can be done by allowing the operation of private schools, charging of users fees, granting of student loans, provision of vouchers, operation of charter schools and public schools, and other modes. Although PPPs are being done in the Philippines, Indonesia, Thailand, and Brunei Darussalam, other AMSs can learn from the practices of other member states and reap the benefits of such partnerships.

The expansion of the role of the private sector in the provision and operation of basic education is meant to improve the quality of education and provide families more freedom in their choice of schools. It could not be said though that private education shall be replacing publicly operated schools in the ASEAN in the foreseeable future. However, it may be said that there are complementary roles for these two sectors in education, particularly in terms of the private sector being used as a means to ease the reliance on the state. Indeed, the state still has a major role to play in terms of regulating the educational system and in ensuring that curricula and

minimum standards are met. This mode of partnership can likewise alleviate the resource and regulatory constraints inherent in the government provision of goods and services.

6.4. Enhancing the Role of Teachers in achieving Quality Basic Education

The need to improve the quality of teachers is based on the recognition that the teacher is considered the most important input in the process of education as well as the main predictor of student academic performance (Vegas 2012). In this light, there are many questions on the concept of quality of teachers and how this is pursued.

From an input-based educational perspective, the teachers are major inputs in the educational production process. It is argued that an improvement in the quality of teachers will translate to quality graduates and positive educational outcomes. However, the role educational inputs have been tempered. Studies have shown that the relationship between school inputs and student outcomes has been limited (Hanushek 2003). Specifically, there are studies that show that teachers' quality or educational qualifications or even teacher certification may have narrow impact on measurable educational outcomes, including Reading, Mathematics, and Science scores. On the other hand, for outcome-based education, the quality of teachers is also instrumental in improving the outcomes. Although outcome-based education is student-centred, the transmission of skills can only be done by qualified teachers. Skilled and competent teachers are needed to transmit skills and competencies amongst the students.

Oftentimes, the quality of teachers is indicated by their academic credentials and classroom management. However, it can also be revealed by the ways teachers interact with their students. In the light of the non-market dimensions of basic education and the formation of a socio-cultural ASEAN community, one may ask which quality of teacher is more important. Is a knowledgeable teacher more valued than teachers who care for their students? Which one has created a greater impact on the future performance of students? Is it the caring teacher or the pedagogically adept teacher?

A related issue on the quality of teachers is the avenue in which this is being promoted. Currently, pre-service training, a feature of quality, is used as part of the qualification requirements for teachers. On the other hand, a number of studies have

cited the importance of in-service training in predicting teachers' quality. These two avenues should not be considered as substitute but rather complementary measures. Thus, pre-service training may be considered as a necessary condition to attain quality whilst in-service training may be the sufficient condition to maintain the quality of teachers.

Given the importance of in-service training programmes, it is likewise important to know which mode of delivery these programs can be carried out. Although most of the AMSs have some form of in-service training programs for their teachers, they vary in terms of delivery and intensity. There are countries with dedicated teaching institutions for this type of retooling. In Malaysia, in-service training is mandatory for teachers every five years. On the other hand, because of the limited resources of the government and logistical problems, other countries can only provide short-term in-service training programs during school breaks. These initiatives may be inexpensive and can address the logistical complexities of full-blown continuing education programs, but are they effective in improving the quality of teachers?

Improving the quality of teachers is also important in the light of the differences in the qualifications of teachers in the region. This unevenness needs to be addressed by a regional convergence of qualifications requirements. For example, there is a move to have harmonisation in the qualifications of teachers. Is this convergence meant to enhance trade in educational services or intended to improve the quality of teaching?

