2012

RESULTS FOR DEVELOPMENT INSTITUTE

INNOVATIVE SECONDARY EDUCATION FOR SKILLS ENHANCEMENT (ISESE)

Skills Defined by Curricula: South and Southeast Asia

August 31, 2012

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This paper was prepared for the Innovative Secondary Education for Skills Enhancement (ISESE) project, led by R4D with support from the Rockefeller Foundation. For more information on the ISESE project, please contact Michelle Engmann: mengmann@resultsfordevelopment.org.

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Acknowledgements

The success of any project depends largely on the support and guidance of many others. We take this opportunity to express our gratitude to the people who have been instrumental in the successful completion of this project.

We would like to express our sincere thanks to the ISESE team, Results for Development Institute, Washington, DC for providing tremendous support and guidance throughout, along with expert comments on the first draft of the paper.

We are highly grateful to Prof. R. Govinda, Vice Chancellor, National University of Educational Planning & Administration for his kind support, motivation and able guidance throughout the research process, including facilitation of the field work.

We record our deep appreciation to the organizations - CBSE, PSSCIVE, NIOS (India), Ministry of Education (Thailand) and the educational and vocational functionaries from India and Thailand for generously giving their precious time to provide relevant information and data.

We are thankful to Ms. PriyankaChakravarty and Ms. SonaliChitalkar, Research Scholars for providing research assistance and Ms. Nilofar Khalil, Project Assistant in providing technical support to complete this Project.

VineetaSirohi and Avinash Kumar Singh

EXECUTIVE SUMMARY

The importance of secondary education is being recognized as a terminal stage in education rather than merely a conduit to higher education. While the OECD countries have fairly well developed secondary education systems, countries in Asia, due to differing socio-cultural and historical conditions face a challenge in enrollment, access and quality of secondary education.

This study looks at education systems in general and specifically secondary education in seven South-East Asian and four South Asian countries. The aim is to identify and isolate features of the skill development paradigm that is driving restructuring of secondary education systems in OECD countries.

In all the countries sampled in South East Asia and South Asia primary education is compulsory. Some countries in the region are trying to extend the compulsory level of education up to thejunior secondary phase. In India and Sri-Lanka, students have to by law, compulsorily be in school till the age of fourteen.

In South Asia, the main differentiation between general academic and vocational streams is done after the completion of junior secondary levels of education, with the sole exception of Sri-Lanka.India, there have been attempts to introduce pre-vocational education from Grade 9 onwards. In Pakistan student can enter vocational education earlier. However, this has resulted in Pakistan being caught in a low skills trap.

Similar systems are seen in most countries studied in South-East Asia. In Vietnam and Laos PDR, students are tracked into vocational education at primary, basic and junior secondary stage. Only Philippines follow a system of mixing general and vocational streams and tracking only at post-secondary level of education.

Vocational education at secondary level forms an important part of educational systems in all the countries under study. In South-East Asia, vocational secondary education is given considerable importance and in the past has been one of the reasons for the success of the 'Asian-Tigers'. In South Asia, though enrolment and labor market outcomes are weak, governments are not willing to de-focus the sector. For instance, in India, the government is undertaking a major exercise in revamping vocational and technical education system.

All countries in South Asia are moving towards a skills development orientation. They are doing this through the drafting of policies in skills development. Afghanistan (2007), Bangladesh (2011), Nepal (2007), Pakistan (2009-13), Sri-Lanka (2009) and India (2009) have also moved towards a skills development policy framework. This clearly indicates that skill development is a priority for governments.

A major component of these policies is to create Qualification frameworks. For instance, India has recently approved the National Qualifications Framework for Vocational Education. The main aim of this exercise is to enable vertical mobility of students and to prevent their de-skilling on entering higher education streams of study.

In Thailand there are systems of credit transfer and recognition between different types of educational qualifications and institutions. Under this system, learners can transfer their learning outcomes, skills and experience that have been gained from formal, non-formal and

informal education (including apprenticeship and on-the-job training) into a level of the basic education curriculum as well as in higher education at the associate degree level. These developments clearly converge with OECD frameworks.

All countries studied, recognise that secondary levels of education in their countries are riddled with inadequacies. It is realised that secondary education has to be more effective in helping young people to better realize their potential at work and to take their place in society as productive, responsible and democratic citizens. In other words secondary level education should provide effective preparation for those proceeding to academic or professional tertiary education as well as for those entering the world of work either as trainees, wage employees or as self-employed entrepreneurs. To remedy this, countries like India have called for an epistemic shift in the vocational education curriculum.

Analysis of the curricula in the sample countries show that all countries have at least some national requirements for secondary schools for academic and vocational programs. All countries offer minimum requirement of basic subjects, including mother language, foreign languages, mathematics, science, social science.

In all the countries sampled, the junior secondary level, up to grade 10, is seen as a stage for building a responsive and responsible national citizen.

Vocational secondary schools also tend to have nationally applicable requirements with respect to basic subjects and graduation requirements, as seen in Thailand and India. In addition, vocational school curricula in all focal countries tend to include more technical and practicum learning, whereas general education curricula include more specialized and advanced academic courses.

In all the countries under study there is an attempt to articulate skills in both academic and vocational streams. Thailand, Malaysia and Indonesia have clearly articulated skills in their curricula. In South Asia only Bangladesh has a fully articulated academic secondary school curriculum. Vocational educational curricula in countries like India is moving fast towards a competency based modular structure with a clear articulation of skills and competencies.

English language is seen extremely important in the curricula of all Asian countries. Language curriculum clearly focuses on developing communication skills for a global knowledge economy. There is a focus on life skills education and ICT in all Asian countries at secondary level.

Curriculum reform is a priority in all the sampled countries. It is regarded as an aspect of quality of secondary education. They recognize this process as integrated with the improvement of education. Many are presently implementing curricular reforms (Bangladesh, Indonesia, Sri Lanka, and Vietnam) or are preparing for major curricular changes (Thailand and Maldives); others are monitoring or evaluating the impact of recent reforms (Bhutan, Nepal, India, and the Philippines).

As the above survey shows, one of the major features in all sampled countries is that the curricula are either well articulated in the skill development paradigm or are in the process of being reformed. Yet it is seen that secondary school graduates do not seem to have the skills required for employability. The major gap area that emerges is lack of teacher effectiveness in transacting curricula. This is common between all countries in South-Asia as well as South -East Asia.

Research evidence cited in this study clearly indicates that Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes and outcomes. Most curricula changes in Asia focus on a constructivist view of education. However most teachers believe that the direct transmission viewof student learning is useful in class. Teachers follow structuring classroom practices, such as stating learning goals, summarizing former lessons, homework review, checking the exercise book, and checking student understanding across all sampled countries. This is true of science and mathematics teaching in Malaysia.

Semi-structured interviews with educators and administrators in India, revealed the following reasons for the inability of teachers to transact curriculum.

- Skills are not clearly articulated in the Indian syllabus documents.
- The National Curriculum Framework, 2005, mentions skills, but the language is complicated and too academic for a practitioner to understand and imbibe.
- The focus is mainly on cognitive skills

Interview data also revealed that the implementation of National Curriculum Framework and related guidelines depends on the type of school management and initiatives taken by school leadersindicating that School Based Management might facilitate curricular objectives more effectively. This also indicates that targeting school leaders as agents of change might be an important policy strategy.

In India there have been attempts to re-organize teacher education curriculum, to ensure that teachers are able to meet the demands of the changed school education paradigm. The traditional approach to teacher preparation based on philosophical, sociological and psychological orientation of courses has given way to 'carefully crafted curriculum design that draws upon theoretical and empirical knowledge as well as student teachers' 'experiential knowledge' National Curriculum Framework for Teacher Education(NCFTE 2009).

A comparison reveals that are frameworks like Teacher And Learning International Survey (TALIS) that regularly assess and research teacher effectiveness on a number of parameters in the OECD countries. In countries in Asia, such frameworks simply do not exist.

The following conclusions derive from the summary given above:

- All countries in Asia are currently engaged with articulating a skill development policy. There is a widespread acceptance of skills development paradigm of the World Bank - OECD.
- In South Asian countries the importance of secondary education as an important stage in skills development is now recognized.
- Within secondary education, the importance of vocational education is appreciated.
- South Asian countries are looking at ways to move away from public provision of secondary education and especially in the vocational stream are looking at widespread cooperation with the private sector.
- Sampled countries recognize the importance of curricular change in meeting the requirements of the skills development paradigm.
- Countries in South East Asia have reasonably well articulated skills and competencies in

their curricula.

- Some countries in South Asia, like Bangladesh have well articulated curricula. India and Pakistan do not have such well articulated curricula documents.
- Teacher effectiveness in transacting the curricula is the gap area in both the segments of Asia that have been studied.
- Teachers in South Asia will benefit in their practice if localized, contextualized frameworks like TALIS are developed.

SECTION I: EDUCATION, SKILLS AND CURRICULUM

1.1 Introduction

Education involves teaching and learning of knowledge, skills and values. The term `skill' means an ability to perform an activity. It is also used as synonyms for `competence', or `knack' or `aptitude'. The term may have different connotations depending on the context in which it is used. In recent years, the term has gained currency in policy discourses on vocational education. Skills may be of different types; basic and applied, hard and soft skills, marketable and non-marketable skills, unitary and composite skills, etc. Basic skills are those foundation skills such as, reading, writing and arithmetic which may become the base for various other practical skills, using computer/internet, etc. The marketable skills are those skills which are of direct relevance to the employers, and which are often specified in the advertisement for the job. The skills may be categorised as transferable or non-transferable. The transferable skills are those skills which are useful in more than one kind of job. For example, computer literacy is a transferable skill. Soft skills are personal attributes or personality traits that enhance an individual's interactions, job performance and career prospects such as, empathy, good manners, sociability, teamwork, leadership, communication, a sense of humour, etc.

1.2 Skills, livelihood and education: relationship between work and education

Skill has close linkage with work, as it is the main instrument of gaining livelihood and employment. The human capital and employability approach to education has reinforced the skill component of education. In the capabilities approach, education is of *intrinsic* importance in that being educated is a valuable achievement in itself, and is a basic capability which affects the development and expansion of other capabilities. Education also has an *instrumental* role for each person in helping him or her to do or achieve many things such as getting a job and being able to take up economic opportunities. It fulfils an *instrumental social role* in that greater literacy and basic education fosters public debate and dialogue about social and political arrangements. It has an *instrumental process role* by expanding the people one comes into contact with, broadening our horizons. Finally, it has an *empowering and distributive role* in facilitating the ability of the disadvantaged, marginalized and excluded to organise politically. It has a redistributive effect between social groups, households and within families where better education is shown to reduce gender inequality. Overall, education contributes to interpersonal effects where people are able to use the benefits of education to help others and hence contribute to the social good. In short, 'education' is an unqualified good for human capability expansion and human freedom.

This approach fits in well with the skills development approach currently upheld by the World Bank and the OECD. Earlier approaches to the development of skills in education focused primarily on education and training which were expected to contribute to provide the skills and aptitudes required for economic growth and productivity. There was a separate vocational stream of education which focused on skills needed for work and an academic stream for the 'intellectually inclined'. This approach failed miserably in all parts of the world. Not only were enrolment and labour market outcomes for vocational graduates weak, they also lost skills due to transition to higher education. The current thinking on skills development thus upholds a broad generic set of skills that graduates from both streams must possess. It also envisages less rigid separation and curricula that embed these skills.

1.3 Curricula and Skills: International, Regional and National Variation

Countries in the Asian region have placed varying emphasis on general and vocational education, depending upon several historical, social, economic and political considerations. While general secondary education is somewhat of homogenous nature, there is a diverse pattern of provision of vocational and training in many countries. It has two major forms: vocational and technical education in formal education systems, and training outside formal system of education (pre-employment training and on-the-job-training). Vocational and technical education has been an important part of senior secondary education. Most countries have both exclusive vocational schools and diversified secondary schools with general academic as well as vocational courses (Tilak, 2002).

SECTION II: CURRICULA AND SKILLS IN SOUTH ASIA

2.1 Introduction

South Asian region includes the countries of Afghanistan, Bhutan, India, Nepal, Maldives, Pakistan and Sri-Lankaand Bangladesh. In some studies Iran is included in the region. Before curriculum and systems of education are analyzed for the region it is necessary to specify unique conditions of some of the countries in the region. Afghanistan and Sri-Lanka have been witness to long drawn conflicts which have affected education systems significantly in these countries. All countries of South Asia, except Sri Lanka and Maldives, have GER below 50% at secondary level, with Pakistan at 23%. Moreover, gender disparity is quite evident at all levels of education. South Asia is a region home to 335 million youth between the age of 10-19 years. They constitute 21% of the total population of which 51% attend secondary school. With the exception of Bangladesh, girls lag behind boys in access to secondary schooling in this region. Amongst the factors affecting secondary schooling, residential location, socio-economic status and education level of families, religion and disability manifest significant impact. However, gender is a major discriminatory factor in secondary school education in South-Asia.

The school systems in South Asia suffer from low levels of children's participation and performance almost at all levels. The rate of participation goes lower, as we move from lower to higher levels of education. Although there is lack of systematic comparative study of learning outcomes of the region, the in-country studies and surveys indicate that low level of learning is perhaps the greatest challenge facing the education and training systems in all the countries (World Bank, 2012). The children score much less than the expected level of learning as prescribed in the curricula in almost all competencies, reading, writing and mathematics (Asadulla and others, 2009; Das, Pandey and Zajonic, 2006; EI, 2006). The children have difficulties with conceptual thinking and problem solving skills. They have difficulties in application of concepts, relationships and mathematical processes in different situations.

2.2 Systems of Education

This section gives a glimpse of the education systems of some countries in South Asia. Sri Lanka's education system is divided into five parts: primary (grades 1-5), junior secondary (6-9), senior secondary (10-11), collegiate (12-13). According to Sri Lankan law it is compulsory for all students to go to school till grade 9. Despite conflict situations, the secondary gross enrolment ratio for 2007 was 88%. Confronting the problem of growing numbers of educated youth, unable to find employment and consequently becoming militant, Sri Lanka launched two major curricular innovations with the aim of linking education to the world of work. Pre-vocational studies were introduced as an element of the common compulsory curriculum for junior secondary schools in 1972 which was scrapped in 1978 on a political decision. While life skills was introduced with similar objectives in mind in the early 1980s and was successful due to it not being perceived as a threat to or a dilution of academic education. Vocational education, thus, falls outside the scope of formal education system and entry into vocational stream is contingent on certification at senior secondary or collegiate levels.

The Bangladesh school system has only five years of compulsory education. Children start going to school at the age of six years and grade five represents the terminal stage of primary education. In Bangladesh the Madarsa system of education runs parallel to the government system offering education at all stages. Secondary education is divided into three

parts – junior secondary for grades six to eight, secondary for grades nine to ten and higher secondary for grades eleven to twelve. Progress through secondary school depends on school results (at grade eight) and external public examinations (at grades ten and twelve). Primary education is essentially free in schools. At secondary level, education is largely in single gender schools in the towns and in the "better" schools. There are very few secondary schools covering grades eleven to twelve. Learning in grades eleven to twelve is undertaken by colleges, most also including Bachelor degree (general and honors) students. However, secondary education is divided into general, vocational and tracking into vocational and technical stream is done after junior secondary education.

In Pakistan primary and secondary education is provided by public and private schools as well as by Islamic madarsa. School education is organized in a 5+3+2+2 model: Primary stage (5 years); middle stage (3 years); lower secondary stage (2 years); and upper secondary stage (2 years). Moreover, general secondary education is divided into 2 years of junior secondary education and 2 years of senior secondary education at higher secondary or intermediate school. Whereas, secondary vocational education can be pursued after grade 8 or after grade 10 (after obtaining the Secondary School Certificate) which is provided by Vocational Institutes or Technical Training Colleges (for programmes after grade 8) and Polytechnics or Commercial Institutes (for programmes after grade 10). The duration of programmes at a vocational institute varies from 3 months to 2 years with separate programmes for male and female students. The programmes at a Technical Training College have duration of 2 years that provide vocational education to the students who are unable to progress further in general secondary education

On the other hand, Nepal and India have quite similar structure of secondary education which is organized in three stages, lower secondary (6-8), also called upper primary in India, secondary (9, 10) and senior secondary (11, 12). Moreover, tracking in both countries occurs after lower secondary school. With respect to India, some students pursue different streams after secondary for 3 years in technical education institutions called Polytechnics.In India, there are broadly fourstages of pre-university school education, however, there may be variations in the nomenclature across States. Lower Primary and Upper Primary together are named 'Middle School'; Middle School and Secondary together are named High School. Grades 11 and 12 are termed as Intermediate or Senior Secondary School.Overall, the span of schooling extends till 12 years, following the "10+2 pattern".

