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Innovative Models for Skills Enhancement: South Asia

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Internationally, secondary education has become important in the context of changing global labor markets and changes in the requirements of and emphasis on higher education. A workforce with an appropriately designed secondary education is also increasingly being considered as integral to the economic development of a country. The forces that have highlighted secondary education internationally are becoming more and more pronounced in South Asia with the globalization of the economy and the advent of the age of information technology (IT). Innovations and technological changes require that the labour force be equipped with advanced skills. Independent of the requirements of the labour market, a good secondary education provides future adults with the skills to live and adapt in a rapidly changing society. In particular, it empowers individuals to be fully active citizens in a world where climate change, environment depredation, health hazards and technological innovation are transforming quickly everyday life. Last, but not least, secondary education prepares and selects the adolescents who are going to enter higher education and become our future leaders, managers and professionals.

The paper on 'Innovative Models for Secondary Education' is divided into three sections. **Section 1** provides an overview of the status of secondary education in South Asia particularly in India, Pakistan and Bangladesh with regard to access, equity, quality and financing. While discussing the progress made in enhancing secondary schooling opportunities including participation and outcomes in South Asia during the past two decades, this section highlights the   regional, gender and social disparities in secondary education.

Section 2 provides a critical review of different innovative models on secondary education presently operative in the South Asian countries with a thorough investigation of innovative models implemented in formal and nonformal secondary educational institutions in India. This section also presents an in-depth analysis of the innovative models in secondary education focusing on the delivery or effectiveness of the models in terms of skill generation in the secondary graduates vis-a-vis the cost of implementing such models.

Section 1: Status of Secondary Education (India, Pakistan, and Bangladesh)

Some of the important findings of Section 1 are:

1.   All the three case study countries (India, Pakistan and Bangladesh) have four stages of school education, namely primary (Grades I-V), upper primary/middle (Grades VI-VIII), secondary (Grades IX-X) and higher secondary (Grades XI-XII). Besides, in these countries, students can enrol for general education streams (Science, Humanities, and Commerce) which lead to a Higher Secondary Certificate (HSC), or enrol in vocational programs leading to a Higher Secondary Certificate-vocational (HSC vocational). The Technical and Vocational Education System provides courses related to various applied and practical areas of science, technology and engineering, or focuses on a specific specialized area. All the countries of South Asia have now shifted their developmental efforts towards secondary education. Science and technology has also recently found wide acceptance as a component of the school curriculum, in all the countries of South Asia due to their policy reforms.

2.   South Asia, with a population of 1.15 billion, contains 22 per cent of humanity, has 6 per cent of global real income and accommodates 46 per cent of the world's illiterate population. Fifty per cent of all malnourished children live in this region. The populations of the individual countries range from the Maldives with 0.3 million people to India with 1 billion. These are largely rural populations: about 90 per cent of the people in Nepal and Bhutan and 75 per cent of those in India live in rural areas with agriculture as their main source of livelihood. The rate of economic growth in South Asia is less than 2.5 per cent. There is a clear urban-rural divide in terms of economic and educational opportunities.

3.   **India's** literacy rate has recorded a 9.2% rise between 2001 and 2011 to reach 74.04%, according to provisional data of the 2011 census. In **Pakistan**, the literacy rate has increased from

16.4% (Male 19.2% and Female 12.2%) in 1951 to 26.2% (Male 35.1% and Female 16.0%) in 1981 and further to 57.0% (Male 69.0% and Female 45.0%) in 2009. The urban literacy rate increased from 47% in 1981 to 74% in 2009 and the rural literacy rate increased from 17.3% in 1981 to 48% in 2009. In **Bangladesh**, in 2005, the national literacy rate was 51.9% (Male 55.8% and Female 48.1%) with literacy rates in rural areas 46.7% (male 50.4% and female 42.9%) and in urban areas 67.9% (male 67.6% and female 63.2%).

4.   The demand for secondary education continues to grow significantly since 1990 in all countries of South Asia. In South Asia, total enrolment at the secondary level increased from 26 million in 1970 to 136 million in 2009. The enrolment at secondary level was grown at a rate of 9.2% and 6.2% respectively in Maldives and Nepal between 1999 and 2009. Bangladesh (0.13%) recorded the lowest growth rate in secondary enrolment followed by Pakistan (3.86%) and India (4.26%) between 1999 and 2009m. Except in Maldives, where the share of girls enrolment to total enrolment remains same, i.e., 50%, in all the remaining countries in South Asia the share of girls enrolment to total enrolment at secondary level has increased between 1999 and 2009 implying the improvement in the participation of girls at secondary level.