It is obvious from the above that there is a huge variety in terms of qualification requirements for teachers across the various AMSs. It may be said, however, that the prospects for harmonised qualifications for the teaching profession is good. This is premised on the fact that AMSs have, as one primary objective, the substantial elimination of barriers to trade in services amongst them (as stated in AFAS). In particular, Article V of AFAS states that AMSs 'may recognize the education or experience obtained, requirements met, and licence or certification granted in other ASEAN Member Countries, for the purpose of licensing or certification of service suppliers.' In order to achieve this goal, MRAs are entered into by all AMSs, which allow for the recognition of educational and professional qualifications as well as experience, for the free flow of skilled and professional workers within the ASEAN. This has the ultimate objective of creating an integrated market for the region. To

date, MRAs have been entered into for Engineering, Nursing, Architecture, Surveying, Medical Practitioners, Dental Practitioners, and Accountancy. The fact that these MRAs have been entered into suggest that whilst a similar endeavour for teaching may be difficult given its role in education, it is not impossible. In addition, even though an MRA has not been entered into for Teaching, it may be said that the practice of inviting guest lecturers and undertaking faculty exchanges amongst AMSs are almost akin to employment of foreign teachers. At the same time, in other AMSs such as Thailand, Filipinos are in demand as English teachers (Hickey 2014). In other words, teaching services have been quite mobile within ASEAN even without an explicit MRA, providing some credence for a potential MRA in Teaching.

6.5. Regional Cooperative Measures on Basic Education

Notwithstanding these issues, there is a need to explore the opportunities offered by regional cooperation. Aside from regional initiatives on the improvement of educational outcomes, educational inputs, teacher's quality, and the delivery of instruction, AMSs can also share best practices in the delivery of basic education.

The ASEAN, by design, is an association for regional cooperation amongst its member states, with the ASEAN Declaration explicitly providing for 'assistance to each other in the form of training and research facilities in the educational, professional, technical, and administrative spheres.' Therefore, education is a key area in terms for cooperation amongst the AMSs.

The ASEAN Ministers of Education first met in 1977 in Manila and issued a communiqué containing the approval for the establishment of an ASEAN Network of Development Education Centers. The projects included: (i) teacher education reform, (ii) test development, and (iii) the creation of a management information system for education. In 2009, the Cha-Am Hua Hin Declaration Strengthening Cooperation on Education to Achieve an ASEAN Caring and Sharing Community was adopted. This highlighted the role of education in contributing to the establishment of an ASEAN community that has a common identity, and enhances the well-being, livelihood, and welfare of its nationals. This declaration envisions the development of a standardised curriculum, detailing the common content on ASEAN for schools in the region. As mentioned earlier, a key document that aims to address this goal is the creation of the ASEAN Curriculum Sourcebook which has five

themes: (i) Knowing ASEAN, (ii) Valuing identity and diversity, (iii) Connecting global and local, (iv) Promoting equity and justice, and (v) Working together for a sustainable future (ASEAN/SEAMEO 2012).

Also, in order to expand quality education, particularly in the rural communities, a community-based program for young volunteers who will support rural learning centres is to be established. The declaration also envisions the establishment of an educational research convention to allow experts to exchange views on regional issues and concerns. Finally, it advocates for the establishment of a regional education development fund that will ensure that there is adequate financial resources for the implementation of the recommendations above.

The sharing of best practices is a key objective of the ASEAN and the activities supported by the ASEAN in this regard are (ASEAN Secretariat 2012 p.13):

1. 'Convening best practice workshops and conferences at which Member States can discuss their experiences and cultivate dialogue/cooperation with partners.
2. 'Collecting baseline information on sector attributes (e.g. policies, institutional performance, social partners' organization and actions, workforce development, and networks) in order to benchmark sector performance in the region.
3. 'Analysing education sector performance in Member States, using benchmark information and good practice experience, to identify ways to narrow disruptive gaps among Member States;
4. 'Agreeing on ASEAN framework instruments in specific areas where consensus makes policy convergence among education ministries possible.
5. 'Raising awareness of good practices among ministry officials and building their capacity to adapt such practices.
6. 'Advancing cooperation and ASEAN-level agreements between education ministries and dialogue and cooperation partners to enrich debate and secure financial and technical resources to develop ministry capacity.
7. 'Tracking benchmark and progress indicators to monitor sector evolution and the results of cooperative efforts.
8. 'Informing civil society, stakeholders and the general public through the education ministries and the ASEAN Secretariat on progress in cooperation on education.

9. ‘Using information and communication technology to keep communication efficient and to enable innovative forms of dialogue and training among participants in the Member States.’