Teaching of skills for employment is being offered in the forms of vocational education as a separate stream to students who do not pursue higher education. It is provided both inside and outside the schooling system in liaison with technical experts or specialised training centres, often targeting early school leavers with the objective of preparing them for the labour market. Minimum entry qualifications for such vocational courses vary across countries in the region. Although in most countries, the minimum entry qualification is Grade-X, it starts after grade VIII in Bangladesh and Pakistan after grade-IX in Sri Lanka (World Bank, 2012). Depending on entry qualification, the vocational courses offered are of varying durations ranging from less than a year to five years, and from preparing a simple technician to higher level skilled personnel. India, Bangladesh and Pakistan also have vocational education streams within the secondary school system.

BOX 1: Vocational Education within the Public School System in South Asia

In Bangladesh, India and Pakistan, students who do not fare well in the general academic stream are often tracked into vocational education streams, typically at the senior secondary level. Vocational schools are supposed to equip students with skills that will allow them to join the labour market or

pre-employment training programs.

The experience with secondary vocational program in South Asia, as in many other regions, has been poor. In India, for example, studies show that 60-70 percent graduates fail to obtain employment, even two to three years after graduation (World bank, 2007). Despite these poor outcomes, policy makers remain keen to expand vocational secondary education. Bangladesh has targeted 20 percent and India 25 percent of secondary education to be vocational. There is also a desire to make general secondary education more vocational. As in other parts of the world, this desire is motivated by the concern that large numbers of students complete primary and secondary education with no occupational skills and the assumption that having occupational skills improve prospects in the labour market. Such strategies may not be appropriate for the following reasons:

- Vocationalizing education is difficult. It requires especially trained instructors, preferably with work experience in the types of skills being taught. Teachers with these qualifications are hard to recruit and retrain.
- Vocationalizing education is costly. Most variants of vocational training cost more per student class period than general education subjects, primarily because classes are smaller and facilities, equipment, and consumables cost more.
- Private sector involvement in running vocational educational systems, setting course content and curricula, or managing vocational schools is very limited.
- Time spent on vocational skills training can detract from the teaching of basic skills, which provide the foundation for future learning and are increasingly essential for labour market success.

A better alternative to expanding vocational training in the school system would be to make general secondary schools more relevant and better able to a wider range of students.

(*Source: Chhoeda, Dar and Tan, 2010; World Bank, 2012, p.200*)

No country in the region has national system of student assessment in secondary education. The national systems of student assessment currently being implemented in India, Sri Lanka and Pakistan, are limited mainly to the primary level only. Only India has participated in the PISA, on sample basis. Insufficient attention has been paid in most South Asian countries to developing quality assurance systems for the public and private sectors and strengthening incentives and capacity in the school system as a whole (World Bank, 2012).

Private provision of education is significant in South Asia, particularly in pre-employment training and is growing. Enrolment in private pre-employment institutions range from 6 percent of total enrolment in Afghanistan to 82 percent in Nepal; in tertiary education, the figures range from less than 5 per cent in Afghanistan and Bhutan to more than 50 percent in Bangladesh (Choeda, Dan and Tar, 2010).

Vocational education is being offered by different institutions, agencies functioning under different departments without structural and functional linkages among them. Fragmented systems blur the roles of various agencies and reduce policy coherence. Responsibility for policy direction, leadership and regulation of and accountability for implementation is often diffused across different levels of government or multiple ministries and agencies. In India, for example, 17 ministries and several departments are entrusted with the responsibilities of offering vocational education. In Bangladesh, both the Ministry of Education and the Ministry of Labour are responsible for pre-employment training and about 10 other ministries run training institutes. There is a lack of clarity and duplication of functions, leading to a delivery of training by multiple agencies at the cost of ensuring quality standards. (World Bank, 2012). There is need for the government to clarify the functions of various agencies, and entrust one body with playing the stewardship role, setting policy co-ordination

between different ministries, overseeing financing, developing curriculum, handling certification and accreditation and providing information on the quality and effectiveness of institutions. Besides employers should also be given a prominent role in the decision making process.

Analysis of the systems of education in some of the countries of South-Asia shows that free primary education is guaranteed by all the governments, although the nature of this provision varies across the countries in this region. In India, elementary education up to class eight is free and compulsory while in Sri Lanka, education is free and compulsory up to secondary school level. On the other hand, Bhutan goes a little beyond the secondary education and extends free education to a limited tertiary education. However, tracking in most of the countries occur after junior secondary level with the exception of Sri-Lanka, where vocational education is separate from school education.

2.3 Skills in the Secondary School Curricula

With an aim to provide well-rounded education to students, Sri-Lanka introduced a competency-based curriculum in 2007 at junior secondary education level. The present curriculum focuses on the following competencies: Competencies in Communication are based on four sub-sets, literacy, numeracy, graphics and IT proficiency, relating to the social, biological and physical environment, religion and ethics. Curriculum significantly supports meta-cognition or competencies relating to 'learning to learn'. A significant set of competencies relate to personality development including generic skills such as creativity, divergent thinking, initiative, decision making, problem-solving, critical and analytical thinking, team work, inter-personal relations, discovering and exploring and also values such as integrity, tolerance and respect for human dignity and emotional intelligence. There are competencies relating to preparation for the world of work and employment related skills to maximize their potential and to enhance their capacities.

In Bangladesh analysis of curriculum indicates that junior secondary science curricula (grades VI-VIII) places emphasis on application of science in learners' contexts. Secondary Science (grades IX-X) follows a path of curriculum differentiation. A group of students study 'valid science' (Physics, Chemistry and Biology) to build a solid foundation for further study of science. Other students study an application focused general science. The science curriculum is heavily loaded with content of little relevance to the learner context or application. With reference to the skills development paradigmthe science curriculum has little industrial application. Most of its concepts and information are not tied together strongly by bigger unifying ideas/concepts. An analysis of skills reveal that the curriculum emphasize practical process skills at the cost of intellectual process skills such as analyzing problems, identifying variables, hypothesizing, and interpreting data to arrive at conclusions. The same drawbacks are observed in terms of skills content in the general science curriculum for non-science streams. On the positive side there is an emphasis on applied content especially fordomestic application and a strong emphasis on applications in learner's context especially in the areas of Environment, Health and Natural Resources. This curriculum does not emphasize intellectual skills like classifying, identifying scientific issues, interpreting data and using evidence to reach a conclusion.

Communication skills in English are considered basic in the skills development framework. In Bangladesh, the National Curriculum and Textbook Board curriculum for English at the secondary level is examined below. The main aim of the curriculum is to provide

communicative syllabus for the teaching and learning of English at the Secondary and Higher Secondary levels. The document aims to provide clear and comprehensive guidelines for the textbook writers, teachers, students and those who are concerned with the teaching and learning of English from classes six to twelve. The current English curriculum is not subject centered but skill centered. English is seen as a vehicle for practicing- listening, speaking, reading and writing skills. Topics, in the curriculum, are vehicles for the practice of four language skills. Thus, the curriculum demands that methodology of teaching be interactive, where students will practice English with teachers and other students. Similarly, suitable communicative language materials and assessment has been spelt out by the curriculum document.

The document addresses and recognizes the students' existing communicative competence - that is what they have learnt at the primary level. At the junior secondary level, it aims to ensure that students enjoy the process of acquiring English and are able to use it effectively in real situations outside the classroom. Students will achieve an elementary to intermediate communicative competence at this stage. At Secondary level, the present curriculum aims that the students will acquire an intermediate command of the four skills. The National Curriculum recognizes English as essential work-oriented skill that is needed if the employment, development and educational needs of the country are to be met. It seeks to create a base for students who progress through higher secondary to tertiary levels and need an advanced level proficiency of reading and writing skills. The document suggests that at higher secondary level students should be given more intensive and extensive reading tasks and various types of appropriate writing tasks. Comprehension skills should be continued, focusing on finding, processing and re-expressing information with emphasis on language rather than literature.

At each stage of the secondary education a level of proficiency is expected to be obtained. Objectives are set out for a more advanced level of proficiency at each higher stage. Specific objectives of English language teaching and learning have been spelt out in terms of four skills of listening, speaking, reading and writing. In speaking, class six and seven students are intended to be able to give instructions and commands, participate in short and simple conversations, recount a series of events, describe people, objects, recite simple poetry with understanding and speak intelligibly in clear, correct English appropriate to the situation. Class eight students, however, are expected to obtain an advanced level of proficiency. They should be able to tell simple narrative and descriptive stories and talk about themselves. They have to acquire these speaking sub-skills in addition to those they have acquired in classes six and seven. In class nine and ten, students are expected to attain a yet advanced proficiency. Here students are intended to be able to initiate and participate in conversations at an advanced level on a variety of topics, express opinions clearly and logically, participate in debates, tell narrative and descriptive stories and talk interestingly about themselves. In listening skills, class sixth students are expected to be able to comprehend instructions and commands, participate in short and simple conversations, understand text, listen to simple passages and distinguish between the sounds of English. The statement of intent about listening sub-skills for class seven and eight students remains same as that for class six students. However, objectives set out for class nine and ten include listening sub-skills at an advanced level which are in addition to those obtained at the junior secondary classes. Listening sub-skills spelt out for class ten are same as those spelt out for class nine.

Reading skill objectives set out for class six and seven are same, though they are mentioned in separate sub-sections. Students at these levels are intended to be able to comprehend written instructions, narrative and descriptive texts and simple poems, look up words in simple dictionaries, infer meaning or words from their contexts, recognize the functions of different punctuation marks. Reading skill objectives set out for class eight include sub-skills at an advanced level. Here, in addition to the reading mentioned above, students are

intended to be able to understand informal letters and newspaper texts, use such simple written reference sources as indexes, table of contents and dictionaries, read extensively with appropriate speed, skim, scan, recognize topic sentences, recognize cohesive and graph logical devices. In class nine and ten, students are intended to acquire reading sub-skills at a yet advanced level. These include among others the ability to understand argumentative texts, formal and informal letters and suitable literary texts, use general reference works related to subjects of study at this level, distinguish fact from opinion, detect appropriate inferential meaning and draw appropriate conclusion.

The following objectives will be realized in class six in clear, legible handwriting. In this class, students should be able to write simple instructions, narratives, descriptions and informal letters and use punctuation. In class seven and eight, students will acquire a writing proficiency at an advanced level. In addition to the above writing sub-skills they will use linking words and reference words appropriately. In class nine and ten, students are intended to acquire writing skill at a yet advanced level. In addition to the above sub-skills, they are expected to be able to write job applications, reports, clear argument, summaries and dialogues. They are expected to use creativity, fill in forms and write curriculum vitae, plan and organize the above tasks appropriately so as to communicate ideas and facts clearly, accurately and with relevance to the topic.

On the other hand, the science curriculum for Pakistan aimed at inculcating scientific literacy in the students by engaging them in *ScientificInquiry, ProblemSolving*process, and in *Decision Making*. The students are expected to engage in inquiry through initiating, planning, performing and recording, analyzing and interpreting, communication and teamwork. Emphasis is on science process skills of observing, measurement, classifying, inferring, predicting, communicating, hypothesizing, designing experiments, controlling variables, interpreting data and formulating models.

English is offered from primary to senior secondary grades. There are clearly defined competencies for all grades. All students at secondary levels undertake a course in Ethics and Islamiyat. General science is offered throughout the secondary grades. However, pre-vocational subjects are offered at lower secondary and computer science at upper secondary grades. Further, junior secondary education is divided into three distinct tracks: science group, humanities group and technical group and the curriculum in all the tracks consist of five subjects. Whereas, in senior secondary education students choose one of the following tracks: science, humanities, general, pre-medical, pre-engineering, medical technology or home economics (only for girls). The curriculum in all the tracks consist of four compulsory subjects, namely English, Urdu, Islamic studies/Civics (for non-Muslims) and Pakistan studies. In addition, students at this level are taught in three subjects belonging to the track in question. Programmes at the technical training college are offered for those who do not proceedfurther in general secondary education. The training programmes consist of 20% theoretical and 80% practical education and furthermore, are final stages in formal education designed to qualify graduates for the labour market.

In South Asia 'technology' is integrated within science curricula. A UNESCO survey of science and technology in school curricula in India, Maldives, Nepal, Pakistan and Sri Lanka found that, with the exception of the Maldives, the total hours of schooling were higher than the world average, while the time devoted to science teaching was lower. Exceptionally in Maldives, where the total hours of schooling were found to be less than the world average, the time given to science at the secondary level was more (UNESCO, 1986). Moreover, in recent years, Bangladesh has seen a dramatic decrease in the percentage of students enrolling in the science stream at the secondary school level (Bangladesh Education Statistics, 1995 and BANBAIS,

1996, cited in Mian, 1998).

A survey conducted by UNESCO in 1986 found that, in South Asia, as in most parts of the world, technology education either did not exist or was confused with vocational subjects or practical arts. Sri Lanka, in recent education reforms, has replaced the science curriculum at the Ordinary Level of the General Certificate of Education (Grades X and XI) with a science and technology course. At the Advanced level (Grades XII and XIII), a technology stream has been introduced with a bias towards agriculture, industry, commerce, services and professional fields (Presidential Task Force, 1997). In Sri Lanka, the current education reforms require 'Life Competencies' to be taught in grades six-nine (the junior stage) and a technical subject to be introduced in grades ten-eleven (the senior stage/GCE O Level).

In Nepal, separate technical schools are now provided at three levels: lower secondary, secondary and higher secondary, each of which is a terminal level. On the other hand, in India, vocationalization of secondary education is still part of official policy and 'work experience' and 'pre-vocational courses' form part of the curriculum. The quality of the delivery of these courses is however suspected. In Bangladesh, agriculture is a compulsory subject for grades six-eight, after which it is optional. It is meant to be taught through practical training by field-level experts. Technical training certificate programmes can be taken up after grade eight and diploma courses after grade ten.

Separate streams for technical and vocational education exist at various levels in all the South Asian countries. However, a major problem identified by a World Bank study (World Bank, 1990) is that the vocational education curricula are not designed to promote affective aspects like positive attitudes towards work, discipline and employee-employer relationships. Interestingly, this study claims that the primary reason for the failure of new employees in industry is their lack of affective skills in the workplace. Of all the various aspects of scientific and technological education, it is information technology that has received most attention from the policy makers in recent years. Pakistan and Bangladesh have introduced compulsory computer education in grades nine and ten. Moreover, in the technical and vocational sector, too, training in information technology has met with much success in India and Pakistan and Sri Lanka. The Government of Pakistan's IT Policy and Action Plan and Sri Lanka's Information and Communication Technology Agency emphasize human resource development and make comprehensive, wide-ranging and progressive recommendations for education.

In all South Asian countries, it was found that life skills are considered quite important in secondary schools. However, the delivery mechanisms differ across the region. In some countries there is a stand-alone life skills curriculum such as Sri Lanka's Life Competencies Programme,Afghanistan's Life Skills Curriculum, and the Maldives' Pilot Life Skills Project. On the other hand, it is integrated into an existing curriculum as is the case of Nepal's health curriculum. It may also be delivered through extracurricular activities like Pakistan's Empowerment of Adolescents Project and the Bhutan Scout's Life Skills Course. Finally, it may be delivered through a blended program like India's Adolescent Education Programme. While the literature supports the idea that life skills should be integrated into all curricula and not delivered as its own subject or module, this is not done for most South Asian schools. The exception is Sri Lanka, which is exploring how to integrate life skills across the entire secondary curriculum.

2.4 Employability skills in the Curricula

From the brief survey given above it is evident that secondary school curricula of South Asian countries contain the potential for generating employability. There is a strong focus on English communication skills. Moreover, life-skills and science process skills are integrated in the curriculum.

2.5 Comparison with OECD countries and East Asia

In China, the core curriculum of secondary schools include three fundamental subjects: Chinese, Mathematics, and English. Each is taught for six years and together account for more than 50 percent of the total hours students spent in the classroom. Political study is required in each year of secondary school. It consists of political ideology and morality, the history of social development and dialectical materialism, political and legal knowledge, political philosophy, political economy and review during the senior year. In addition, students study five years of physics, four years of chemistry and biology, three years of geography and history and one year of computer science, which includes basic computer literacy and programming. Pupils also participate in physical education in each year of secondary school and two or three years of art and music. Many schools now teach typing in the second year of junior secondary school.