5.   Participation in secondary education also shows encouraging trends in **India**, at least in absolute terms. From 1.5 million in 1950/51, the total enrolment in secondary and higher secondary stage has gone up almost 26 times to 38.8 million in 2009/10. In **Bangladesh**, the total enrolment in secondary and higher secondary stage increased at an annual average growth rate of 4.1% between 1970 to 1990, but it increased at a higher growth rate of 4.6% between 1990 and 2010. It is interesting to note that the share of girls enrolment to total enrolment at secondary level not only shows an increasing trend but also the share of girls to total enrolment (53.3%) is more than that of boys (46.7%) in 2010. In **Pakistan**, there were total 23,964 high schools, of which 9,911 (41%) are in public sector, whereas 14,053 (59%) are in private sector in 2007-08. The total enrolment at high stage is 2.426 million, of which 1.723 million (71%) is in public sector, whereas, 0.702 million (29%) is in private sector. The total boys enrolment at high school stage is 1.428 million (59%), whereas, the girls enrolment is 0.997 million (41%). The total teachers at high school level are 374,252, out of which 175,159 (47%) is in public and 199,093 (53%) are in private sector. There are 167,252 (45%) male teacher and 207,000 (55%) are female teachers.

6.   Though technology education is an innovation in South Asia region, a related subject, namely Technical and Vocational Education (TVE) has long been a mainstay of the educational policy of all the countries of South Asia. The most positive experience is perhaps that of **Bangladesh** where agriculture is a compulsory subject for grades VI-VIII, after which it is optional. Separate streams for technical and vocational education exist at various levels in all the South Asian countries. Given the major shortages of skilled labour in these countries, one would expect a high demand for such education but the reality is quite different. South Asian countries are characterised by low levels of enrolment in technical and vocational education programmes: 1.5 per cent of the total enrolment at the secondary level compared with 10.5 per cent in East Asia. The situation is worsened by the high dropout rate from technical and vocational education, around 50 per cent in India, Pakistan and Bangladesh.

7.   The expansion of secondary education opportunities has reduced disparities and a number of countries have reached gender parity. In South Asia, five out of seven countries have achieved gender parity. The situation is particularly serious in Pakistan. India is doing well on this indicator, and is expected to achieve gender parity by 2015. A noticeable exception is Bangladesh which has reached gender parity in both lower and secondary education.

8.   The biggest increases in total numbers of primary and secondary school teachers from 1990 to 2009 were observed in South Asia (49%), from 20.3 million to 30.4 million between 1990 and 2009. In South Asia (in particular in India and Pakistan), growth has been especially rapid since 2000 with the passage of international agreements set out in the EFA Dakar Framework for Action. In absolute terms, the increase was maximum in India followed by Bangaldesh, Nepal and Bhutan.During this period, 1999 to 2009 PTRs in secondary schools remained stable for all countries except Nepal, where the ratio increased significantly. With a current ratio of 31:1, in South

Asia Nepal has the highest PTR in the region (40:1). In Sri Lanka, however, there are only 20 pupils per teacher, which is the lowest PTR at secondary level in South Asia.

9.   Education in South Asia is largely State-funded (95 per cent in Sri Lanka and 85 per cent in India). Even so, public expenditure on education remains low. Over the past decade, South and West Asia as a whole registered a slight decrease in the commitment to education, with the share of national income invested in education declining from 3.7% in 1999 to 3.5% in 2008. This is far below the world average of 5%. The percentage of GNP allocated to education is less than 3 per cent in Pakistan and Bangladesh, just over 3 per cent in India. Nepal increased its education financing effort over the period from 2.9% in 1999 to 4.6% in 2009,i.e., by 1.7 percentage point. The Maldives is an exception, with 10.3 per cent of its GNP spent on education in 2009. By contrast, India had reduced education spending as a share of GNP from 4.5% in 1999 to 3.6% in 2009 and Bhutan has reduced the same from 7.25 in 2006 to 4.8% in 2009 in. Most of the education budget is spent on teachers' salaries, leaving little to improve the infrastructure or raise the standards of teaching and learning. Public Expenditure on Education as percentage to GDP is lowest in Pakistan as compared to other countries of the South Asian region. According to official data, Pakistan allocated 2.5% of GDP during 2006-07, 2.47% in 2007-08, 2.1% in 2008-09 and 2.0 % in 2009-10 which shows persistent declining trend.

10.   With regard to the quality of secondary education, South Asian countries have focused on curriculum reform: "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).

Based on the objectives and the consequent outcomes, the innovative models/ practices of secondary education have been broadly classified into two categories: Category I:Models addressing the issues relating to access, participation and equity in secondary education; and Category II: Models addressing the issues relating to quality and relevance in secondary education (ICT and other life-skill development programmes). Some of the important findings of Section 2 are:

Section 2: Innovative Models of Secondary Education in South Asia

   2.1   Bangladesh

Bangladesh, in its policy planning, seems to have given more emphasis on public-private partnership and the role of non-state providers in improving access, participation and excellence in secondary education. In fact, private providers mostly dominate in expanding access to school education in Bangladesh. In Bangladesh, there exist two kinds of private providers, one for-profit, and the other, with non-profit motto, along with public institutions, the later is actually lagging behind the former, in terms of enrolment and   recruitment of the required number of teachers. A review of some of the innovative models on secondary education in Bangladesh are as follows:

(1)   The largest private provider in the country, **BRAC (Bangladesh Rural Advancement Committee)** started its Non- Formal Primary Education Program in 1985 in 22 one-room schools, which grew to more than 32,000 primary schools by 2007 enrolling 11% of primary school children. BRAC also works with secondary schools to support government efforts in improving quality of secondary education by improving teaching quality and school management. In 2011, BRAC launched an education site, i.e. e-education.brac.net from which high school teachers, students and, in fact, anyone can view online or download interactive educational material, which are based on the national curriculum. It is an endeavor to make the textbook contents easier, interactive and stimulating. It also ensures conceptual clarity and better application of learning materials and aims to increase the teachers' understanding of the lessons. It is expected that e-education has its own attraction, which holds students in study, and consequently, leads to reduction in dropout rate, which is very high among high school students. Besides, it enhances teaching quality.