The ASEAN has committed to the Education for All goal by 2015. To achieve this goal, the ASEAN Secretariat (2012 p. 22) writes that the following activities shall be undertaken:

1. ‘Sharing best practices in promoting universal and equal access to quality education through partnership programmes and technical assistance; benchmarking non-government organizations, private sector, and community initiatives; tracking mechanisms for students at risk of dropping out; and collaborative gathering of data for use in planning.
2. ‘Documenting and sharing practices for “reaching the unreached.” This would provide guidance and expertise in reaching marginal and underserved populations and would focus on improving classroom instruction for underserved population groups.
3. ‘Incorporating effective approaches for systematic teacher development programmes and use of relevant data for planning, policy formulation and recommendations. Good teachers with requisite skills are needed and often in short supply in remote areas as well for serving the educational needs of underserved population groups in both urban and rural areas, as well as for minority groups. Using appropriate approaches for increasing the supply of quality teachers, programme activities would include sharing innovative, interactive approaches to teaching and exploring the role of the teacher as mentor and learning facilitator.
4. ‘Using university and corporate social responsibility programmes to broaden access to education. Such programmes can help establish service learning and outreach activities that broaden access to education. Establish, support, and promote a regional system to track the “unreached.”’

However, it is clear that access alone is not enough. Thus, AMSs have also committed to improving the quality and relevance of basic education. To this end, the following activities are to be undertaken (ASEAN Secretariat 2012, pp.26–27):

1. ‘Promoting quality through networks of teachers, principals, administrators, teaching institutes, schools, and teacher associations. Activities under this programme could include an ASEAN website, newsletters, interactive video, schools visits, and teacher and principal exchanges.
2. ‘Supporting Teacher Development Initiatives
    a. Encouraging teaching that leads to learning. Workshops and sample teacher evaluation instruments could be developed through ASEAN as part of its teacher support initiative.
    b. Sharing best practices on assessing students. A resource guide could be developed with ASEAN support as part of an ongoing professional development programme for teachers and teacher educators.
    c. Establishing a sub-network on teacher capacity-building by subject areas among institutions and universities. Content specialist in mathematics, science, language, history and other subjects would be supported in establishing networks addressing curriculum reform, professional developments and evaluation.
    d. Supporting a regional Teacher Quality Assurance Framework. ASEAN could provide leadership in developing teacher performance appraisal instruments and convene a regular regional teacher awards ceremony.
    e. Providing for continuous professional development of teachers and school leaders. This could involve establishing an ASEAN Summer Leadership Institute.
    f. Developing guidelines on mentoring and supporting teachers. A manual could be developed through ASEAN to provide guidance to principals in recruiting, supporting, and evaluating teachers.
    g. Sharing best practices on teacher incentives, awards, and appraisal. ASEAN can offer guidance on retaining good teachers and suggest criteria for acknowledging excellence.
3. ‘Promoting regional teacher accreditation and mobility programmes (physical and virtual). Efforts to examine common teaching credentials are beneficial to

the region. A regional accreditation approach is essential to teacher mobility, and ASEAN could provide support for establishing such a mechanism.

4. 'Enhancing regional capacity building efforts for school management, school improvement planning, leadership development, and school governance. Activities could include workshops on innovative approaches to school improvement and provide a database for innovative schools in the region. In addition, this could include the development of a Master Plan on Regional Capacity Building for school management, school improvement planning, leadership development, and school governance.'

The educational services sector is expected to benefit in terms of freer flow and increased investments through the continuous expansion and deepening of liberalisation in services leading up to the establishment of the AEC by 2015 and through the AFAS. According to Wongboonsin (2014), the liberalisation of the educational services sector in the ASEAN has been greatest for Mode 1 (cross-border supply) and Mode 2 (consumption abroad) as opposed to Mode 3 (commercial presence) whilst Mode 4 (movement of natural persons) is practically non-existent. As of 2011, Thailand has had the most number of sectoral commitments in education under the AFAS with nine; followed by Lao PDR with eight; Malaysia with seven; Brunei Darussalam and Myanmar each with five; Cambodia, Indonesia, and Viet Nam with four each; Singapore has one; whilst the Philippines has none (Ministry of International Trade and Industry, 2011).