Besides the senior secondary schools that prepare students for going on to college, there are vocational and technical senior secondary schools (VTE) that train pupils in specialized fields and prepare them to enter the workforce immediately after graduation from secondary school. Full-time senior secondary school programs are commonly classified into specialized technical and teacher-training schools, technical and pre-service skilled worker schools and the largest sector, vocational and agricultural schools. VTE programs are offered by specialized schools that train middle-level technical personnel,kindergarten, primary school teachers and students entering into these programmes are junior secondary school graduates. The four-year study program includes nine broad specializations in technical fields (agriculture, art, economics, engineering, forestry, medicine, physical culture, politics and law, and a miscellaneous category that includes everything from the training of buddhist monks and nuns to flight attendants) and one course in teacher training for secondary schools. It is significant that over a third of the curriculum in a junior secondary school is devoted to chinese and mathematics whilst at senior secondary level over half of the teaching is concerned with science and mathematics. Science curriculum in China stresses science process skills similar to those identified in curriculum in South Asia. Mathematics curriculum in China emphasizes mathematical thinking, sensibility and attitude, knowledge and skill and problem solving. The curriculum puts emphasis upon the application of Mathematics, connection between Mathematics and living practice and synergies between Mathematics and other subjects.

Almost all the countries in South East Asia stress the importance of science process skills in secondary school science curricula. These are expected to lead to the thinking skills considered vital for employability. Curricula in South East Asian countries also stress English communication which is evident that South-East Asia is concerned about marking a global presence. Whereas, Mathematics curricula stress skills in numeracy and problem solving. However, junior secondary school curricula are expected to lead to personal skills and attributes and skills related to the community.

Job-related skills and entrepreneurship are the only areas which do not find an explicit mention in secondary school academic curricula in South-East Asia. They are however embedded in vocational secondary curricula. In South East Asia, an analysis of both academic

and vocational curricula reveals the predominance assigned by policy to the development of thinking skills, communication and employability related skills.

2.6 Skills for Secondary School Students: Educators' Perception

In almost all the countries in South Asia, curricula cover skills necessary for employability of secondary school graduates. However, unless teachers transact these skills through teaching, it is not possible for students to gain the required skills and competencies. Teacher attitudes and practices with reference to curriculum is an important factor in determining the skills outcomes of school students.

The regional institute of English in South India conducted an impact study for SSA, in Kerala. The objective was to investigate the English language achievement of learners in the classes III and VII. The study looked into teacher proficiency in terms of language and pedagogy, the objectives of the curriculum and learner achievement. It was designed to assess the achievement of learners in English in classes III and VII after the implementation of textbooks revised as per the NCF, 2005. The impact study was designed to describe the achievement of learners in English in Class III and VII in all the BRC's in Kerala. The study also intended to describe the beliefs and practices of teachers and teacher trainers in the state. Results of the study are significant. More than 75 percent of teachers have positive attitude to the curriculum. However, only 50 percent of the teachers have internalized the classroom processes and practices. In most of the cases a mismatch is found between teachers' beliefs and practices. More than 50 percent of the teachers do not have proper understanding about classroom interaction, facilitating constructive learning, facilitating discussions, micro-processes of reading, editing and planning the lessons. However, they claim that they practice all these processes quite often.

Teachers in South Asia also hold views on language teaching contrary to those prescribed by the curriculum documents. For instance, they strongly support the teaching of grammar as against communication skills, through the teaching of English. Mathematics and science are taught more for examination and rote learning than application.

2.7 Skills possessed by secondary school-aged youth in the region

In Sri-Lanka, 80 percent of all unemployed in 2006 were youth. Of these, roughly a third had at least 10 years of schooling. One obstacle preventing employment among educated youth was perceived as poor English language skills—skills that are hard to acquire through the publicly provided general education system. Even in vocational training, although most training programs were targeted at school leavers who had completed their O-level examinations, a significant number of trainees had A-level or higher qualifications, indicating that their formal schooling had still left them unprepared in important ways for the labor market. A significant number of these students took courses in English and in information technology in an effort to improve their prospects for a good job—a further indication of shortcomings in the formal education system. In Sri-Lanka the labor force has become more educated over time; a major part of the improvement has been at the primary level. The need is to improve not only education attainment at the upper-secondary and tertiary levels but also the relevance of education so that the workforce is competent in IT and English skills necessary for securing employment in the emerging global employment markets.

A World Bank study of 2009, clearly says that data on competencies of Indian secondary school graduates is not available. This is primarily because India does not participate in large scale international assessments. Views on graduate communication skills in English are diverse. The Wall Street Journal describes the difficulty that many organizations are having in recruiting able graduates in India. It states that the number of high school and college graduates who come through the door who can communicate effectively in English is staggeringly low and that many lack a grasp of educational basics such as reading comprehension. It cites a Customer Contact Company that can hire just three out of 100 applicants. It is accepted that English, is important in Indian schools. However, some of the literature surveyed, surprisingly claims that most of the population does not gain this skill through the secondary school system. Many secondary schools still rely on an outdated grammar-based approach to teaching English that does not prepare students to communicate effectively in the language. Despite science and mathematics being compulsory for all secondary school students, their proficiency in these subjects is also debatable. Many ninth graders tested in Tamil Nadu and Himachal Pradesh using mathematics questions from PISA survey had problems with basic arithmetic skills.

However, analysis of Indians Graduate Management Aptitude Test (GMAT)scores in 2010 reveals that Indians are above average of the international score in the test. The Chinese were above the Indians. “Two Million Minutes”, a documentary comparing high school education in India, China and the United States concludes that Asians are better at Maths than Americans.

2.8 Summing Up

The majority of countries in Asia are now expanding the coverage of compulsory education to include lower secondary education. Transition rates vary among countries regardless of whether lower secondary education is part of compulsory education. Even though lower secondary education is not compulsory in Bangladesh, Bhutan, Maldives, more than 90% of students in the last grade of primary education move on to the first grade of lower secondary level. Many countries have made rapid progress in pursuing the advancement of skills development policies within the broader framework of lifelong learning. The overarching goals of these policies are to enhance the employability of working population, boost economic growth and improve the quality of life. They also refer to developing abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. Skills development is now considered a key component of the economic reconstruction policy in post conflict countries like Afghanistan.

Since the 1990s, education systems have emphasized the need for children to acquire a variety of skills, ranging from basic skills such as literacy and numeracy to generic skills or key competencies, such as ‘problem solving’, ‘communication’ and ‘team work’. Countries in South Asia are aware of this diverse skill need and are trying to restructure policies accordingly. For instance in Sri-Lanka there has been attempts to introduce subjects like 'entrepreneurship' in secondary school curriculum. There is an emerging demand for this latter set of skills that go beyond more traditional cognitive skills. In this fast developing region, these skills are more and more valued as they help accommodate new technologies and respond to the increasingly knowledge based globalizing society.

A growing interest inICT literacy and skills as part of essential skills for life in the 21st century well reflects this trend. Teacher attitudes and practices remain an area of concern and policy regimes are needed to ensure that curricula are transacted effectively to ensure skills development.

SECTION III: SCHOOL CURRICULA AND SKILLS IN INDIA: A CASE STUDY

3.1 Introduction

In India, the national education pattern is 10+2+3, with first 10 years devoted to general education, 2 years for diversification from general education to specialised academic or vocational courses and 3 years for degree programmes. In other words, first 12 years of education is called school education, which does not include pre-primary education comprising of nursery and kindergarten stages. At the +2 stage, a student is in a position to exercise a choice to select a stream (academic or vocational), keeping in view his interests and professional pursuit. Public examinations are conducted at the end of class X and class XII.

3.2 Policy Perspective on Vocational Education

The national policy planners have considered higher secondary stage of school education as crucial as it is at this stage that necessary skills and competencies are acquired which enable the students to enter the world of work or to go for higher education. The Secondary Education Commission (Mudaliar Commission, 1952-53) put forward the idea of multipurpose school and recommended a 11 year pattern of school education for offering diversification after 8 years of schooling by providing training in various crafts/ vocations. The Commission felt that at the end of this, a student should be in a position to take up some vocation and enter the world of work. The Kothari Commission (1964-66) suggested the restructuring of education into a uniform pattern of 10+2+3 education all over the country, implying 10 years of undifferentiated education for all, with diversification into academic and vocational streams at the +2 level.

The NCERT document entitled "Higher Secondary Education and its Vocationalisation" (1976) emphasised that internal restructuring and modification of contents in education is required for establishment of strong linkages between education and other concerned sectors involved in developmental process. The National Working Group on Vocationalisation of Education (Kulandaiswamy Committee,1985) reviewed the Vocational Education Programme in the country and developed guidelines for the expansion of the programme. Its recommendations led to the development of the Centrally Sponsored Scheme (CSS) on Vocationalisation of Secondary Education. The Committee also suggested that Socially Useful Productive Work (SUPW) may assume the form of training in "life skills" and should, therefore, be given pre-vocational orientation.

The National Policy on Education (NPE), 1986 advocated introduction of systematic and well planned vocational educational programmes, which can be rigorously implemented to enhance employability, reduce the mis-match between demand and supply of skilled manpower and to provide an alternative to those pursuing tertiary education, without particular interest or purpose.

3.3 Vocational Component at Different Stages of Education

Work experience, viewed as a purposive and meaningful manual work and organized as an integral part of the learning process should be an essential component at all stages of education. It should be provided through well-structured and graded programmes resulting in either goods or services useful to the community. Work experience should inculcate in the learners a respect for manual work, values of self-reliance, co-operativeness, perseverance, helpfulness, work

ethics, attitudes and values related to productive work and concern for the community. It should enable the learners to know and understand the concepts and acquire skills related to various production and service processes. The Pre-vocational Education Programme provided at the lower secondary stage in place of the Work Experience Programme should facilitate the choice of vocational courses at the higher secondary stage. It should impart training in simple marketable skills to students, develop vocational interests, prepare students for participation in work, inculcate desired values related to work and allow for self-exploration of vocational interests. It should be offered in the form of modular courses so that pupils in general should acquire knowledge and marketable skills for direct entry into the world of work. Vocational Education at the +2 stage, also known as higher secondary stage, develop competencies (knowledge, skills and attitude) required by a specific occupation or a group of occupations, through diversified vocational courses to prepare pupil for the world of work, especially for self - employment. The 11th and 12th grade students have access to around 160 vocational courses offered in about 6,000 schools of the 32 States/Union territories of the country. The Generic Vocational Course (GVC) is meant for students of general education at +2 stages, as it cuts across various vocations and aims to develop employment related generic skills needed by an educated work force, regardless of the person's occupation. It is a step towards improving the quality of general education by developing key competencies/transferable skills for the technology oriented society.

Education and Skill development in India can be seen in terms policy guidelines, curriculum frameworks, institutional mechanisms established at different levels, functioning of the educational institutions and perceptions of different stakeholders. Although teaching of skills is an integral part of the curriculum of both general school, education and vocational education, knowledge is often associated with general school education, skill is associated with vocational education or training for work. At the secondary level of schooling, vocational education is provided both within the school system and outside the school system. While within the school system, vocational courses are offered in Higher Secondary schools at the + 2 level (Grades XI and XII), specialized vocational courses are offered at Industrial Training Institutes (ITIs). The school based vocational education; initiated under centrally sponsored scheme in 1988 is expected to provide an alternative to the pursuit of higher education.

Outside the school system, ITIs were started to provide in basic industrial trades. There are 4650 ITIs with intake capacity of 678,000 seats. The majority of these ITIs are in the privatesector. The management of the school based vocational courses and ITIs are different in terms of ministerial control, academic and administrative supervision, etc. While the management and control of ITIs come under the purview of the Ministry of labour and Employment and a role in overseeing curriculum and evaluation is performed by the National Commission of Vocational Training (NCVT), the school based vocational courses on the other hand come under the purview of Directorates of Education in the states, broadly under the Ministry of Human Resource Development.

3.4 Policy Guidelines for teaching and learning of skills in schools

Although both the national policies of education of 1968 and 1986 have dealt with the issues of skill by recommending to establishing strong linkage between education and work, the 1986 National Policy on Education was more specific in detailing out in the form of vocational education. The 1986 National Policy on Education (NPE) 1986 intended to provide vocational courses to as many as 25% of all students enrolled at the +2 level within 10 years. The achievement has been far from the target. According to the Seventh All India Educational

Survey (2002), only 12.4 % (5437) of higher secondary schools have been offering vocational courses, which covered only 5.4% of all students enrolled at the + stage. Barring a few states such as Kerala, Maharashtra, Karnataka, the situation is far from satisfactory.

3.5 Skills in National Curriculum Framework

In India, the National Curriculum Framework for School Education, 2005, (henceforth NCF, 2005) provides a reference point for understanding the policy context of curricular and structural change in Indian school education. Departure from the behavioural approach to education, this framework is rooted in Vygovtskian social constructivism. As far as skills are concerned, the approach of the NCF (2005) is on restoring 'dignity of labor' and repositioning the fundamental elements of Nai-Talim or Gandhian Basic Education. In this model 'work' at school had myriad applicability. It could be used pedagogically to link the context of the learner to the subject matter at hand. In the process it would become a medium of skill-formation. This beautiful integration was ruptured by policy in two ways. Firstly the Kothari Commission (1964-66) introduced the concept of work experience that later got extended to the idea of Socially Useful Productive Work (SUPW). Operationalised in this manner 'work' got relegated to a few allocated time slots in the school day. Later the National Policy on Education (1986) created two distinct streams at the secondary level-the vocational and the academic.

The NVEQF being developed by the MHRD is the latest policy framework that provides a common reference for linking various qualifications. It will set common principle and guidelines for a nationally recognized qualification system covering Schools, Vocational Education and Training Institutions, Technical Education Institutions, and Universities/Colleges. The framework provides for recognition of prior learning and flexibility in programmes, delivery mode and training design, and diversity in range of courses and training options. The main feature of the framework would be competency based education and training system led by market, with active participation of industry at various levels including curriculum development and transaction and training of teachers and trainers. The NVEQF will act as a translation device to make qualification more understandable to employers, students and institutions. It will promote transparency of qualifications and facilitate workers and learner's mobility, both horizontally and vertically between different qualifications. The framework, although part of the 12th five year plan, is still under process.

National Vocational Education Qualifications Framework (NVEQF)

		Case I		Case II	
NVEQ level	General Qualification	Vocational Qualification	Certifying Body	Vocational Qualification	Certifying Body
10	Doctorates	Degree	University and SSCs	Degree	University and SSCs
9	Masters	Degree	University and SSCs	Degree	University and SSCs
8	Post Graduate Certificates, Post Graduate Diplomas and Bachelor Degrees (Honours)	PG Diploma/ Degree	University and SSCs	Degree	University and SSCs
7	3rd yr bachelors	Advanced Diploma	Board of Technical Education and SSCs	Degree and SSCs	University and SSCs
6	2nd yr bachelors				
5	1st yr bachelors	Diploma	Board of Technical Education / NCVT and SSCs		
4	Higher Secondary School Grade XII			Grade XII	School Board and SSCs
3	Higher Secondary School Grade XI			Grade XI	School Board and SSCs
2	Secondary School Grade X	Grade X	School Board and SSCs	Grade X	School Board and SSCs
1	Secondary School Grade IX	Grade IX	School Board and SSCs	Grade IX	School Board and SSCs

3.6 Academic Curricula and Skills

Following policy guidelines, curriculum frameworks have been prepared and implemented giving due recognition to both knowledge, skills and values. However the predominance of knowledge over skills and missing link between education and work in the school education are still issues which have not been resolved as yet. Although the latest National Curriculum Framework (NCF) 2005 claims to have given due emphasis by advocating constructivist approach towards generation of knowledge and skill building, the process is not complete.

The National Curriculum Framework (NCF) discusses the challenges faced by the larger system of education in the context of the relationship between work and education. It takes the view that a strong bonding of work and education can create congenial conditions for progress towards a common school system. By introducing vocational components in the academic courses at all stages, and academic components and rigour in vocational courses, the gap between the two kinds of courses can be reduced. If curricular policies can evolve greater flexibility in this direction, the quality of the overall educational experience that our schools provide can be enhanced. (Kumar, 2006, p.7)

3.7 Vocational Curricula and Skills

A rapid review of the contents of the Vocational courses offered in the schools indicate that the range of courses is limited, aloof from the on-going changes in both education and economy. There is a large gap between the courses offered and the reality in terms of both curriculum

content and methodology. In addition to this gap, there is also reluctance in the system of vocational education to recognise the unorganised sector which employs the majority of the workforce, reflected in non-inclusion of skills necessary for this sector. Another problem is that Vocational curriculum and syllabi is focused on providing information rather than building concepts and theory embedded in the skills. This flaw is further reinforced by textbooks and reading materials available in the market. The ITIs have been offering courses in only 170 trades, without any significant increase. Within the school system, the range is smaller, as in the CBSE system the total number of courses available is 26. The range becomes further narrower in the light of infrastructure constraints in terms of resources and teachers for offering the vocational courses.