(2)   Under the **Female Secondary School Assistance Project (implemented by the Government with funding support from the Asia Development Bank and the World**

Bank), scholarships are given to girls if they satisfy a set of pre-requisites and the schools they attend are paid the entire tuition amount, in addition they also receive stipend for as much as 50% of the school fees. Specifically, the project aims to improve the quality of, and girls access to, secondary education in rural Bangladesh. Thus, the project focuses on curriculum reform, development of instructional materials, improvement of school infrastructure and institutional capacity building.

(3)   Another scholarship programme, *Medhabikash,* roughly translated means "Promoting Talent" which s*tarted in 2005,* is an innovative intervention of the BRAC Education Programme where talented but disadvantaged students receive financial support to pay their college/university tuition fees both home and abroad, as well as capacity-building assistance. These students are typically high-achievers, scoring at least 80% in the Secondary School Certificates (SSC)/ Higher Secondary School Certificates (HSC) examination. In other words, students scoring 5.0 GPA at SSC/HSC GPA having family income not exceeding 3,000/- per month and land not exceeding 50 decimals are eligible for the scholarship. Besides, this consists of specially designed training modules to develop students' confidence and skills in English and computer studies.

(4)   In another model of PPP in secondary education , the government subsidizes at least 9 teachers at 90% of government base teachers' salaries in community- managed, non-government schools. Subsidies increase with increases in enrolment by paying for additional teachers, provided that other conditions are met. Bangladesh, therefore, provides evidences of increasing possibility and scalability of various models of PPP in school education in general and secondary education in particular.

(5)   The **Female Secondary School Stipend Programme** which started in 1982 aims at addressing the existing social norms such as early marriage of girls, vulnerability of adolescent girls, etc. which had adverse impact on girls' participation in and completion of secondary education in the country. The specific objectives with respect to the provision of stipends to girls in secondary school, are (a) to increase girls' enrolment in secondary school and retain them in secondary education; (b) to assist them in passing the SSC examination to enhance their employment opportunities as primary school teachers, extension workers, health and family planning workers and NGO workers; and (c)   to delay girls' marriage. The long term stated aims are to enhance women's capabilities to participate in the socio-economic development of Bangladesh leading to poverty reduction, to improve women's status and reduce gender disparity and to reduce population growth by delayed marriage and higher contraceptive use by educated girls.

Evaluation of the programme shows the increase in the numbers of secondary school students nation-wide.

(6)   The model *Ganokendra* started in 1992 in Bangladesh, is primarily an approach to literacy based programme for combating poverty. The rationale behind this programme was to combat low literacy rate (65 per cent as government estimates) and high poverty head count as 45 per cent of the population lives below the poverty line of US$ 1 per day. The number of effective *Ganokendras* stands at 807 spread over 7 districts of the country with a membership of 80700. In fact, 80700 families with an average of 5 members per family (around 403,500 persons) are directly benefiting through their membership. Out of 807, 247 *Ganokendras* are implementing programmes on income generating activities; some of them are providing skill based training and supporting the locality by offering micro-credit for poverty alleviation. Some *Ganokendras* are working for improvement of the status of women. It was reported that this programme has been adopted by other organizations too.

Undoubtedly, this is one of the most diversified social development models practised in seven districts of Bangladesh. Although it focuses on literacy, continuing education, training and skill development, nonetheless, it does not focus on secondary education in any particular context. To some extent, it has overlooked the issue for formal education in the pursuit of combating poverty and economic self-reliance of its members and community.

Ushagram is a trust based multipurpose, multifaceted voluntary organization. This trust was founded in 1980 and working for the development of rural population in West Bengal, India. It has also extended its support to the disadvantaged students for preparation for secondary and higher secondary examinations. The trust initiated the operation of open schooling centres under affiliation from West Bengal State Council of Open schooling (Rabindra Mukta Vidyala) in the year 2002. The trust has been providing support to 630 secondary and 652 higher secondary school students through regular classroom coaching by 20 teachers. Hostel facility has also been arranged for girls coming from extremely poor families.

2.2. Pakistan

Some of the select innovative models in secondary education in Pakistan are;

(1) **Punjab Education Foundation: Foundation Assisted Schools**: The Punjab Education Foundation is an autonomous institution, funded by the Government of the Punjab province to promote high quality education for the poor through partnership with the private sector. The program aims at three components: vouchers, teacher training and monetary incentives to schools for improved academic performance. The foundation pays a subsidy to participating private schools on a per pupil basis, the schools must meet the eligibility criteria in terms of enrolment, physical infrastructure, etc. Subsidies are paid directly to the schools. Another project of the Foundation -- the **Pilot Education Voucher Program --** aims to give vouchers to children from urban slums in Lahore to encourage girls' enrolment in schools. The Urban Girls Fellowship was a pilot program launched in 1995 in the Balochistan province, where the government paid a declining subsidy to private schools over a period of three years to enrol girls from low-income families, as well as tuition fee per girl per year for 100 girls in each school. These pilot programmes have not only improved access and school choices but also contributed towards reducing gender disparity in participation in secondary education Pakistan.