Another mechanism by which quality could be addressed is through the SEAMEO which is a multilateral organisation dedicated solely to regional cooperation in education, science, and culture, and which predates the ASEAN by two years. Its work on education is anchored on the following fields (SEAMEO, n.d.):

- 21st Century Skills
    - Character education
    - Entrepreneurship education
    - Information and Communication Technology
    - Language and literacy
    - Scientific and technological literacy

- Continuous professional development for teacher and education personnel
- Education For All
    - Basic education
    - Early childhood care and education
    - Education in emergencies
    - Lifelong learning
    - Reaching the unreached
    - Special education needs
- Education for Sustainable Development
- Higher education
- Technical and vocational education.

The organisation has a number of regional centres across Southeast Asia that undertakes training and research activities in various fields of education, science, and culture. The following regional centres have programmes in basic education:

1. Regional Centre for Lifelong Learning (Ho Chi Minh, Viet Nam)
2. Regional Centre for Educational Innovation and Technology (INNOTECH) (Manila, Philippines)
3. Regional Centres for Quality Improvement of Teachers and Education Personnel
    a. Language (Jakarta, Indonesia)
    b. Mathematics (Yogyakarta, Indonesia)
    c. Science (Bandung, Indonesia)
4. Regional Centre for Education in Science and Mathematics (Penang, Malaysia)
5. Regional Language Centre (Singapore)
6. Regional Open Learning Centre (Jakarta, Indonesia)
7. Regional Centre for Special Education (Melaka, Malaysia).

Collectively, these SEAMEO centres have trained over 70,000 participants since 1965 (SEAMEO, n.d.).

In addressing the issues of equity, the ASCC is the region's primary initiative to improve equity in education. Many of each ASEAN economy's national initiatives are geared towards achieving universal access to primary education, reviewing ASEAN scholarship programmes, and using ICT to penetrate remote areas with e-learning and distance education. The 1990 World Declaration on EFA is also a vital factor in ensuring that equity issues are addressed in the region and that it has paved the way for the ASEAN to achieve its MDG by 2015.

6.6. Tentative Proposals, Policy Actions and Targets for Basic Education Post 2015 ASCC

There are two main objectives being pursued in this paper: how to make education accessible to all in the region and how to improve the quality of basic education as instruments in pushing for human resource development. In the light of the issues presented above, the current regional initiatives in promoting basic education, and the major thrusts in post-2015 ASCC, the following proposals, policy actions, and targets are being recommended to be included in the ASCC Blueprint 2016–2025:

6.6.1. Reinforce the goal of attaining universal access to basic education by 2025

Although participation rates in basic education have improved in most AMSs in recent years, the rates are still below the previous target of universal access to education in all member states. In this light, renewed efforts should be pushed to make basic education more inclusive and benefitting all sectors of society. There should be a study on the factors why some AMSs are lagging behind in this very important target. In particular, a study should be conducted on what are the factors that may contribute to participation rates in primary and secondary education. Theoretically, income of households, spatial factors, opportunity costs, health, and nutritional factors may contribute to children's school attendance. However, these factors need to be empirically verified to assist policymakers on how to intervene effectively and efficiently at the community, local, and national levels to contribute to the attainment of universal access to education.

6.6.2. Significantly improve the survival rates in basic education in all member states

Beyond participation rates, a meaningful measure of universal access to basic education is the proportion of students who complete their primary and secondary schooling based on the original cohorts. Since education is a process, the non-completion of students in the lower levels implies not only wastage in educational resources but also a potential exclusion of a sizeable segment of society in participating in future economic and socio-political initiatives. Although Singapore, Malaysia, Brunei Darussalam and Viet Nam have high survival rates in primary education, the other member states are lagging behind, particularly Cambodia and Lao PDR. In secondary education, Singapore, Brunei Darussalam and Indonesia scored high whilst the tail end was still registered by Cambodia. As a goal, the AMS can target 80 to 90 percent or at least 25 percent improvement from existing survival rates in primary and secondary education.