3.8 Perception of Educators, School Administrators and Students

With the emphasis on social well being of the children by the Education Boards, teaching life skills have become an integral part of school curriculum. Schools are organising various activities under joyful leaning to make children aware of values and basic needs of human life. As a teacher articulates, *`with schooling a child should grow as a compassionate human being with a sense of accountability and responsibility. He or she should be able to handle peer pressure, say no to wrong things `drugs', assert his due rights, etc.*'

Semi-structured interviews were conducted with school leaders and teachers in India to assess their understanding and practice of skills content in the National Curriculum Framework, 2005 and syllabi followed in their schools. Analysis of data reveals that some teachers feel skills are not clearly articulated in curriculum and syllabi. There is a section of teachers who feel that skills are mentioned but these are mostly cognitive skills. Some school leaders felt that skill articulation in the framework is complicated and difficult for a teacher to understand and practice.

Most teachers underscore the importance of Continuous and Comprehensive Evaluation scheme in inculcating life-skills, team-work and cooperation amongst the students.
The usage and implementation of guidelines in the curricular framework also differs across school management type and leadership provided by school-administrators.

3.8.1 Skills in CBSE Schools

Central Board of Secondary Education (CBSE) proposed 34 Vocational Courses, out of which currently, 26 courses are running in 7 major areas spread over 565 schools. The CBSE follows integrated approach to Vocational Education, in which vocational courses are being taught alongside academic subjects and does not treat as separate streams. The vocational education in secondary schools suffers from three following major problems:-

Poor Infrastructure
Most of the schools lack adequate infrastructure for imparting effective vocational courses. The schools do not have adequate and up-to-date equipments and technological aids at their disposal for teaching vocational skills. In most cases, the basic minimum teaching aids are lacking.

Teachers
Most of the teachers appointed for teaching the vocational courses are contract teachers, with short term working tenure, low qualification and are untrained. Most of them, although have

some related degree /experience/ expertise, but are not trained teachers. They have not been given any orientation. The CBSE, so far has not prepared any training module for training or capacity building of the vocational education teachers.

Curriculum without Contents
Although curriculum has been prepared by the CBSE, but no textbooks specific to the vocational courses have been prepared. The teachers use their own books for personal readings and do not share them with children. Most of the courses lack relevant textbooks for the course. Very often students do not have the books and the suggested readings are not readily available in the market. The CBSE cites "cost" as one of the deterrents in preparing materials for vocational education. The Certification Agencies in HR Department of the specific trade charge very high amount for preparing curriculum and reading materials.

Problem of Vertical and Horizontal Mobility
The students of the vocational courses suffer from the problem of both vertical and horizontal mobility. The vocational degrees very often are not accepted for continuing further education either in the vocational or academic streams. These degrees /certificates are not treated as equivalent within the same education system. Furthermore, most of the employment agencies do not consider the VE degrees adequate and suitable for their jobs. There is a need to establish both structural and functional linkages between education institution and industries.

3.8.2 Skills in State Board Schools

The Secondary Schools in Jharkhand follow CBSE Curriculum and NCERT Textbooks. The decision to introduce CBSE curriculum was taken after the state was carved out from Bihar in 2000. As far as vocationalisation of secondary school is concerned, the state has been teaching vocational courses in +2 stages, since 1993 when vocationalisation was introduced in all the states following 1986 National Policy on Educational (NPE) Programme of Action (1993). The Vocational Courses started in 1993 is still in operation. The courses follow NCERT curriculum prepared by PSSCIVE, Bhopal. All together 19 trades/Vocational Courses were being taught under the Vocational Courses as reported by the District Education Office. For each Trade, one teacher has been appointed. The number of students enrolled varied from year-to-year, from trade-to- trade depending on the prospects of the trades. Jharkhand Academic Council, Ranchi conducts annual examination based on the PSSCIVE syllabus. Some of the issued which emerged during the field visit are as follows:-

Students
The number of students enrolled in the vocational courses was less than the sanctioned strength. In some of the trades, there was no student. The number of students fluctuated depending on the availability of Instructors. The students who were selected in the vocational courses were low achievers who could not find place in the general stream. It was reported that the such students were identified during 9th or 10th class, and were persuaded to join vocational courses. There were rare cases when students opted for the vocational courses on their own. Some of the courses which have better employability prospectus for girls, for example Nursing and Typing, attracted larger number of students in comparison to other trade i.e. Sericulture, Textile Designing etc.

Teachers in the vocational course
For most of the Vocational Trades being taught in +2 schools teachers have been appointed with expertise and qualification in the related subject. For example in Mining Geology course, candidates with M.Sc. degree in Geology have been appointed. Similarly for Nursing, persons

with Diploma in Nursing have been appointed. The salaries of these teachers have been lower than the regular teacher of the school. Although the teachers have basic degrees in the related subject, they are not trained teachers having degrees such as B.Ed. or M.Ed. For each Trade, two posts have been created i.e. Instructor and Lab. Assistant. There is no provision for in-service teacher training for the instructors. The teachers do not have promotional avenues. Despite working for around 20 years, they have been on the same scale. The morale of these teachers was found quite low in most cases as their service conditions and job satisfaction were up to the mark.

SECTION IV: CURRICULA AND SKILLS IN SOUTH-EAST ASIA

4.1 Introduction

After putting policy and legal structures in place for universalizing primary and elementary education, most countries in Asia have now turned education policy focus on secondary education. This shift in focus is neither sudden nor deliberate but rather planned and logical. In the nineties most of the high performing East Asian economies, including Indonesia, Malaysia and Thailand leveraged their success on expansion of basic education. The logical progression is to turn the focus on secondary education. However, past economic success is not the only criterion that merits the focus on secondary levels of schooling. Secondary education is no longer seen as a conduit to higher education but rather as a terminal stage that needs to equip students with a broad range of skills relevant to employability. Thus, skill development across secondary education and more specifically upper secondary education is the current policy focus in East Asia.

This section of the study is looking at skill development in secondary schools in South East Asia which includes Indonesia, Malaysia, Philippines and countries of the Mekong sub-region- Thailand, Vietnam, Cambodia and Laos. As on 2007, with respect to the total enrollment in general secondary education, Philippines and Thailand ranks at the top with 83.25% and 82.44% respectively. Amongst these countries, Cambodia has the lowest proportion (40.35%) of students enrolled in secondary education and Lao PDR has the lowest proportion (0.43%) of students enrolled in TVET. On the other hand, Indonesia has more proportion (73.48%) of students enrolled in general secondary education and TVET (9.42%) as compared to Malaysia which has 67.98% of its students enrolled in general secondary education and 3.98% in TVET (EFA Global Monitoring Report, 2010). The focus of this paper is on identifying skills that are presently contained in secondary school curricula in the region. If secondary education match with the skills demanded by employers. This is another focus of this paper and is expected to exemplify as well as inform secondary school curriculum reform that most countries in South-East Asia are currently experiencing.

4.2 Comparison of the Systems of education in South-East Asia

The structure of education in the sample countries is relevant because it gives an insight into tracking and differentiation of students which has implications for skill development. Indonesia offers nine years of compulsory education which includes six years of primary school and three years of junior secondary school, both of which are compulsory. Senior secondary school also lasts for 3 years and is divided into a general track and a vocational track. From the second year onwards, students in the general track can choose from the following subject clusters: natural sciences, social sciences and languages. In addition to a core curriculum from the Ministry of Education, these schools also follow a curriculum of Islamic subjects. Instead of continuing in the general track after junior secondary school, pupils can take 3-year technical and vocational education programmes which include the study of commercial sciences, home economics, agricultural programmes and the like.

In Malaysia Primary education lasts six years and is compulsory. General secondary education lasts 7 years and is divided into three stages. Junior secondary education lasting 3 years, followed by 2 years of senior secondary education, students choose one of twelve subject

clusters, all of which contain at least the core subjects of Malay, English, mathematics, physics, history and geography. In addition to these, there are a number of electives. Following successful completion, students can take another 2 years of secondary education at a Sixth Form College (2 years) or a Matriculation College (1 year). After 3 years of junior secondary education, students can also opt for the technical / vocational stream at secondary schools.

Philippines offer its students a basic education which includes a six year compulsory elementary education.Secondary education is also a part of Basic Education and is of four year duration. It is tuition free in public schools. Secondary education is expanded to include general learning and vocational skills which is not really tracking but a sort of mixing of streams. Children enter primary education at the age of six years. Primary education consists of a five-year programme, from grade 1 through grade 5. For the training of pre-primary and primary/basic school teachers, 2-year courses are conducted at teacher training colleges. For the general education level II, officially known as lower secondary education, a 4-year programme from grade 6 to grade 9 is in place. The curriculum is standardized, with almost no optional or elective courses. At the termination of lower secondary education (LSE), students take a national examination that is prepared and administered by the Ministry of Education and Training (MoET) and those who pass the examination are awarded the diploma of completion of LSE. On the other hand, the upper secondary school, consisting of general education grades 10 through 12, is a three-year programme. Admission to upper secondary school requires successful completion of lower secondary education and an admission examination. At the completion of upper secondary school, students take a national examination. Those who pass get a diploma. All schools use a standard curriculum and textbooks designed by MoET. Upper secondary school teachers are trained in teacher training colleges, in universities with education faculties or in colleges or universities in the regular undergraduate programme. For admission to teacher training colleges, students must complete upper secondary school and pass the entrance examination. Most programmes last for four years, although some foreign language and technical programmes last for five years. Students can enter vocational education after primary education for a course of three years duration. They can also enter vocational stream after basic secondary for 3-4 years duration courses and senior secondary levels for shorter courses.

In Cambodia primary education of six years is compulsory, as is lower secondary education of 3 years and both these levels are under the umbrella of basic education. General secondary education also comprise of 3 years of upper secondary education. Students can branch off into vocational education after lower secondary education.

Thailand offers basic and higher levels of formal education: basic education which includes twelve years of education prior to higher education. These twelve years include pre-primary education of two years, primary of 6 years which is compulsory. Lower and upper secondary education are of three years each, of which the lower secondary is a compulsory stage that makes nine years of compulsory schooling. However, upper secondary education is divided into general and vocational track.

The formal education system of PDR Laos comprises preschool education of 3 years; primary education of 5 years; lower secondary education of 4 years and upper secondary education of 3 years which is divided into general and vocational stream. Students can be pulled into vocational streams after primary school for a four year course and after lower secondary for a vocational training of three years.

The brief description of the systems of education given above reveals two important things. Out of the sample seven countries five countries do not differentiate or track students for the first nine years of education. These are Indonesia, Malaysia and Thailand, PDR Laos,

Cambodia. In all these countries, the main differentiation occurs at secondary level II, at which students choose to advance to either general education schools or vocational schools. In Vietnam and Philippines tracking and curriculum differentiation is significant. Vietnam offers tracking at three levels-primary, basic secondary and senior secondary. Philippines mix vocational courses with general education, offering technical and vocational education as a separate track only in post-secondary education.

In all the countries sampled above primary education is compulsory. Whereas, in Thailand, Indonesia and Cambodia junior secondary level is also compulsory.However, junior secondary education is not differentiated in all the countries mainly because it is the stage that is considered important for developing citizenship, national and moral values amongst children. In all the seven countries tracking and differentiation occurs when the student is in the age range of fourteen to fifteen years. Thus, skills developed till this age and level are important for creating a basic human resource pool in these countries. Tracking into technical and vocational education is done to facilitate school to work transition and with all its complexities remains an important driver for skill development.

4.3 Skills in the Secondary School Curricula

The brief survey above brings the focus on junior and upper secondary education curricula in the sample countries. This is the level that is charged with providing a framework for skill development, either academic or vocational, which the graduate can enhance at higher levels. Skills are produced in many different ways involving pre-employment education and training (formal and informal), on-the-job training (formal and informal), work and life experience and learning from peers at school and work. Skill acquisition is a cumulative process starting at birth and continuing through school education, training and experience. While skills can grow over time, they can however also decay if schools do not provide possibilities for life-long learning. In addition, it has to be recognized that societies are not uniform and equal and it is school that plays a vital role in correcting this imbalance. Studying secondary school curricula for the skills that they offer to graduates becomes even more relevant for these reasons.

In this section skills are broadly categorized into three types.School curricula will be assessed for the presence of these skills. Academic skills are associated with subject areas (math, literacy, English) and generally measured through standardized scores, which then provide a basis for national and international comparisons. Generic (or life) skills are a broader set of skills transferable across jobs generally including thinking skills (critical and creative thinking, problem solving, etc), behavioral (typically communication, organization, teamwork, and leadership skills)and ICT. Job-specific (or technical) skills are associated with one's profession, which are generally a mix of specific knowledge and skills to perform jobs.

Table 1: Curriculum in the seven sample countries.

Indonesia	National curriculum plus Local Content Curriculum
Malaysia	Integrated curriculum for secondary schools
Philippines	Competency based National Curriculum
Cambodia	National Curriculum
Thailand	Basic Education core curriculum
Vietnam	National curriculum
Laos	Basic Education Curriculum

In Malaysia, the Integrated Curriculum for Secondary Schools was launched in1988. It was introduced to primarily rectify the excessive focus on cognitive development to the detriment of emotional and spiritual aspects of education. Problems also existed in terms of curriculum content and delivery of knowledge or specialization in a narrow and differentiated way. In Malaysia, thelower secondary school curriculum is seen as anextension of the primary school curriculum with an idea to ensure that basic skills are further developed and reinforced. The aim is also to introduce a general education which encompass aspects of pre-vocational education. For upper secondary school level the curriculum aims at providing general education suitable not only for students who are going to work but also for those who will continue their education. There is much emphasis on character development and morality based on Islam, however, the use of Bahasa Malaysia is stressed in all the subjects. Integration is another principle of Integrated Curriculum for Secondary Schools. Lifelong learning aims atnurturing the love for knowledge and provides opportunities for the acquisition of study skills. At the lower secondary level, subjects are categorized under core subjects and additional subjects. The core subjects are Bahasa Malaysia, English Language, Islamic Education, Moral Education, Mathematics, Science, History, Geography, Living Skills, Physical and Health Education, Art Education and Living Skills. Besides the core subjects, students can also offer additional subjects such as Chinese and Tamil.

At the upper secondary level, besides the provision of core and additional subjects there are elective subjects. Core subjects taught at the lower secondary level continue to be taught at the upper secondary level with the exception of Geography, Art Education and Living Skills. Chinese and Tamil languages are retained as additional subjects. The electives are listed under three groups: Humanities; Vocational and Technology; and Science. Subjects under Humanitiesare: Malay Literature, English Literature, Geography, and Art Education. Subjects offered underVocational and Technology are Principles of Account, Basic Economics, Commerce, Agricultural Science, Home Economics, Additional Mathematics, Mechanical Engineering Studies, Civil Engineering studies, Electrical and Electronic Engineering Studies, Engineering Drawing and Engineering Technology. Subjects under Science include: Additional Science, Physics, Chemistry and Biology. In 2002, English language was made as the medium of instruction for Mathematics, Science and Information Communication/ Technical subjects which is expected to enable students to access information on the internet, read articles, research papers and other materials published in English. It is significant that Malaysia has introduced systems of testing and assessment of skills in academic and vocational subjects.

Moreover, Malaysia government policy has focused on the inter-linkage between educational and industrial development. Educational reforms policy focuses on enhancing the country's scientific and technological capacity by increasing the proportion of students following science based options in upper secondary and higher education. The aim is to achieve a ratio of 60:40 for science versus arts based students. Accordingly, the upper secondary science curriculum in Malaysia has been examined below. Twelve science process skills have been identified and defined in the relevant syllabus. These are observing, classifying, measuring and using numbers, inferring, predicting, communicating, using space and time relations, interpreting data, defining operationally, controlling of variables, hypothesizing and experimenting. Moreover, thinking skills and meta cognition are evident in the curriculum. Thinking skills have been classified into "critical thinking skills, creative thinking skills and thinking strategies". These categories were further demarcated, defined, and elaborated in a supplementary curriculum handbook, entitled "Thinking Skills in Teaching and Learning".

According to the curriculum document, thinking strategies belong to a higher order thinking process. Three strategies have been identified: Conceptualizing, making decisions and problem solving. Reasoning in conjunction with creative and critical thinking is used to arrive at these three outcomes. This same handbook treated "meta cognition" in terms of students being aware of how they think, methods they have used to explore different approaches in solving a problem and the learning experiences that they have undergone. ICT is viewed as a key enabler of self-accessed learning, allowing students to collect, analyze, process and present information. Equally, the use of ICT was suggested to facilitate self-directed learning and to facilitate self-paced learning which subsequently, allows for vertical integration to happen in our educational system.

In Indonesia as is clear from the table above, curriculum is decentralized and competence based rather than skill based. Skill is a part of competency. Competency consists of three parameters - Knowledge Attitude and Skills. In 2004 standard competencies were defined for school graduates. These overarching competencies are focused on providing the student with a sense of responsibility and morality rooted in religion. Communication is also stressed as an important competency.