(2) A brainchild the Sindh Education Foundation, the Adopt a School Programme has become the most popular PPP programme within education sector in Pakistan since 2001. The programme implies that a non-state actor, NGO or for-profit, takes responsibility to improve the status of a government school. The exact nature of adopters' engagement with the school varies enormously: some simply focus on improving the infrastructure while others are more concerned with improving the educational content. Even in the latter case there are variations, whereby some NGOs just focus on occasional teacher training sessions while others adopt a more interventionist approach and take over the entire school management including monitoring the day-to-day performance of teachers.

2.3 India

The National Curriculum Framework (2005) in India outlines the learning achievements and skill development objectives in secondary education. . The overall 23 objectives of education, which cover a range of skills, values and attitudes, are outlined in the National Curriculum Framework for elementary and secondary education. Keeping in view the above, both the public and private sectors have developed and implemented various models for delivery of secondary education in India. Though these models addresses different components of secondary education like access, participation, quality and relevance, due to data limitations the present attempt is to review some of the select innovative models that fall in one or other components of secondary education.

Innovative Models addressing issues on Access, Participation and Equity (Gender Empowerment) and Social Development)

Under this, 7 models on secondary education in India have been reviewed.

(1)   **Jawahar Navodaya Vidyalayas:** The Jawahar Navodaya Vidyalaya (JNV) system is a unique experiment unparalleled in the annals of school education in India.. Its significance lies in the selection of talented rural children as the target group and the attempt to provide them with quality education comparable to the best in a residential school system. Such children are found in all sections of society, and in all areas including the most backward. These talented children otherwise would have been deprived of quality modern education traditionally available only in the urban areas. Such education enables students from rural areas to compete with their urban counterparts on an equal footing. The major outcome or the deliverable output of this model of education

is the identification and development of talented bright and gifted children predominantly from rural areas who otherwise are denied good educational opportunities. Besides, the objective of quality education is achieved through effective academic, co-curricular and adventure activities, physical education, and reasonable level of competency in three languages. The scheme also fosters decentralised planning of education as the respective districts becomes the focal points for improving quality of education through sharing of experience and facilities with continuous interaction with local community and helping these institutions to develop as centres of academic excellence. In other words, the JNVs also often function as resource centres for other government and aided schools in the district in terms innovative methods of classroom practices, use of technology, teacher empowerment, school management, communication with the stakeholders, etc.

(2) **Rishi Valley Education Project (Model Residential School):** Another innovative model in secondary education worth highlighting is the Rishi Valley School, which provides a distinctive educational environment that enables young persons to grow not only in intellectual capacities, but also in other dimensions of their being. The emphasis at this level shifts towards an in-depth preparation of students to meet the academic requirements of the prescribed syllabi. While developing the students' intellectual faculties, there is a conscious effort towards creating a wider awareness of the world and giving space for the development of the aesthetic, moral and emotional dimensions. It is envisaged that students passing out from Rishi Valley School would grow into self-aware, sensitive and responsible human beings who remain life-long learners. While the residential school is only one unit among others in the Education Centre, it functions as a resource base for other units by providing them with administrative support and broadly sharing with them its educational and human resources.

(3) **Passport to Success (A Programme of the International Youth   Foundation):** The International Youth Foundation (IYF) and Youthreach have collaborated since 2003 on implementing the Passport to Success model for Indian youth aged 14-24 years old. The program, which was renamed the Udaan Life Skills Program in India, targets vulnerable youth, including those from urban slums in government schools, job training programs for leprosy patients and their dependents, vocational training courses for out of school youth, such as street children, child labourers, and children affected by HIV/AIDS with the objective to impart a range of skills that help them stay in school and get the education, professional skills, and confidence they need to succeed in life.

(4) **Yuva Parivartan: Creating Livelihood through Skill Development**

Yvva Parivartan is a project of Kherwadi Social Welfare Association, set up in 1928 by Mr. B.G.Kher, the first Premier of the then Bombay Presidency, has emerged as the largest livelihood NGO in the country training over 85,000 students during 2011-12. Yuva Parivartan focuses on a segment of society that is relatively ignored by the government as well as the NGOs – i.e. less educated and deprived out-of-school youth. Yuva Parivartan works for the youth who do not complete school; hence, have little livelihood opportunities and end up as casual labourers in urban or rural areas. It focuses on the interventions for economic and social development of these forgotten deprived youth in an equitable manner by providing short term employment oriented courses, thereby mainstreaming them and helping them to become contributing members of the society. The program/courses provides these youth with exposure to market realities, training in the skills and practice in the skills. This exposure leads to opening of their minds where they start thinking of the future. The program helps build their confidence and realize their potential. The program also trains them to take up jobs, make them employable through job preparedness, interviewing and CV writing skills, grooming, etc. Yuva Parivartan has also been working with the Police Department and the Prisons to train First Time Offenders and under-trials to re-rehabilitate them and keep them away from crime.