6.6.3. Continue to exploit the opportunities offered by the developments in ICT in the delivery of basic education

The statistics on the average participation and survival rates in basic education do not capture the true picture of access to education since they do not reveal spatial, socio-economic, and demographic variations within member states. Participation and survival rates tend to be low in remote and poorer regions of a country. Beyond spatial factors, some marginalised sectors may not appreciate the value of basic education because of huge opportunity costs. In this light, opportunities offered by distance learning, educational television, and other ICT delivery measures can be explored to improve access. In addition, the development of MOOCs, particularly in the ASEAN, can be undertaken as a tool for understanding differences and commonalities of the peoples in the region, and instill on the youth ASEAN awareness and solidarity with the various nationalities in the region.

6.6.4. Explore alternative systems of financing and delivery of education

In the light of increasing population, limited budgets of governments, limited school infrastructure, changing tastes of parents, uneven geographic distribution of populations, and increasing opportunity costs, alternative systems of financing and delivering basic education may be pursued. Indeed, basic education is a public good

by design and should be provided primarily by the government. However, public financing and operation of schools can be augmented through private financing or even private sector participation in the operation of schools. The best practices in Brunei Darussalam, Indonesia, and Thailand in engaging the private sector in the provision of primary education can be instructive and should be shared. Aside from these countries, the Philippines also has a sizeable private sector involvement in secondary education. Several options may be explored and implemented in terms of financing and operation.

Beyond exploring the appropriate mix of PPPs in financing and operation of basic education, the AMSs should also explore how distance learning, community-based learning systems like the Project IMPACT of Innotech, home study, and other alternative learning systems can address the spatial and temporal constraints faced by students in attending schools.

Moreover, to address the income constraints and huge opportunity cost of attending school, a system of CCT may be implemented. In this light, an impact evaluation of the CCT on participation and completion rates should also be undertaken to empirically show the power of government intervention in addressing opportunity cost and in enhancing participation rate.

6.6.5. Focus on capacity building and sharing of best practices as the thrust of regional cooperation in basic education

Regional integration does not only mean standardisation and harmonisation. In the light of differences amongst AMS in their levels of development, not only in income but also in education, what may be a practical thrust to pursue in regional cooperation is the process of capacity building to narrow these income and educational gaps.

In the area of improving the quality of education, some of the specific initiatives are as follows:

a. Continue the role of SEAMEO in improving teachers' quality through in-service training through the use of its regional centres. Although SEAMEO has a different governance structure, it can be useful to make it the lead education arm of the ASEAN community. If this is problematic,

the relationship between ASEAN and SEAMEO should at least be strengthened.

b. Coordinate with the ASEAN University Network (AUN) in building the capacity of teacher training institutions in the region. The AUN has a number of sub-networks in various fields. The AUN–Southeast Asian Engineering Education Development Network (SEED-Net) is one of the more successful ones in the region, particularly in engineering research capacity. In this light, the teacher training colleges or departments of educational Psychology of AUN member universities may be organised primarily to build capacity in teacher training in various AMSs. Aside from improving pedagogical skills, they can reinforce and spread across the region what is being done by the various disciplinal centres of SEAMEO.

c. Institutionalise in-service training programs and explore the more cost-effective modes of delivery of this important means of improving the quality of teachers. Member states that have highly developed in-service training programmes can share best practices. In addition, MOOCs on teacher training can be developed by lead institutions. These MOOCs can be shared to all teacher training institutions across the region.

d. Implement decentralisation and more flexibility for administrators and teachers in implementing curriculum in basic education. Member states with successful experiences on decentralisation can share their best practices.

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APPENDIX

ACRONYMS

ADB – Asian Development Bank

AFAS - ASEAN Framework Agreement on Services

AMS – ASEAN Member State

ASEAN – Association of Southeast Asian Nations

ASCC – ASEAN Socio-Cultural Community

CCT – conditional cash transfer

ICDE – International Council for Open and Distance Education

ICT – Information and Communications Technology

EFA – Education for All

Lao PDR – Lao People's Democratic Republic

TIMSS – Trends in International Mathematics and Science Study

MRA – Mutual Recognition Agreement

MOOC – Massive open online courses

NFQ – National Qualifications Framework

OER – Open Educational Resources

PIRLS – Progress in International Reading Literacy Study

PISA – Programme for International Student Assessment

PPP – public–private partnership

SEAMEO – Southeast Asian Ministers of Education Organization

INNOTECH – Regional Center for Innovation and Technology

UNESCO – United Nations Educational, Scientific and Cultural Organization

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