Competencies aligned to the science process skills identified in the Malaysian curriculum are also found in the Indonesian curriculum. Also identified is the competency to search and use information from multiple sources, understanding and valuing the physical environment, living creatures, technology and using knowledge and skills to make sound decisions. A set of competencies focus on understanding the local and global culture and aesthetics. Thinking skills are identified and mentioned in the competencies associated with secondary school curriculum. Generic skills like motivation in learning, self confidence, independent way of working, ability for team work are mentioned.

English is a focus language in Indonesia. For senior secondary graduates developing communicative competence in spoken and written English is a stated goal. Listening, speaking, reading and writing skills in English are emphasized. The emphasis is on raising awareness regarding the nature and importance of English as a foreign language and as a major means for learning. A related competency is developing understanding of the interrelation of language and culture as well as cross-cultural understanding.

In the Philippines too, the curriculum is competency based. The overall goal of the 2010 Secondary Education Curriculum is to develop a functionally literate Filipino who can effectively function in various communication situations. A functionally literate individual demonstrates the following critical competencies: ability to express clearly one's ideas and feelings orally, in writing and non-verbally; ability to learn on his own; ability to read, comprehend and respond to ideas presented; ability to write clearly one's ideas and feelings and the ability to access, process and utilize available basic and multimedia information. These competencies comprise the expected outcomes of the 2010 Secondary English Curriculum. Competencies in Science include thinking in an integrative way to analyze/solve problems critically, think innovatively/creatively and make informed decisions in order to protect the environment, conserve resources and sustain quality life. The curriculum like that in Malaysia emphasizes science process skills. Skills that graduates must possess in Mathematics are – Problem Solving, Reasoning, Making Connections and Representations. In addition computational skills, critical and creative thinking, visual imagery and ICT are also emphasized.

In Thailand the Basic Education core curriculum identifies five competencies that learners are expected to demonstrate. These are – communication, thinking, problem solving,

applying life skills and capacity for technological application. The Science Curriculum categorizes thinking skills into two types-critical thinking skills and creative thinking. Critical thinking skills comprise the abilities of attributing, comparing and contrasting, grouping, classifying and sequencing, prioritizing, analyzing, detecting bias, evaluating and drawing conclusions. Creative thinking skills comprise generating ideas, relating, making generalizations, visualizing, synthesizing, making hypothesis and analogies and inventing. The capacity for reasoning is at the core of all these skills and leads to higher order thinking processes which are identified in the curriculum as conceptualizing, making decisions and problem solving.

In Vietnam and Cambodia secondary school curriculum aims at consolidating and developing the content learned in primary schools. At the core of both curricula lie nation building and citizenship skills, moreover, a sense of working for the community is stressed. Skills in the national language are at the core of the curriculum. Science process skills like, knowing how to observe, collect, analyze information and creative problem solving are stressed. Whereas, communication, adaptability and flexibility are important skills identified in the curriculum. Also significant are ability of self-esteem, spirit of striving to learn and to work, constantly to train oneself, be able to self-evaluate and criticize within the environment of activities and the experience of oneself.

Vocational Education Curricula in sample countries was analyzed for skill content. In Thailand the curriculum for Diploma of Vocational Education stresses the skills of integration of knowledge and skills from different disciplines and apply them in a career according to technological changes. Further, promoting a positive attitude towards a career, self-confidence and teamwork are stressed. Skills of inquiry, creative thinking, management decision-making, problem solving are significant skills supported by the curriculum. Behavioural attributes like honesty, discipline are emphasized as are national and citizenship values.

The structure of vocational curriculum in secondary schools in Malaysia offers fifty five percent academic core subjects and forty five percent vocational subjects. There are sixteen vocational core subjects ranging from building construction to subjects relevant to farming. Secondary school vocational curriculum was restructured in 2007; Almost seventy-five percent of the content is focused on technical, drawing and practical skills. Moreover, entrepreneurship and polytechnic modules are included leading to formation of relevant base skills and assessment is competency based.

As previously mentioned in Indonesia students graduating from junior secondary school must choose between general and vocational senior secondary education. These school types are distinct. Only a small portion of the curriculum used in general and vocational schools overlap, mostly in the languages of English and Indonesian. General schools offer three majors: natural science, social science and language. On the other hand, the vocational stream provides a choice among many majors. Each vocational school usually focuses on just one or two majors. The available vocations are business management; technical, which includes machinery and information technology; agriculture and forestry; community welfare; tourism; arts and handicraft and health care. In addition, there are very specialized vocational high schools that focus on aviation and shipbuilding. Of all these choices, the most popular are the first two, business management and technical.

Since recently, the curricula of the study programs are based on National Competence Standards for Work which are developed under contribution of industry and enacted by the Ministry of Manpower and Transmigration. The National Agency for Educational Standards

sissues detailed curriculum guidelines and also develops nationally unified students' final examinations. The schools, however, shall develop their own curricula based on the curriculum guidelines and in negotiation with local stakeholders like companies and other parties interested in education. Curricula need approval from the regional education administration. Vocational curricula contain a fair share of general education content since vocational schooling shall also enable graduates to pursue higher education. Thus, the vocational part is restricted to roughly 25% of the curriculum and does not include basics of maths, sciences and English language which are covered by the prescribed general education part.

4.4 Employability skills in the Curricula

If secondary education is to be treated as a terminal stage of education it is evident that curricula should lead to the development of employability skills in the student. In this section a brief inventory of possible employability skills is drawn. The curricula described above assessed against the list given below:

- Basic/fundamental skills—such as literacy, using numbers, using information technology
- People-related skills—such as communication, interpersonal, teamwork, customer-service skills
- Conceptual/thinking skills—such as collecting and organizing information, problem-solving, planning and organizing
- Meta-cognition, thinking innovatively and creatively, systems thinking
- Personal skills and attributes—such as being responsible, resourceful, flexible, able to manage own time, having self-esteem
- Skills related to the business world—such as innovation skills, enterprise skills
- Skills related to the community—such as civic or citizenship knowledge and skills
- English
- Job specific skills

Comparing this inventory of employability skills with the skills identified in the curricula in the sample countries provides interesting insights. Almost all the countries under study stress the importance of science process skills in secondary school science curricula. These are expected to lead to the thinking skills listed above. Curricula in all sampled countries stress English communication which is evident that South-East Asia is concerned about marking a global presence. Moreover, Mathematics curricula stress skills in numeracy and problem solving. Junior secondary school curricula are expected to lead to personal skills and attributes and skills related to the community. Job-related skills and entrepreneurship are the only areas which do not find an explicit mention in secondary school academic curricula. They are however embedded in vocational secondary curricula. An analysis of both academic and vocational curricula reveals the predominance assigned by policy to the development of Thinking Skills, Communication and work related skills.

4.5 Skills for Secondary School Students: Educators Perception

The brief analysis above shows that curriculum documents at the very least are exceptionally clear about the repertoire of skills that are necessary to make the secondary stage of education a terminal stage. However, studies have shown that there is skills deficit in youth in the region, despite constant curricular change. Secondary vocational graduates are skilled in standard jobs whereas there is a demand for enterprise skills. Employers seek multi-skilled workers. It is

obvious that curricula are not translating into skills at the level of the students. Moreover, teachers form a vital link in transaction of curricular objectives. This section examines teachers and their engagement with curriculum and skills at the secondary level.

Studies on Malaysian teachers' knowledge of the integrated curriculum found that there are significant differences between teachers' knowledge and practice. Given that the integrated curriculum has been in practice for almost two decades, it is logical that teacher knowledge was high. However, high level of teacher knowledge of the integrated curriculum was not necessarily related with their practice. Similar results were indicated on a study of mathematical problem solving skills amongst maths teachers at upper secondary level in Malaysia. Teachers stick to the traditional belief that students' task is to get answers from clearly defined exercises. A problem that may lead to varied answers is not seen to be "good" mathematical problem. Maths teachers teach for exams and do little to own their curriculum.

An OECD study of 2009 showed that teachers in Malaysia preferred structured activities and do not particularly regard students as active participants in class. One of the key skills demanded by employers is ICT. Studies in South-East Asia showed that although teachers held positive beliefs about ICT in education, these beliefs were not fully translated into their classroom practices. Most of them believed that ICT was just a tool to use in teaching and learning, particularly if it eased knowledge dissemination and helped students to understand the content. On the positive side, teachers in South-East Asia in general, have strong beliefs about language skills which they consider are important for the development of student skills.

4.6 Comparison with OECD countries

The organization of upper secondary education in OECD countries is quite divergent. At least three types of organizational structures exist in secondary school provision. Divided school-based upper secondary school system, whereby upper secondary education is divided into general and vocational schools with separation between the two streams. The second type is the unified upper secondary school system, whereby upper secondary education is organized within one school offering different programmes. Thirdly, there are parallel or dual school-based and work-based upper secondary schools where upper secondary education has school-based general and work-based vocational education options.

Skills are unequally distributed between and within OECD countries. While some countries managed to improve their performance in education between 2000 and 2009, as measured by the OECD's Programme for International Student Assessment (PISA), others have stagnated or even declined (OECD, 2010 d). Substantial numbers of people remain without the most basic skills, between one-third and two-thirds of the population do not master minimum levels of the core skills considered necessary to engage in further learning and function in modern economies.

4.7 Summing Up

The survey above reveals important features of skill development in South-East Asia. Almost all countries in the region are in a phase of curricular reform of school education. Analysis of curricula reveals that secondary school curricula are embedded with a wide variety of skills that if not sufficient for school to work transition, at least seek to provide a strong base from which the student can develop further skills. Though curricula are embedded with such skills, students graduating from secondary school often do not possess the required skills that can make

secondary education a terminal stage in schooling. One of the major gaps identified is teacher effectiveness and attitudes. Under skilling is evident even in OECD countries pointing at the need for reforms in secondary education curriculum, its delivery and teacher capacity development.

SECTION V: SCHOOL CURRICULA AND SKILLS IN THAILAND: A CASE STUDY

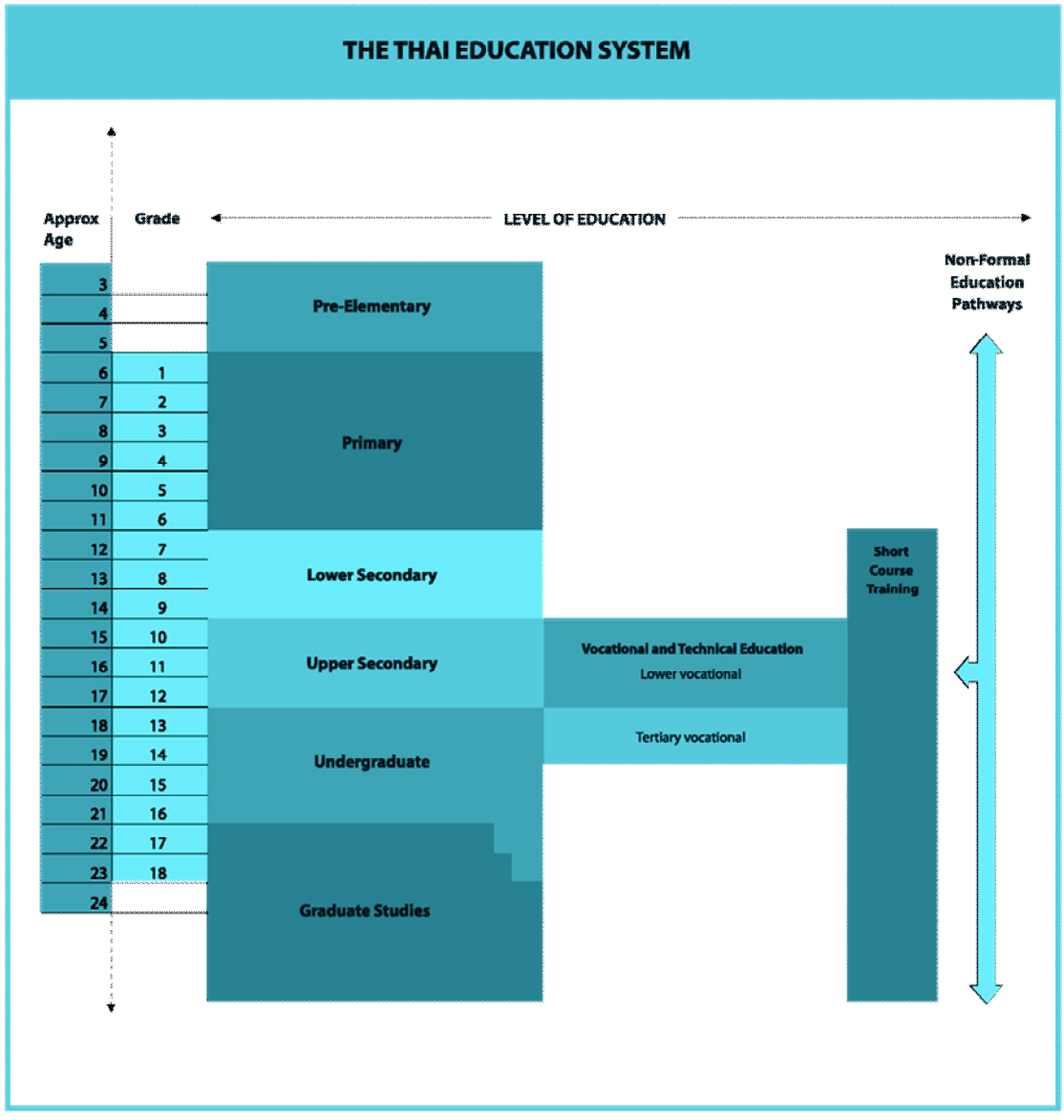
5.1 Historical Background of Education in Thailand

The conventional system of education in the kingdom of Thailand can be traced back to the thirteenth century, which was influenced by the Buddhist culture and plausibly also by the connections with other Buddhist countries such as Myanmar and Sri Lanka. Initially, Buddhist temples, monasteries and households were the major centres for imparting education, but, the daughters of nobility were only educated in the royal palaces. However, due to Buddhist doctrine of practicing high degree of tolerance, as of 1868, missionaries from the western world began campaigning belligerently, partly through educational opportunities, to convert the Thai people to Christianity. Consequently, this incited the Royal Thai Government to lay the foundations of formal Thai education system from 1884. Moreover, in 1902, a Royal Proclamation announced that formal education would be provided to all the citizens of the country by the kingdom. As required by the Ministers of Religious Affairs and Culture, the newly established government education system was heavily influenced by Buddhist culture. It was only way back in the early 1980s, that Thailand witnessed a progressive change in its growth and development from an agriculture-based economy to a burgeoning industrial market-driven economy. This new trend in economic growth posed challenges in terms of new demands for the kind of human resource and skills required by the economy. In response to the perceived failure of conventional education and training to prepare students for more learning-intensive work, a high-powered commission report in 1997 that was appointed after the Asian Financial Crises of the 1990s, Thailand could see the major reforms towards modernization. Based on its recommendations, coordination and unification of the Thai education system including decentralization and devolution of school management were laid out in the National Education Act of 1999. According to the National Education ActB.E. 2542of 1999, amended in 2002, the educational provision shall be based on the following principles: (i) lifelong education for all; (ii) all segments of the society to participate in the provision of education; and (iii) continuous development of the learning process. In subsequent of the National Education Act, the National Education Plan (2002-2016) was promulgated to achieve equity and quality of life for all. Moreover, it pledged “to improve education to be in harmony with economic and social change” (ONEC, 2002 a).

The main objectives of the Eleventh National Economic and Social Development Plan (2012-2016), issued in October 2010, are to promote a peaceful society with good governance, to promote sustainable development through restructuring the economy, society and politics, and nurturing natural resources and environment, as well as to prepare the people and the community to be resilient to changes. To achieve these objectives, six development strategies have been set forth, including: promoting the just society; developing human resources to promote lifelong learning society; balancing food and energy security; creating the knowledge based economy and enabling economic environment; strengthening economic and security cooperation in the region; and managing natural resources and environment towards sustainability. (UNESCO Bangkok, 2011).

5.2 Structure of Education

Figure 1: The Thai Education System



Source: The Thai Education System, Towards a Learning Society, MOE 2007.

Currently, the education system of Thailand consists of nine years of compulsory education with twelve years of free basic education guaranteed by the constitution. The school education is divided into four levels controlled by the Ministry of Education: pre-primary education two to three years, followed by six years of primary education (Prathom) with entry age of six years, three years of lower secondary (grades 7-9) and three years of upper secondary (grades10-12).

The higher education is controlled by the Ministry of University Affairs which offers an associate degree, a four year bachelor's degree and a two to five year post graduate degree.
Within the secondary education (Mattayom) system extending from the age of twelve to seventeen years, the upper secondary level is divided into two parallel tracks: general or academic and vocational. Some popular upper secondary schools or schools situated in municipal areas admit students through the entrance examination, whereas, in some cases, school boards independently lay down particular conditions to admit students to upper secondary level.