(5) **Model Schools at Secondary Level**

The Ministry of Human Resource Development (MHRD), Government of India has been implementing several innovative schemes, mostly in collaboration with the provincial/state governments. The Model School scheme was launched in November 2008 with the aims to provide

quality education to talented rural children through setting up of 6,000 model schools as benchmark of excellence at block level with the objectives. These model schools are envisaged to function as block level resource centres for providing academic support to state government managed and aided schools in all educationally backward blocks in the country.

The scheme has two modes of implementation, viz., (i) 3,500 schools are to be set up in as many educationally backward blocks (EBBs) in collaboration with State/UT Governments; and (ii) the remaining 2,500 schools are to be set up under the Public-Private Partnership (PPP) mode in blocks which are not educationally backward. At present, only the component for setting up of model schools in EBBs through State/UT Governments is being implemented. The PPP component of the Model School Scheme is being implemented in the 12th Five-Year Plan (2012-17).

A model school under the PPP mode as in case of state government mode would have infrastructure and facilities at least of the same standard as in a Kendriya Vidyalaya (KV) and with stipulations on pupil-teacher ratio, ICT usage, holistic educational environment, appropriate curriculum and emphasis on output and outcome. The standards of a model school would be at par with KVS and the target for performance in Board examinations should also be at par with the average performance of the Kendriya Vidyalaya Sangathan (KVS).

(6)   **Ashram Schools and Eklavya Model Residential Schools:** Ashram schools are being run in tribal sub-plan areas in states and UTs in India. The establishment of Ashram School has been envisaged as a direct intervention to tackle the socio-economic and geographic inequalities of the tribal population, particularly sparsely populated areas by providing educational opportunities. The concept of Ashram Schools stemmed from the objective of providing an atmosphere in which the inmates are offered full opportunities to develop their personality and out-look marked with a high sense of responsibility towards their own community. In addition to formal schooling, these institutions aim at fostering qualities of leadership, communication of new ideas and decision-making ability among the inmates. The Ashram schools, thus, are catering to the needs of the poorest of the poor and are helping the inmates to remain in the school system without dropping from it.

Another innovative initiative to expand secondary schooling opportunities for the poor tribal children is the establishment of Eklavya Model Residential Schools (EMRS) in remote areas. These schools modelled on the lines of Navodaya Vidyalayas but with state-centred management have the basic objective of providing quality education to the tribal children. These schools promote uniform pattern of education and enable their students to compete effectively for higher education programmes (viz., medical, technical, etc.).

(7)   **Public Private Partnership in Secondary Education in India:** In India, PPP is considered as an important strategy for expanding secondary education, particularly in the educationally advanced blocks and urban areas. However, from the point of view of expanding equitable learning opportunities, PPP as development strategy is widely criticized as it might limit access to socio-economically disadvantaged groups, even though the government subsidizes certain number of intakes in these schools. The types of PPP existing in the education sector in India are (i) Philanthropic Initiatives: **Bharti Foundation**, which is operating 236 schools of which 187 schools are constructed by the foundation and the rest are public schools that it has adopted; in addition, it plans to set up 50 senior secondary schools in partnership with state governments; (ii) School Management Initiatives: This form of partnership involves private management of public schools, while the schools remain publicly owned and publicly funded. **Educomp in partnership with Government of Punjab (under the Adarsh scheme)** has started running 5 senior secondary schools. In this model of the PPP, the government provides land free of cost on a 99 year lease; both the parties share both the total capital and recurring operating expenditure on these schools and the responsibility of providing teaching and non-teaching staff lies with the private player; and (iii) Provision of infrastructure: In this model, the private partner builds, owns and operates the infrastructure facilities. While the government agencies run such a school, the private partner is paid a fee over the contract period which can run up to 20-30 years. An example this type of PPP is the **Everonn Education Limited (EEL),** which operates under a BOOT model to deliver services in the field of ICT education. The company at present is operating in 6628 schools

across 16 states in India and provides computer education, computer literacy, computer-aided learning and teacher training projects.

Models for Improving Quality of Secondary Education (Role of ICT to Improve Learning and Acquisition of Global Knowledge-Economy Skills)

It is generally believed that ICT can empower teachers and learners, promote change and foster the development of '21st century skills; however, data to support these beliefs are still limited. Keeping this in view, some of the ICT models in secondary education have been reviewed as under;

(1)   Smart Schools: Smart School is a multiple technologies based content development initiative for making innovative and experiential learning in schools. It comprises of high definition 3D educational content along with host of e-learning applications to harness the latest in the technology. Such schools are helpful for normal as well as special children for better learning experiences at ease. Smart Schools are unique initiatives in making education and learning in schools a joy for students and teachers. With a vast digital content in every subjects of study in school, it will certainly revolutionize the teaching learning processes in schools. Last year, Indian government has proposed to establish 150 smart schools across the country. Proposals for 55 smart schools in 11 states and two union territories have been cleared so far.