Admission to higher education is done through the Central University Admissions System entrance examination after attaining grade 12 certificate. A diploma course in Vocational education of the duration of two years is offered in vocational colleges at the postsecondary level. Moreover, students have the option of continuing their vocational education at the university level also (degree level, two-year programme).

5.3 Components of Secondary Education Curricula

Thai education system promotes decentralization of authority to local educational institutions so as to participate in the curriculum development and implementation resulting in improved quality of educational provisions, hence, enhancing learner's quality. The involvement at the local level provides for linkage between the Basic Education Core Curriculum prescribed at the national level and the local situations and needs.

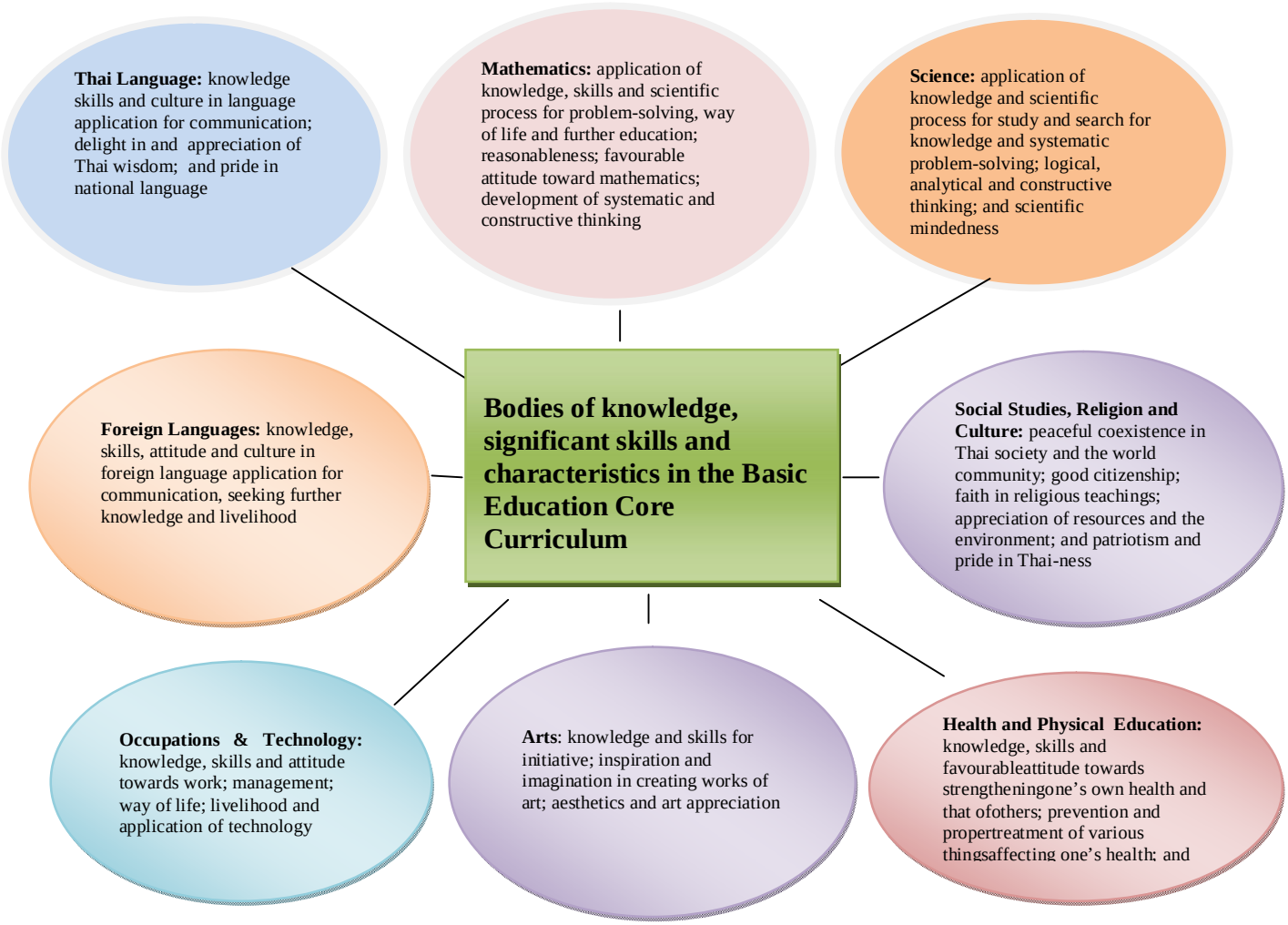
Lower secondaryeducation is the final stage of compulsory education and aims to promote learner’s morality,knowledge and skills beyond the primary level; enable them to identify their needs, interests and aptitudes both in general and vocational education; and to develop life skills and their ability for age related work . Whereas, theupper secondary education aims to enable learners to develop their aptitude and interests and acquire the foundation for further education or career both as entrepreneurs and paid workers: to promote their morality, ethics, and social skills necessary for pursuing a career and leading peaceful social lives.

5.4 Skills in the National Curriculum framework: Approach, Content and Methodology

5.4.1 General Education

The National curriculum comprises of eight core *learning areas* - Thai language, Mathematics, Science, Social Studies, Religion and Culture, Health and Physical Education, Arts, Careers and Technology, and Foreign Languages, which includes bodies of knowledge, skills or learning processes and desirable characteristics (Fig.2) To facilitate integration of indigenous culture and acumen, flexibility is built in the curriculum so that a consistency is maintained with the set learning standards in each of the core learning areas.

Fig 2: Core areas of learning in Basic Education Core Curriculum of Thailand



Source: The Basic Education Core Curriculum, 2008, MOE, Thailand.

The core curriculum aims to develop five *key competencies* among the learners: Communication skills - receiving and transmitting information, linguistic ability and skills of expression, judging information through sound reasoning, using efficient methods of communication and negotiation; Thinking skills focusing on developing analytical, synthetic, constructive, critical and systematic thinking; Problem-solving through sound reasoning, moral principles and accurate information, life skills - integrating self with the social environment, continuous learning, maintaining social harmony; and capacity for application of technology for the development of self and society.

Moreover, the Curriculum also aims to develop *desirable characteristics* like love of nation, religion and king, honesty and integrity, self-discipline, avidity for learning, observance

of principles of Sufficiency Economy Philosophy in one's way of life, dedication and commitment to work, cherishing Thai-ness and public-mindedness.

Besides the eight core learning areas, there are also three types of learner *development activities* focussing on the overall development of the learners and providing opportunities and experiences to develop their potentials. The Counselling activities helps the learner to know about oneself, develops the problem solving ability, planning and decision-making in educational and vocational areas. These activities also provide an insight into the student's personality and behaviour and help the teacher to guide parents about the learner development. There are also student activities like Boy Scout organisation, girl guides, junior Red Cross, social service and territorial defence; and activities of various clubs and societies which aim to inculcate self-discipline, leadership, teamwork, care and concern for others. Whereas activities for social and public interest aim at encouraging learners to devote themselves and provide voluntary services for the benefit of society, their communities and local areas.

5.4.1.1Learning Time framework

Though the core curriculum prescribes a framework for minimal learning time structure for the eight learning areas and learner development activities, there are provisions of flexibility which enables the institutions to increase the allotment of time as per the context and needs of the learners. Time allotment is done on semester basis at secondary education level with a learning time of six hours per day and forty hours per semester is equivalent to one credit. The learning time framework specified in the Basic Education Core Curriculum 2008 for lower and upper general secondary education is shown in the tables below:

Table 2: Learning time framework of Lower general secondary education in Thailand

Learning area	Number of hours per year in each grade		
	7	8	9
Thai language	120	120	120
Mathematics	120	120	120
Science	120	120	120
Social studies, religion & culture:	160	160	160
History	*40*	*40*	*40*
Religion, morality and ethics, civics, culture and living in society, economics, geography	*120*	*120*	*120*
Health and physical education	80	80	80
Arts	80	80	80
Occupations and technology	80	80	80
Foreign language	120	120	120
Total yearly hours (basic)	**880**	**880**	**880**
Learner development activities	120	120	120
Additional courses/activities provided by the school, depending on the local situation and priorities	200	200	200
Total learning time per year	**1,200**	**1,200**	**1,200**

Source: Ministry of Education-OBEC, 2008. One credit is equivalent to 40 hours (normally persemester).

Table 3: Learning time framework of Upper general secondary education in Thailand

Learning area	Number of hours/credits in grades 10-12	
	Hours	Credits
Thai language	240	6
Mathematics	240	6
Science	240	6
Social studies, religion & culture:	320	8
History	*80*	*2*
Religion, morality and ethics, civics, culture and living in society, economics, geography	*240*	*6*
Health and physical education	120	3
Arts	120	3
Occupations and technology	120	3
Foreign language	240	6
Total hours/credits over three years, grades 10-12 (basic)	**1,640**	**41**
Learner development activities	360	
Additional courses/activities provided by the school, depending on the local situation and priorities	1,600	
Total learning time/credits over three years (grades 10-12)	**3,600**	

Source: Ministry of Education-OBEC, 2008. One credit is equivalent to 40 hours (normally per semester).

At the secondary education level*additional time* is allowed by introducing additional courses or learner development activities, with due consideration to the priorities of the educational institutions. Allocation of 120 hours each year for learner development activities for primary education grade 1 to secondary education grade 3 (Grades 1-9) and 360 hours each year for secondary education grades 4-6 (Grades 10-12) is meant for counselling activities, student activities and activities for social and public interest. However, for the last category of activities, educational institutions shall allot the time 45 hours totalling three years at lower secondary level and 60 hours totalling three years at the upper secondary level. Moreover, the basic education core curriculum can also be adjusted to cater to the needs of the special target groups, on condition that the quality attained shall be as prescribed in the standards.

5.4.1.2 Pedagogy for transacting the curriculum and skills

The Thai National Curriculum is a strong advocator of the ingredients of thinking skills, self-learning and moral development in teaching and learning. Though the basic education core curriculum emphasizes on learner-centered approach focusing on some essential learning processes like integrated learning process, knowledge creating process, thinking process, social

process, heuristic learning process, learning process from actual experience, still an over emphasis on memorization and teacher-centeredlearning have been persisting problems in Thai education. As a consequence,the teaching-learning process becomes weak, particularly in the critical areas of learning - science, mathematics and foreign languages.

5.4.1.3 Training and Professional Development of Teachers

The current teaching manpower at secondary level comprises of 39,870 lower secondary and 85,569 upper secondary teachers with varying levels qualifications and skills (ONEC, 2001). It is commendable to note that the student-teacher ratio for secondary school is 21.6, which is below Organization for Economic Cooperation and Development (OECD) and World Education Indicators (WEI) averages (AWEI, 2000). A review of the current and the proposed curricula indicated in both a lack of focus on the new teaching and learning issues such as a comprehensive understanding of knowledge for the information age, attributes of a knowledge worker, new learning models and technology-based learning. There is little or no focus on developing the teachers' abilities to selectively use strategies to maximize student learning outcomes (Thailand Education Reform Project, 2002).

In order to respond to therapid expansion of secondary education, a large number of teachers were recruited with qualifications ranging from Diplomas to Masters Degrees in respective disciplines but without any teacher training qualifications. Those that had some training did not undergo any professional development courses since they graduated from their teacher training programs. Recognizing the difficulties experienced by untrained teachers and a need to continuously upgrade teacher competencies while at the same time producing more teachers, in 1990s, Rajabhats (Teacher Training Colleges) and faculties of education at universities were established. However, since 1995, Rajabhat Institutes got a new nomenclature as Office of Rajabhat Institutes Council, as a result of the new Act of Rajabhat Institutes. Moreover, within the framework of teacher education reform, these institutes have been changed into Rajabhat Universities. These Rajbhats are strategically positioned all over the kingdom to serve respective communities. They offer pre-service and in-service teacher training and other professional development courses. They have a strong community orientation and extend their role beyond teacher training to provide educational services to the local areas in research and technical services, technology development and transfer. The new curriculum for teachers at the bachelor's degree level comprise of four years of course work and the remaining time to the teaching practice. A new initiative in the name of school-based training (SBT) for enhanced effectiveness and sustainability of in-service teacher training has been introduced by the Office of the Education Councils (OEC, 2004).

The university teacher training programmes focus on child centered learning methods and some of them also operate Satit - demonstration by lecturers and teacher trainees. The training for secondary school teachers is undertaken by government Rajabhat Universities. The training programmes cover areas of teaching methodology, school administration, special education, optional specialization, supervised practical teaching experiences and the general education subjects of language and communication, humanities, social science, mathematics and technology. The eligibility for entry to basic teacher training programme (bachelor of education degree) is completion of upper secondary education, whereas, lower secondary school teachers are required to complete a two year programme of higher certificate of education (diploma or an associate degree in education).Thereafter, they are eligible to continue their two additional years of full time study for a bachelor degree. However, prospective teachers with a bachelor degree in other discipline than education is required to undergo one year of full time study of bachelor of education degree (UNESCO, 2011).

The Teacher and Educational Personnel Reform 2004-2013 also considers teacher training as one of the key components in the development and management of educational personnel. As a result of this reform, five-year curriculum for pre-service training replaced the previous four-year curriculum. Moreover, National Institute for Development of Teachers, Faculty Staff and Educational Personnel (NIDTEP) established in 2006, has been entrusted with the responsibility of teacher development that looks into rationalizing existing in-service training programmes, extending professional development across the country through new programmes and mobilizing personnel from a variety of organizations. Although, regular participation in teacher training programmes is not mandatory, but at the time of assessment for the renewal of teaching license, it is considered an added advantage.

5.4.1.4 Learning Assessment

To improve the quality of learning and achieve the prescribed learning standards, the capacities of the learners must be strengthened. As per the Basic Education Core Curriculum (2008), learning assessment in Thailand is divided into four levels - classroom level, educational institution level, educational service area level and national level. *Classroom assessment* aims to verify the extent of the progress of learning and identifying the hard spots for improvement. The evaluation of students' performance is done by the teachers on a continuous basis by using various assessment techniques, e.g., asking questions, observing, examining homework, assessing projects, tasks/assignments and portfolios, and using written tests, etc. Teachers also provide learners with opportunities for self-evaluation, peer-to-peer evaluation, and evaluation by parents. The evaluation provides scope for improvement of teachers' performance in concurrence with the established learning standards, by furnishing necessary information to the teachers. Whereas, *school assessment*aims to see the effectiveness of the education provided by the educational institution. It is conducted by the respective educational institution to review the learners' achievements on an annual/semester basis in the areas of reading, analytical thinking and writing, desirable characteristics and learner development activities. The learning outcomes can also be compared with national assessment criteria. School assessment provides data for improving policy, curriculum, projects and teaching-learning methodology. Evaluation outcomes are also useful for preparation of each educational institution's educational quality development plan in accord with the educational quality assurance guidelines. Similarly assessment is conducted at the *local level* in order to assess learners' quality at educational service area level, based on the learning standards prescribed in the Basic Education Core Curriculum. Moreover, evaluation is also done at the *national level* to assess learners' quality at national level, in accordance with the learning standards of the Basic Education Core Curriculum. Educational institutions are required to arrange for assessment of all students in Grades 3, 6, 9 and 12. The evaluation results provide relevant data for comparing educational quality at different levels which helps in decision-making at national policy level.

The National Education Act of 1999 introduced a new system of educational quality assurance at all levels comprising of tasks related to setting educational standards, designing and developing a system of internal and external evaluation, setting up of the Office of Educational Standards and Evaluation and conducting external evaluation of all educational institutions, as a result, the Office for National Education Standards and Quality Assessment (ONESQA) was established in 2000.

A national quality assessment of education at upper secondary level (grade 12) was conducted by the Department of Curriculum and Instruction Development in 1999, focussing on student achievement, characteristics of learners and standards of schools in terms of inputs and

processes. With regards to achievement, all over the country scores were quite unfavourable. Among the eleven subjects assessed, Thai writing obtained 57% which was the highest average score, followed by Thai language and vocational foundation with average scores higher than 50% . Other subjects like Physics, Chemistry, Mathematics and English writing scored average below 40% . Moreover, regional variations were found in the quality of education in all the subjects . Bangkok ranked the top position with regards to the highest average in nearly all the subjects except Thai writing which was in Education area 12 (eastern region) and vocational foundation in Educational area 9 (north-eastern region). With respect to Mathematics, Chemistry and Physics, the minimum average scores were secured by Education area 9 which was one of the poorest areas, whereas in the Muslim predominated education area 2 the minimum average scores were found in Thai language, social studies and physical - biological science. Apart from these core learning areas, learners were also evaluated in terms of desirable characteristics. The results on these characteristics indicated that the qualities of 88.6% and 83% of learners were favourable in terms of hygienic habits and sporting spirit, respectively. However, with respect to the general characteristics only 39.9 % and 54.5% showed good and fair characteristics respectively. Finally, only 54.9 % of schools could meet the requirement of student-centred learning (ONEC, 2001).