(2)   **Intel Education Initiative:** Launched in November 2004 as part of the Akshaya Project in rural Mallapuram district in collaboration with Kerala IT Mission, the Intel Learn Program is a 60 hour, hands-on, after school project based curriculum built around two core modules for learners from communities that have no access to technology. It taps into children's interest in their own communities while developing their skills and nourishing their curiosity with creative, technology driven projects. This program has helped many students, aged 8-16 years old by using computer skills such as; Using the internet, word, processing, multimedia, graphics, and spreadsheets; collaborating skills by working together on projects, sharing ideas, and solving community problems; critical thinking and problem solving skills by building projects that contribute to their community. This project has been implemented through 100 community technology centres in Kerala. The program has benefited 48,000 youths across 14 States and Union Territories of India.

(3)   Educational E-Governance Model: There are four parts of educational e-governance model proposed by one of the state Governments, i./e. Gujarat: (a) Computer literacy Education; (b) E-Learning centralized Teaching through BISAG and 'multimedia teaching'; (c) Online transactions by student, teacher and parents, employers; and (d) Better management of schools and colleges and Universities through IT.

The proposal aims at digitization of education system of Gujarat from primary education to college and university education. It proposes complete transparency in educational provisions and arrangements.

(4)   Youth for Development Empowered with Basic Rural Agro-Biogenics Technologies: Based on rural secondary education reform initiative, this model aims at controlling high dropout rates, migration of unskilled rural youth and ensuring educational aspirations of rural students for completing secondary education. It is based on true spirit of education designed to provoke and catalyse independent thinking to cultivate indigenous ideas for wealth generation through rural development. It also aims at empowering rural youth with applied science and technical skills.

(5)   Innovative Measures in the RMSA: Government of India has implemented a country-wide secondary education development programme called the *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA)   in partnership with States and UTs in 2009. The programme aims at making secondary education of good quality available, accessible and affordable to all young persons in the age group 15-16 years, removing gender, socio- economic and other barriers by 2017. It also aims at making all secondary schools conform to the prescribed norms relating to infrastructure, teaching and non-teaching staff and the teaching-learning environment.

The RMSA adopts a sector-wide approach and is being implemented with a   fund-sharing arrangement of 75:25 between the Centre and the States. The RMSA, therefore, offers a strategic

opportunity to improve access and equity, enhance quality, accountability and ability to measure learning outcomes, and promote standardization of curriculum and examinations across states. It aims at targeted expansion that supports equity, particularly with regard to girls, and children from Schedule Caste and Schedule Tribe communities. Redirecting the vision of secondary education to prepare students for the fast paced and changing work environment and improving the quality of education provided are also seen as critical to the development of this sub-sector.

The key innovative element of RMSA is that it is an umbrella programme with untied funding for innovation. The programme gives relatively more emphasis on design and implementation of school level innovative interventions, and accordingly, places a lot of emphasis on the formulation of the school improvement plan with a whole school approach. School autonomy and accountability, therefore, assumes greater importance for promoting innovations at the school level. This is evident in the RMSA Framework for Implementation, where States are encouraged to develop innovative ideas in all their activities within the existing framework. It is expected that, over time, successful innovations having visible impact on the ground and with potential for up-scaling in wider geographies and informing larger target groups would be adapted, scaled up and institutionalised under the RMSA. But, the critical role of the States and UTs in promoting innovation in secondary education under the RMSA can not be undermined. Besides, to facilitate a greater role of States/UTs, NGOS and private education providers, creation of a separate Innovation Fund is being envisaged during the 12th Plan period with funding support from donors, i.e. the World Bank, DFID and European Commission. This innovation component not only extends to government education agencies at the both at the national and State level but also to non-governmental organizations (NGOs), foundations, and education societies. However, all proposals under innovation would be the part of the State RMSA Annual Plan proposal and funds would be channelized only through the State Implementation Society for the RMSA. The main rationale for the proposed component is to support initiatives that are in-line with the RMSA's goals, but are not currently approved and/or "ready" to be included in the RMSA Framework in the form of national norms. This component would support two broad types of activities: (i) ideas and approaches that may be at an early concept stage, but show promise and are feasible to implement; and (ii) successful ideas and approaches that would have been piloted on a small scale at the block or district level in the State or elsewhere in India and are now ready to be expanded, with potential for being replicated, scalability and impact. It is expected that lessons learnt from the innovative activities would feed into the future design of the RMSA Framework.

Apart from this, the innovative approaches to develop secondary education during the 12th Five-Year Plan (2012-2017) are: (i) taping the private sector capabilities fruitfully with design of the appropriate PPP models; (ii) making sports and physical education an integral part of curriculum in schools; (iii) expand the KVs/NVs; (iv) introducing vocational/pre-vocational courses in Class IX & X either as an add-on or as an alternative to work education or third language, where applicable; (v)providing vertical mobility options for VE students to pursue UG/PG level courses; (vi) providing training and equipping teachers on a continuous basis with latest skills and the vocational pedagogy itself for a high quality vocational education; (vii) evolving an integrated Vocational curriculum closely aligned with academic curriculum containing modules on various generic and specific vocational skills in consultation and active involvement of industry; and (viii) giving special focus on training of trainers/teachers in skill impartation, wherever possible using the PPP model.

Section 3: Concluding Remarks

All countries in South Asia are engaged at varying levels in adopting innovative methods of delivering secondary education. Enormous amounts have been invested in these countries towards generic reforms in areas such as expansion of school networks, teacher education, infrastructure improvement, curriculum revision, promoting gender and social equity, bridging regional disparities and so on. However, the socio-political and the institutional context characterizing the process of knowledge generation and control of educational initiatives both at the macro and institutional levels have hardly undergone any change in order to enable ensure an environment for innovation to happen, particularly at the institutional level.

Countries in the sub-region have also gone for several programmes, often externally funded projects, to improve access and quality of secondary education. These efforts invariably have been at the national and/or provincial levels often with narrow functional coverage of the sub-sector. In other words, countries in the sub-region have emphasized relatively more on systems level reforms leaving little scope for secondary schools to be able to absorb and implement the planned changes/innovations envisaged at national and/or provincial levels. But, it is a fact that sustainable change and innovation can only be anchored at the institutional level as is evident from several innovative models, including the practices of the Rishi Valley Schools, as in India. It, therefore, requires a change of mindset of the policy planners in these countries not only to facilitate school improvement through innovative initiatives but also to create the right kind of institutional environment for participation of other stakeholders such as the private providers, corporate sector, NGOs, etc. to contribute towards innovative methods of delivering secondary education.

However, if one examines the underlying principles of the successful models of secondary education discussed in this section, some important trends emerge in promoting access, equity, quality and relevence of secondary education in the sub-region. For example, most countries in the sub-region are going for <u>demand-side financing</u> as a basic principle for increasing access to and equity in secondary education. This is evident from the major sector-wide reform programmes in Bangladesh, Pakistan and India. This strategy has been accompanied by models that focus on women's empowerment and skills training for poverty alleviation. Models such as the Secondary Education Stipend Programme and Ganokendra of Bangladesh, the Rashtriya Madyamik Shiksha Abhiyan (RMSA) of India emphasize a lot on demand side financing and interventions for women's empowerment for improving equal learning opportunities for girls and the disadvantaged in secondary education. In Pakistan, <u>public-private partnership</u> (PPP) seems to be the underlying principle of several successful models of secondary education such as the Punjab Education Foundation Programme and Adopt-a-School Programme of Sindh Education Foundation. While the voucher system is adopted to increase access to secondary education by the slum dwellers and other disadvantaged groups, Adopt-a-School Programme emphasizes on the role of non-state actors and NGOs in improving the standards in provisions and internal efficiency of secondary education. PPP is also increasingly seen as a major strategy in India and Bangladesh to expand quality secondary education. In other models like Usha Gram Trust, the <u>provision of ECCE for the children of illiterate parents and supports to the disadvantaged</u> <u>Bangladeshi migrants</u> seems to be the underlying principles for promoting equitable distribution of learning opportunities at the secondary level.

<u>Creating enabling environment for the talented in disadvantaged rural areas, institutional autonomy and acccountability and emphasis on wholistic development of children</u> are the underlying principles of seversl secondary education models in India discussed in this section that focus on improving quality and relevance of secondary education. For example, while the Jawahar Navodaya Vidyalay (JNV) model focuses on harnessing rural talent through provision of residential schools and school effectioveness interventions, the Rishi Valley Education Project is based on the principle of creating the educational environment that enables young persons to grow not only in intellectual capacities but also in other dimenstions giving space for asthetic, moral and emotionl dimenstions. The <u>use of ICT</u> <u>in promoting school effectiveness</u> is also the basic priciple of some of the models discussed in the Indian setting. For example, while the Smart Schools Project emphasizes on technology based content development intiatives in secondary education, the Intel Education Initiative focuses on after-school learning modules that aim at improving the IT skills of both communities and students of secondary schools. The Y4DEBRAT also makes use of ICT as the major driver of change for improving quality and internal efficiency of secondary education in India.

<u>Empwerment through education, skills training and creating sustainable support systems for improving employment opportunities for youth and the disadvantaged</u> happen to be the underlying priciples of other models discussed in the section. While the Passport to Success Programme focuses on interventions that promote education, skill development and emplyability traits of the disadvantaged youth, the Yuva Parivartan gives a lot of emphasis on providing the sopcio-economically disadvantaged with employability linked vocational skills through community engagement, livelihood training, industry partnership and placement support. <u>Empowering and</u>

<u>mainstreaming the disadvanted</u> seem to be the basic principles of various interventions undertaken by the Yuva Parivartan. Moreover, among others, <u>promoting institutional/school level innovative practices and creating space for engagement of the non-state actors and NGOs for school effectiveness</u> (under the RMSA) happen to be the major underlying principles for promoting school effectiveness and relevance of secondary education in India.

Most of the innovative models either sit in isolation or are confined to addressing only certain specific aspects/functions of secondary education. Besides, in the absence of any impact evaluation and appropriate sharing mechanisms of best practices/innovations in secondary education in these countries, one is not very sure of the scalability of most of the innovations being carried out at the sub-national and/or institutional levels. In the absence of documentation of innovative practices in secondary education in countries in South Asia, including India, it is, in fact, difficult to address questions like do innovations in secondary education sit in isolation? Is there any effort to institutionalize and expand innovations in secondary education? If so, at what levels/functions of secondary education? What is the likely direction of innovation in the coming years? Although, countries in the sub-region are increasingly recognizing the critical role of secondary education in socio-economic development, and accordingly, making efforts to increase investments at this level of education, recognition of the critical role of schools and the enabling institutional framework for encouraging and supporting innovations in secondary education is yet to happen.