Further, the evaluation findings of the Office of the Education Council (OEC, 2004) on the students of grade 6 and 9 indicated unsatisfactory academic achievement in Thai language, English language, mathematics and science. In similar lines, thinking, knowledge-seeking and working skills such as team work, utilization of learning sources and planning were found to be unsatisfactory. However, learners' quality of good citizenship, such as discipline, honesty and etiquette showed satisfactory results. Overall desirable qualities in terms of good citizenship were higher than the set criteria (50%) as compared to other desirable qualities which were lower than the set criteria (OEC, 2004). **A**lthough the same curriculum was used in compulsory education in all schools in Thailand, differences in the quality of education were found in a 2005 evaluation based on student achievement test results in various subjects in grade 12 in 175 educational areas. Bangkok had the highest level of education quality and Songkhla the second highest. Pattani, Yala, and Narathiwat had low levels of educational quality, especially Pattani, which was ranked 174 of 175 educational areas.

The 1999 Trends in International Mathematics and Science Study (TIMSS), showed poor scores of lower secondary students in Math and Science. This was attributed to the poor quality of teachers in these subjects (UNESCO Bangkok, 2011). The results of the OECD Programme for International Student Assessment (PISA 2009), indicate that out of 65 participating countries on this assessment on the performance of 15 year old students, Thailand ranked at 47th place in reading and science and 48th place in mathematics. As reported by the Institute for the promotion of Teaching Science and Technology (IPST), the reasons for the lower performance were unqualified teachers in the respective subjects, improper use of ICT in education. It has been observed that during the last decade, the learning achievements of the 15 year old children of Thailand have somewhat stagnated in reading, mathematics and science. There was a very high concentration of low achievers ranging from 43% to 53% achieving level I or below out of six learning levels of PISA 2009 in all three subjects. Moreover, the results of the assessments of schools done by ONESQA in 2006 were sub-standard, however, some improvement were evident in 2008 assessment, as 68% secondary schools were rated to be of good quality (UNESCO Bangkok, 2011).

5.4.2 Vocational Education

With regards to Vocational education at secondary level, the Vocational Education Act of 2008, calls for vocational education provisions in concurrence with National Economic and Social Development Plan and National Education Plan. Vocational Education through global theoretical knowledge and Thai acumen, intends to produce skilled human resource equipped with adequate competencies, so that learners can practically utilize their knowledge and skills for employment and entrepreneurship. Vocational education is provided through, formal education in colleges and universities, non-formal education of graduation conditions and dual system and apprenticeship with agreements between vocational institutes and entrepreneurs, state enterprises or government agencies, on teaching-learning curricula and evaluations; students spend some time learning in colleges or universities and practice in entreprise - state enterprises or government agencies (UNESCO Bangkok, 2011).

The incidence and importance of work experience in vocational education is growing in the amount of learning time, didactic elaboration and importance in the curriculum. There are many vocational institutions that provide work placements as part of the curriculum and students attend workplaces for a period of supervised participation in work activities. The standards are improving, but some anomalies remain. The integration between learning in and out of school seems very difficult, if only because school is discarded in student consciousness as soon as the student is in the workplace (MOE, 2002). On the contrary, schools have difficulties disseminating what was learned in the workplace and relating it to the school curriculum. Systematic reflection is difficult to arrange (MOE, 2001). At the same time critical remarks remain the same over the years. The main reason for this is not the absence of models or templates but the actual gap between learning in school and in the workplace (ONEC, 2001b). The advance of new approaches and competence-oriented didactic concepts could be a promising way to narrow the gap. Many new initiatives have been launched at university and vocational school level to give students practical experience of the work site. However, to meet the need of updated vocational training as a key element of Thailand's educational reform programme, the British Council launched an initiative in 2001 in association with the Thai Ministry of Education. Vocational training experts and policy makers from both countries were tasked to develop a Thai Vocational Qualifications Framework (British Council, 2001).

Employability and entrepreneurship are the two major components emphasized in Thai Secondary Education Curricula. Though there is a direct reference to these in Vocational Education Act, 2008, however, the basic education curriculum, 2008 also points to their significance in secondary education development plans in terms of basic knowledge, skills and attributes required for work and life. The major flaw in Thai secondary education system is the gap between the policy and its proper implementation. Hence, the education reform of 1999 and 2009 in Thailand was a step towards linking the process and outcomes of learning. Consequently, competency-based curriculum is strived for by involving all the stakeholders in developing the qualification frameworks aiming at linking education and work.

5.5 National Qualifications Framework of Thailand

As a result of the impact of globalization resulting in the changing world of work, Thailand, national strategies in human resource development in the Second Round Educational Reform Plan (2009-2018) has emphasized the need for establishment of NQF as a mechanism for strengthening knowledge, skills, and competency of workforce required by the labor market.

This has shown the way to the development of outcome based assessment system at each level of educational qualification. However, during the past decade, concepts and practices of NQF have been developed and recognized internationally as an important instrument for improvement of quality and effectiveness of qualifications system and recognitions of learning outcomes. Hopefully, a well-designed NQF would help to facilitate not only national education quality and standards but also international standards. The structures of drafted NQF of Thailand included four parts -*Levels*which were comprised of 7 levels of the NQF of which level 1 and Level II relates to lower secondary + vocational training and upper secondary + vocational training respectively and third level to vocational certificate; *Details of component* of each level which comprised of knowledge,skills, and application of skills & knowledge and required attributes;*Linkages*between levels of competency and educational qualifications which required mechanism for assessment, validation, testing, comparison and fulfillment by additional training, education or workplace learning; *Learning outcomes* of each level of educational qualification, secondary, vocational, and higher education. Moreover, Thailand Vocational Qualifications (TVQ) is created by the Office of Vocational Education Commission (VEC), Ministry of Education, based upon industrial practices and needs. It was announced last year together with the Royal Decree on Establishment of Thailand Vocational Qualifications Institute (Public Organization) 2011. Thailand Vocational Qualifications (TVQ) covers desirable characteristicsincluding integrity, professional ethics, personalities and cognitive skill; Core/general competenciesincluding communication, ICT literacy, teamwork skill, learning skill and practical skill; and professional competencies entail ability to perform specific functions and tasks in the workplace. In general, as per the TVQ, those who achieve level 2-3 of the TVQ (equivalent to upper-secondary education and certificate of technical/vocational education) must be able to demonstrate their knowledge in theoretical concepts related to work, English skill, fundamental ICT literacy, ability to work independently and problem solving skills.

5.6 Perceptions of School Administrators and Educators of Thailand

Box 2: Excerpts from the responses of School Administrators and Educators in Thailand

- In general, curriculum emphasizes on general skills more than vocational skills, but vocational skills is a part of the school subject-"Vocational & ICT". However foreign language skills such as English, Chinese and Computer Skills are emphasized for all students. Work orientation and vocational training are compulsory part of curriculum.
- Workplace skills which include teamwork, adaptability, thinking, problem solving, willing to learn, integrity, communication, critical thinking, life skills and ICT are identified in the curriculum.
- Critical thinking skills; democracy and leadership skills are given more importance in the school in curriculum.
- Work based learning or learning by doing or project-based learning is the most important part of skill development and schools adopt this method to impart skills to the secondary students.
- Most schools are imparting skills by using local resources, experts, and work cooperatively with other institutions, industries, and service enterprises.
- In evaluating skill learning, school teachers assess students by observation, portfolio and products evaluation, sometimes, also work with local experts.
- The common skills lacking in the secondary & senior secondary school students are practical or functional skills in each area.
- Lack of qualified teachers, equipment and practical training in the workplace.
- The balance of cognitive and technical skills need to be carefully identified.

- Critical thinking skills, self-development skills, planning and problem solving are most important skills which need to be developed for future career.
- In-service teacher training program every year covering subject areas, professional skills, teaching methodologies, educational evaluation and assessment and classroom research.
- Teachers training programs are comprised of work place training 1-4 weeks
- Study visit programs, workshops, seminars with related organization which may be 3 days or more.
- Work-based learning encourages the future career prospects for school students, because employers are fully supporting work-based learning and job opportunities.
- To prepare students for transition to work, schools need to provide sufficient information for learning pathway, career development and employment opportunity besides work based learning experiences.
- Curriculum should be competency-based.
- Involvement of enterprises in providing work-based learning is important for employment opportunities.
- Teacher training in the workplace should be encouraged as well.

The perceptions of the secondary school administrators and educators towards the curricula and skills in the secondary and senior secondary schools bring to light that general, curriculum put emphasis on generic skills more than specific professional skills, but the specific professional/vocational skills are considered as part of the school subject called "Vocational and ICT". However, foreign language skills such as English, Chinese and Computer Skills are emphasized for all students.Moreover, work orientation and vocational training are compulsory part of the curriculum which provides for at least six credit hours per semester for each student. Amongst the skills identified in the school curriculum are basic skills which do not require complicated operation and equipment and workplace skills like adaptability, teamwork, integrity, willingness to learn, communication skills, critical thinking, problem solving, life skills and ICT skills. Nevertheless, critical thinking, democracy and leadership skills are considered to be the most important for the secondary school students. With regards to the methods for imparting skills, the project-based learning or learning by doing is considered to be the most significant method for imparting skills to the secondary school students. Moreover, skill learning is evaluated by observation, portfolio and products evaluation, sometimes local experts are also involved in cases where students desire to work. However, a common consensus was observed on the skills lacking in the secondary school students which were the practical or functional skills in each area and it was felt that this was due to the lack of qualified teachers, equipment and practical training in the workplace. With respect to the professional development of the teachers, it is indicated that in-service training programmes are conducted annually on a regular basis covering the subject areas, professional skills, teaching methodologies, educational evaluation and assessment, classroom research and workplace training of about one to four weeks. In addition to this, some short-term programmes for about three days in the form of seminars, workshops and study visits are also organized for the professional development of the teachers. They also expressed that work-based learning encourage the future prospects for school students and school is a preparatory stage for transition to work as at this stage students select their study track that can help them pursue the desired course of study as per their vocational choice. In order to prepare students for transition to work, the respondents felt that the schools should focus on developing important skills like critical thinking, self-development, planning and problem solving skills and provide adequate information for learning pathway, career development and employment opportunities. Moreover, the school administrators and educators emphasize that the secondary school curriculum should be competency based and industry should be involved in providing work-based learning experiences.

5.7 Summing Up

The perusal of the literature and the relevant documents manifest thatthe curriculum and teaching–learning process in Thailand have not yet reached the goals or objectives of the national curriculum framework with respect to general as well as vocational education. Conventional methods of teaching and learning continue to be major issues in Thai education. Consequently, the process of transacting the curricula and outcomes in terms of learning by the students become frail particularly in the critical areas of learning - science, mathematics and foreign languages., which is further confirmed by the international comparisons and other evaluations like Office of the Education Council (OEC, 2004), Trends in International Mathematics and Science Study (TIMSS,1999) which was attributed to the poor quality of teachers in these subjects (UNESCO Bangkok, 2011). Moreover, systematic reflection by integrating learning in and out of school and also relating workplace learning to school curriculum is difficult to arrange (MOE, 2001).

Moreover, a sharp decline in skills proficiency has been observed in recent years, especially in science and technology. There is no interface of school and workplace, hence, the school curriculum is incompatible with the demands of the workplace resulting a mismatch in supply and demand of the labour force. This fact is echoed by a World Bank study (2000), which found that 75% of the surveyed Thai companies had difficulties finding recruits with the necessary qualifications and skills. Though, the vocational system in Thailand has been able to produce middle level manpower to fulfill the actual need of the labour market. However, it has been disapproved for not equipping students to apply their abstract knowledge or to learn in the context of practical problem-solvingand notproviding a sufficient theoretical foundation for graduates lifelong learning. In order to address these issues, many vocational programmes have evolved with a blend of strong academic knowledge with cutting-edge technical and career skills and provide an insight into how their schooling relates to a desired career.

SECTION VI: CONCLUSION

This study compared education structures of seven countries in South-East Asia and four in South Asia. The focus was on curriculum and structure of secondary schools in the sample countries. The overarching framework of this study was to identify elements of structure, curricula and policy that fit in with the World Bank-OECD frameworks of skills development and quality education. Accordingly the following themes have been identified and discussed for all countries under study.

Theme 1: Structure of Education

In all the countries sampled in South East Asia and South Asia primary education is compulsory. Countries in the region are trying to extend the compulsory level of education up to the junior secondary phase.

In India and Sri Lanka, students have to by law, compulsorily be in school till the age of fourteen.

Theme 2: Tracking and differentiation

In the sampled countries in South East Asia and South Asia, most countries do not differentiate or track students for the first nine years of education. These are – India, Bangladesh, Indonesia, Malaysia, Thailand, PDR Laos, and Cambodia. In all these countries, the main differentiation occurs after the completion of lower secondary education or Grade 10.

In Pakistan, Vietnam and Philippines tracking and curriculum differentiation is varied. In Pakistan it is possible for a student to enter vocational education after grade 8. However this has resulted in Pakistan being caught in a low skills trap. Vietnam offers tracking at three levels- primary, basic secondary and senior secondary. Philippines offer vocational courses with general education, offering technical and vocational education as a separate track in post-secondary education. This is somewhat similar to the Sri-Lankan system where vocational education is a separate track at post-secondary level.

Theme 3: Vocational secondary education

Vocational education at secondary level forms an important part of educational systems in all the countries under study. In South-East Asia, vocational secondary education is given considerable importance. In Thailand with reference to the TVE at the secondary level, the Ministry of Education Strategic Action Plan 2005-2008 had set an enrolment target of 50-50% between general and vocational streams by 2008. India; despite a poor enrolment at vocational secondary levels has a clear policy agenda to improve outcomes.

In terms of programmes, there is a huge variety offered in South East Asia. In Thailand there are two types of TVE offered at upper secondary level: special vocational education and technical and vocational education and training (TVET).

All the countries under study are planning a move towards lifelong learning and the creation of a learning society, the system of credit transfer and recognition between different types of educational qualifications and institutions. In Thailand, there is focus on credit transfer between fields, subjects and learning units. Under this system, learners can transfer their

learning outcomes, skills and experience that have been gained from formal, non-formal and informal education (including apprenticeship and on-the-job training) into a part of a particular curriculum at the level of basic education as well as in higher education at the associate degree level. The system also allows students to shift programmes between general and TVE streams of education.

Such flexibility is also under consideration in India where credit transfer is being envisaged through a National Vocational Education Qualifications Framework. These developments clearly converge with OECD framework.

Theme 4: Policy on Skills Development

All countries studied recognize that secondary level of education in their countries is riddled with inadequacies. It is realized that secondary education has to be more effective in helping young people to better realize their potential at work and to take their place in society as productive, responsible and democratic citizens. In other words secondary level education should provide effective preparation for those proceeding to academic or professional tertiary education as well as for those entering the world of work either as trainees, wage employees or as self-employed entrepreneurs. This can only be done through a multi-pronged approach to achieve a harmony among academic disciplines, generic practical and social skills and civic responsibility.

The Lao People's Democratic Republic and Nepal collaborated with UNESCO and International Institute for Educational Planning (IIEP), reviewed their "skills development" policies and concluded that existing secondary-level and non-formal vocational education programmes do not meet individual and societal economic needs. These countries are now moving actively towards policies that integrate "skills development" in basic education programmes. Similarly all the countries under study display acceptance of the skills development paradigm.

Afghanistan (2007), Bangladesh (2011), Nepal (2007), Pakistan (2009-13), Sri-Lanka (2009) have moved towards a skills development policy framework. In August 2007 Pakistan launched Vision 2030, a development plan replacing previous Five Year Economic Plans that tackled economic development. As part of this the National Vocational and Technical Education Commission (NAVTEC) was set up in 2006 with the aim of revamping the vocational education and training system in Pakistan. After extensive consultation with industry and stakeholders, NAVTEC has now developed a national skills strategy for Pakistan.

In India, the National policy on Education, 1986, positioned skill development as a priority area for education. It envisioned a healthy attitude towards work and life and focused on enhancing individual employability. It focused on reducing mismatch between demand and supply and positioned vocational education as a distinct stream. The policy focused on skill for entrepreneurship and self employment. It had a special focus on women, rural, tribal, disabled and deprived sections of society. It aimed at enrolment of 10% of higher secondary students in the vocational stream by 1995 and 25% by 2000. Introduced in 1988, the Central Scheme for vocationalisation of secondary education underwent many revisions. The revamped scheme for vocationalisation of secondary education focused on strengthening of existing Vocational Schools and establishing new vocational schools, expansion of intake capacity during 11thPlan, development of competency based modular Vocational courses of varying duration, revision of the existing system from supply based to demand based.

It advocated setting up of Central Board and State Boards of Vocational Education (CBVE) and (SBVE) for accreditation/affiliation, examination certification and equivalence, Provision for vertical and horizontal mobility, Provision of multiple-entry, multiple exit and flexibility in delivery, provision of joint-responsibility of academic Institute and Industry/Employer for making a person employable. The National Policy on Skill Development 2009, took forward all these themes .This clearly indicates that skill development is a priority for the government. In accordance with this policy the government is experimenting with lowering tracking to junior secondary level in India.

Thailand's policy on skills development is articulated in the policies of the 10th National Economic and Social Development Plan (2007–2011) which intends to develop the potential, competency and skills of people to cope with competitiveness by increasing knowledge and life-skills such as analytical, innovation, problem-solving, decision-making and team-working skills. The Plan intends to set up a training system that applies new technology and promote linkages among government, the private sector, and the community. It promotes short training courses, in-plant training and workplace learning and intends to set up a system that matches skills and competencies with the wage structure. The Plan also aims to extend skills training to vulnerable people.

The Skill Development Policy in Bangladesh recognizes that skills development depends on many different actors, including the private sector, non-for-profit actors, NGOs and civil society; as well as the large number of government ministries delivering skills based education and training. Consequently, the National Skills Development policy for Bangladesh tries to improve coordination and delivery of skills in Bangladesh for the betterment of the nation as a whole. This policy also extends and builds on other major government policies such as the Education Policy of 2009, the Non-Formal Education Policy of 2006 and the Youth Policy of 2003.

Theme 5: Curriculum

Analysis of the curriculum in the sample countries shows that all countries have at least some national requirements for secondary schools for academic and vocational programs. All countries offer minimum requirement of basic subjects, including mother language, foreign languages, mathematics, science, social science.

In all the countries sampled, the junior secondary level, up to grade 10, is seen as a stage for building a responsive and responsible national citizen. The "core" or basic subjects described above are important for students' transition to post-secondary education, especially in the four Asian countries, because the national university entrance examinations are based on those subjects. It can be concluded that upper secondary curricula have a significant impact on university admissions processes, especially in the countries where university admission is highly competitive. In all the Asian countries, post-secondary institutions considerably influence upper secondary curricula.

Vocational secondary schools also tend to have nationally applicable requirements with respect to basic subjects and graduation requirements, as seen in Thailand. In all nations included in this study, there is some district-level influence over the curriculum. In addition, vocational school curricula in all focal countries tend to include more technical and practicum learning, whereas general education curricula include more specialized and advanced academic courses.

In all the countries under study there is an attempt to articulate skills in both academic and vocational streams. In countries like Thailand, Malaysia, Indonesia and Bangladesh, this articulation is clear and well maintained. In India there is a resistance to mentioning competencies in a clear and well articulated manner especially in academic curricula. Vocational educational curricula are still moving fast towards a competency based modular structure with a clear articulation of skills and competencies. This could be because theoretically, curriculum development is not seen as product oriented.

English language is seen extremely important in the curricula of all Asian countries. For instance the language curriculum for Bangladesh clearly focuses on developing communication skills for a global knowledge economy. There is a focus on life skills education and ICT in all Asian countries at secondary level.

Curriculum reform is a priority in all the sampled countries. It is regarded as an aspect of quality of secondary education.

"A principal motivating factor for curriculum reform is the desire to design educational programs that will more adequately prepare young people for the job market within the existing economic climate, while providing the human resources necessary to ensure sustainable national development" (Byron, 1999, p. 58).

Thus sampled Asian countries have developed focused plans for reforming curriculum of secondary education: "improving the quality and scope of vocational education (Indonesia and the Philippines); strengthening science and technology education; developing competence in information technology (IT) skills by introducing or expanding the use of IT in the classroom (all nations in Asia); focusing on the teaching of a wide range of cognitive, social and personality skills so as to develop the capacity for flexibility, problem-solving, creativity, initiative and lifelong learning" (Byron, 1999, p. 58).

The reform and renewal of secondary school curricula is clearly a priority for all the countries. They recognize this process as integrated with the improvement of education. Many are presently implementing curricular reforms (Bangladesh, Indonesia, Sri Lanka, and Vietnam) or are preparing for major curricular changes (Thailand and Maldives); others are monitoring or evaluating the impact of recent reforms (Bhutan, Nepal, India, and the Philippines).

Malaysia states that it is involved in an ongoing process of curriculum reform and Pakistan is engaged in four-year curriculum reform cycles. The focus of reform in a number of countries has been on primary education (Bangladesh, Indonesia, India, Maldives, and Thailand), although most countries are also attempting to improve the quality of secondary education, making it more relevant to the future needs of pupils and reducing an overly academic orientation (Byron, 1999, p. 58; IBE, 1999, p. 2).

Theme 6: Teacher Effectiveness

As the above survey shows, one of the major features in all sampled countries is that the curricula are either well articulated in the skill development paradigm or are in the process of being reformed. Yet it is seen that secondary school graduates do not seem to have the skills required for employability. The major gap area that emerges is lack of teacher effectiveness in transacting curricula. This is commonly observed in all countries in South-Asia as well as South -East Asia.

Research evidence cited in this study clearly indicates that Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes and outcomes. Most curricula changes in Asia focus on a constructivist view of education. For instance the Indian National Curriculum Framework, 2005 is clearly rooted in Vygovtsksian social constructivism. The social-constructivist paradigm focuses on students not as passive recipients but as active participants in the process of acquiring knowledge. Teachers holding this view emphasize facilitating student inquiry, prefer to give students the chance to develop solutions to problems on their own, and allow students to play active role in instructional activities. Here, the development of thinking and reasoning processes is stressed more than the acquisition of specific knowledge (Staub and Stern, 2002). If skills are adequately implemented through the curriculum, by teachers who hold these beliefs, students may be able to benefit from a quality education.

The direct transmission viewof student learning implies that a teachers' role is to communicate knowledge in a clear and structured way, to explain correct solutions, to give students clear and resolvable problems, and to ensure calm and concentration in the classroom. Despite long duration of curricular reforms like in Indonesia and Malaysia, teachers still prefer structured classrooms as against constructivist and interactive classrooms and in mathematics and science lessons more "traditional" activities dominate in almost all countries. Teachers follow structuring practices, such as stating learning goals, summarizing former lessons, homework review, checking the exercise book, and checking student understanding across all sampled countries.

In countries like India which have undertaken serious restructuring of assessment and examinations on the basis of the new curricular frameworks, it is easy to understand the importance of teacher effectiveness in bringing home curricular reforms and underscoring the skills development outlook.

In the OECD countries there are frameworks like TALIS that regularly assess and research teacher effectiveness on a number of parameters. In countries of Asia, such frameworks simply do not exist. In India there have been attempts to re-organize teacher education curriculum, to ensure that teachers are able to meet the demands of the changed school education paradigm. The National Curriculum Framework for Teacher Education (2009) recognizes that the epistemology of learning has undergone a major change; i.e. learning does not involve discovering the reality, but constructing the reality. The NCF 2005 expects a teacher to be the facilitator of students' learning in a manner that helps them to construct knowledge and meaning utilizing their individual experiences. The whole pedagogical approach of teacher education programme, therefore, needs to be reoriented from traditional behaviourist to constructivist discourses.

Therefore, the traditional approach to teacher preparation based on philosophical, sociological and psychological orientation of courses has given way to 'carefully crafted curriculum design that draws upon theoretical and empirical knowledge as well as student teachers' 'experiential knowledge' (NCFTE 2009).

The following conclusions derive from the summary given above:

- All countries in Asia are currently engaged with articulating a skill development policy. There is a widespread acceptance of skills development paradigm of the World Bank - OECD.
- In South Asian countries the importance of secondary education as an important stage in skills development is now recognized.

- Within secondary education, the importance of vocational education is appreciated.
- South Asian countries are looking at ways to move away from public provision of secondary education and especially in the vocational stream are looking at widespread cooperation with the private sector.
- Sampled countries recognize the importance of curricular change in meeting the requirements of the skills development paradigm.
- Countries in South East Asia have reasonably well articulated skills and competencies in their curricula.
- Some countries in South Asia, like Bangladesh has well articulated curricula. India and Pakistan do not have such well articulated curricula documents.
- All sampled countries are poised for making changes in vocational secondary education.
- Teacher effectiveness in transacting the curricula is the gap area in both the segments of Asia that have been studied.

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Appendices

APPENDIX I

List of persons contacted for information and interview:

THAILAND

1. Ms.WanwisaSuebnusorn, Researcher, Thailand Development Research Institute (TDRI) Thailand

2. Dr.SiripanChoomnoom, Senior advisor ,The Office of Education Council, Ministry of Education,Thailand

3. Dr. YongyuthChalamwong, Research Director, Thailand Development Research Institute (TDRI), Thailand

4. Dr. DuangkamolSinpeng, Associate Professor, Teacher and Curriculum Developer, SatitPattana School, 380 Panya Road, , Bangkok Thailand

5. Ms. ThanutthaWudhiwanich, Deputy Director, Chiang Mai, Thailand

6. Dr. JariyaSuthidej, Director, Vocational Education Standard Bureau, Office of Vocational Education Commission, Ministry of Education, Thailand

7. Dr. ChompunuchBuabangsorn, Director, Chetupon Commercial College, Bangkok, Thailand

8. Mrs. KanyaneeWongsatian, Teacher, Panthong Secondary School, Chonburi Province, Thailand

INDIA

Delhi

9. Dr. K.P. Wasnik, Director, Vocational Education, (NIOS), A-24-25, Institutional Area, NH-21, Sector-62, NOIDA, Distt. – Gautam Buddha Nagar, (U.P.)

10. Dr. Veera Gupta, Secretary, CBSE, Delhi.

11. Dr. VishawajeetSaha, Programme Officer (Vocational),CBSE, Delhi

12. Dr. VivekNagpal, Consultant(Vocational), CBSE, Shiksha Kendra, Delhi

13. Dr. Sneha Singh, Consultant, Central Board of Secondary Education, Delhi

14. Ms. Renu Jain, Principal of K.R. Mangalam World School, S Block, Greater Kailash - II, Delhi

15. Ms. SangamitraGhosh, The Mother's International School, Sri AurobindoMarg, Delhi

16. Mr. M.M. Sharma, Retd. Assistant Director of Education,163 Munirka Enclave, Delhi
17. Ms. SumanMathur,Vice-Principal, KendriyaVidyalaya, INA Colony, Delhi
18. Ms. Rita Talwar, Academic Advisor, Mother Teresa Public School, PreetVihar, Delhi
19. Ms. MeenaKaul, Principal, Govt. co. edu S Vidyalaya, RkPuram, Delhi
20. Dr. Ramesh Chard, Principal, Mori Gate, Delhi
21. Mr. Ram Singh, Principal, G SBV Rouse Avenue, DeenDayalUpadhayaMarg, Delhi.

Bhopal

22. Prof. Shivagunde, Joint Director, PSS Central Institute of Vocational Education (PSSCIVE), Bhopal.
23. Dr. A. K. Sharma, Regional Director, NIOS Bhopal.
24. Director, SCERT, Rajiv Gandhi Shiksha Mission, Bhopal.
25. Additional Project Director, Rajiv Gandhi Shiksha Mission, Bhopal.
26. Secretary, Madhya Pradesh MadhyamikShikshaMandal (Secondary Education Board), Bhopal.
27. Ms. KamnaAcharya, Deputy Director, RMSA, Bhopal
28. Mr. P.R. Tiwari, Assistant Director, RMSA, Bhopal.
29. Director, State Open School Board, Bhopal.
30. Prof. MridulaSaxena, PSSCIVE, Bhopal.
31. Prof. P.V. PrakasaRao, PSSCIVE, Bhopal.
32. Prof. Sharad Kumar, PSSCIVE, Bhopal.
33. Dr. Asha M. Tasin, PSSCIVE, Bhopal.
34. Dr. A.K. Mishra, PSSCIVE, Bhopal.
35. Dr. V.K. Jain, PSSCIVE, Bhopal.
36. Dr. O.P.Sharma, Additional Director, SCERT, RajyaShiksha Kendra (RSK), Bhopal.
37. Mr. Sanjay Patwa, Deputy Director, RSK, Bhopal.
38. Mr. S. Diwakar, Lecturer, RSK, Bhopal.

39. Dr. A.K. Pareek , Coordination, Curriculum Text Book.

40. Dr. Sadhna Singh, RajyaShiksha Kendra, Bhopal

41. Dr. Lokesh Khare, RajyaShiksha Kendra, Bhopal

42. Dr. Ashok Vyas, RajyaShiksha Kendra, Bhopal

43. Mr. R.P. Tripathi, Consultant, RajyaShiksha Kendra, Bhopal

44. Mr. BrijeshSaxena, Consultant, RajyaShiksha Kendra, Bhopal

45. Mrs. Purnima Joshi, Consultant, RajyaShiksha Kendra, Bhopal

46. Mrs. Meeta Gupta, Consultant, RajyaShiksha Kendra, Bhopal

47. Mrs. R. Uplopwar, Consultant, RajyaShiksha Kendra, Bhopal

Jharkhand

48. Section Officer, District Education Officer(DEO), Ranchi

49. State Project Director, Jharkhand Education Project Council, Ranchi

50. Dr. Pramod K. Sinha, Head, Planning and Monitoring Unit, Jharkhand Education Project Council.

51. Mr. Maheep Singh, District Education Officer (Secondary), Ranchi.

52. Secretary, Jharkhand Academic Council, Ranchi, Jharkhand.

53. Principal, Teacher Training College, Jamshedpur, Jharkhand.

54. Mr. Chandra Prakash Narayan Yadav, Instructor (Radio & T.V. Technician), S.N. Marwari +2 Secondary School, Ranchi.

55. Mr. Apurbhan Kumar, Lab. Assistant (Radio & T.V. Technician), S.N. Marwari +2 Secondary School, Ranchi.

56. Mr. Arunibhushan Prasad, Instructor (Mining & Geology), S.N. Marwari +2 Secondary School, Ranchi.

57. Mr. Kumar SatyaPrakash, Lab. Assistant (Mining & Geology), S.N. Marwari +2 Secondary School, Ranchi.

58. Mr. BishwanathPradhan, Instructor (Stenography), S.N. Marwari +2 Secondary School, Ranchi.

59. Mr. PramdaLall, Lab. Assistant (Stenography), S.N. Marwari +2 Secondary School, Ranchi.

60. Mr. D.D. Mehto, Assistant Teacher (HM Incharge, Matriculation School, Ranchi.

61. Mr. A.N. Mishra, Lab. Assistant, (Mining & Geology)-Matriculation School, Ranchi.

62. Mr. A.K. Sharma, Assistant Teacher (Automobile Engineering).

63. Mr. AwaniBhusan Prasad, Assistant Teacher (Mining & Geology).

64. Dr. BaikunthPandey, JEP, Pedagogy Cell, Ranchi.

65. Mr. Jeetendra Kumar, DEO, Ranchi.

66. Mr. PradeepPradhan, Principal Secondary School, Ranchi.

67. Principal ,Teachers and Lab. Assistants of :-
    a) Bal Krishna +2 Secondary School, Ranchi
    b) S.N. Marwari +2 Secondary School, Ranchi
    c) S.N. Marwari +2 (Girls) High School, Ranchi
    d) SarvodayaRajkiya +2 High School, Kanke, Ranchi.

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APPENDIX II

Interview Schedule for School Administrators and Educators

Introduction:
The National University of Educational Planning and Administration (NUEPA), New Delhi is conducting a research study on Skills defined by Curricula. The research will focus on a catalogue of skills as defined by curricula, including both academic and vocational curricula; specific skills highlighted in the curricula that may be helpful in employment; skills that secondary school educators think are necessary to teach; and skills that secondary school students currently have. The study would cover both South and South-east Asia sub-regions, with a deep dive study focused on India and Thailand.

We would be grateful to you for extending your fullest cooperation and giving your valuable time for reflection on the questions and responding with brevity, precision and comprehensiveness.

1. Has the secondary & senior secondary school curriculum provided any guidelines for imparting skills in the school setting?

2. What types of skills are identified in the secondary & senior secondary school curriculum?

3. Which skills are given more importance in the school curriculum?

4. Can you please throw some light on your school's approach to impart skills (including the instructional time allocated to different subjects, skills and activities)

5. What are the methods used to impart skills in the school settings?

6. How do you evaluate skill learning in school?

7. What are the common skills lacking in the secondary & senior secondary school students?

8. What are the most important skills (cognitive, non-cognitive and technical) that secondary students need to develop for their future career ?

9. What are the provisions for training of teachers of secondary & senior secondary schools?

10. Can you please reflect on the kind of content, duration and methodology of teacher training programmes?

11. Are there any training modules for imparting specific skills to the school students?

12. Does work-based learning encourage the future career prospects for school students? If yes, how?

13. Do you think that the school is the preparatory stage for transition to work? If yes how?

14. How can the secondary school curriculum be improved to prepare students for the world of work?