SECTION 1: STATUS OF SECONDARY EDUCATION IN INDIA, PAKISTAN AND BANGLADESH

Internationally, secondary education has become important in the context of changing global labor markets and changes in the requirements of and emphasis on higher education. A workforce with an appropriately designed secondary education is also increasingly being considered as integral to the economic development of a country. The forces that have highlighted secondary education internationally are becoming more and more pronounced in South Asia with the globalization of the economy and the advent of the age of information technology (IT).

This section of the report provides an overview of the status of secondary education in South Asia particularly in India, Pakistan and Bangladesh with regard to access, equity, quality and financing. Some of the indicators which would help to inform policy debates, are presented. The key questions addressed in this section include:

- How much has the participation at secondary level grown during the last ten years?

- To what extent has growth in primary/elementary enrolment led to pressure on secondary education?

- Do boys and girls have the same chances of participating and completing secondary education?

- Are there enough secondary teachers to meet rising demand?

- Are governments sufficiently investing in secondary education?

1.1 Education Profile of India, Pakistan and Bangladesh (Structure of Education and Educational Administrative set up)

There are broadly four stages of school education in **India**, namely primary, upper primary, secondary and higher secondary. Overall, schooling lasts 12 years, following the "10+2 pattern" adopted by all the states and Union Territories (UTs) of India. However, there are considerable differences between the various states in terms of the organizational patterns within first 10 years of schooling. The pre-school covers two to three years. The elementary stage consists of a primary stage comprising Classes I-V (in some states I-IV), followed by a middle stage of education comprising Classes VI -VIII (in some states V-VIII or VI -VII). The minimum age for admission to Class I is generally 5+ or 6+. The secondary stage consists of Classes IX-X (in some states VIII-X), and the senior secondary stage of schooling comprising classes XI-XII in all states. In some states/UTs classes XI-XII are attached to universities/colleges.

In India, the main types of schools are those controlled by:

- The state government boards like SSLC, in which the vast majority of Indian school-children are enrolled;

- The Central Board of Secondary Education (CBSE);

- The Council for the Indian School Certificate Examinations (CISCE) Board;

- National Open School; and

- "International schools." These schools mimic the schools in the West in pattern and syllabi and are considerably more expensive than regular schools. The examination conducted have the syllabus of anyone of the above-mentioned Councils or Boards.

Education in India is provided by the public sector as well as the private sector, with control and funding coming from three levels: federal, state, and local. Education in India falls under the control of both the Union Government and the states. The education in Pakistan is generally divided

into five levels: primary (grades one through five); middle (grades six through eight); high (grades nine and ten, leading to the Secondary or SSC); intermediate (grades eleven and twelve, leading to a Certificate or HSC); and university programs leading to graduate and advanced degrees. Secondary education in Pakistan begins from grade 9 and lasts for four years. After end of each of the four school years, students are required to pass a national examination administered by a regional Board of Intermediate and Secondary Education (or BISE). Education in Pakistan is overseen by Ministry of Education of Government of Pakistan. The academic institutions are the responsibility of the provincial governments, whereas the federal government mostly assists in curriculum development, accreditation and some financing of research. The private sector also participates, though on a limited scale, in extending education and has established formal schools, mostly located in urban localities. Besides, some NGOs and non-profit organizations also offer primary schooling, both under the formal as well as non-formal systems.

In **Pakistan**, education has always been considered as one of the main factors for socio-economic and subsequently the national development because of its ability to raise the quality and productivity of the human capital. Hence, the Government of Pakistan recognizes education as one of the fundamental rights of a citizen as well as extends its commitment to provide access to education to every citizen. According to the Constitution of the Islamic Republic of Pakistan, the State is responsible, "to provide basic necessities of life, such as, food, clothing, housing, education and medical relief, for all citizens, irrespective of sex, caste, creed or race ... to remove illiteracy and provide free and compulsory secondary education within minimum possible period." In this context, the public sector has invested in education in both urban as well as in rural areas, and in formal as well as non-formal institutions.

Education in **Bangladesh** has three major stages namely; primary, secondary and higher education. Primary education is of 5-year duration while secondary education is of a 7-year duration. However secondary education comprises of: 3-years of junior secondary, 2-years of secondary and 2-years of higher secondary. The entry age for class I at primary level is 6-years. The junior secondary, secondary and higher secondary stages are designed for age groups 11-13, 14-15 and 16-17 years. Higher secondary is followed by graduate level education in general, technical, engineering, agriculture, business studies, and medical streams requiring 5-6 years to obtain a Masters degree. In the general education stream, higher secondary is followed by college/university level education through the Pass/Honors Graduate Courses (4 years). The Masters Degree is of one year's duration for holders of Bachelor Degree (Honors) and two years duration for holders of (Pass) Bachelor Degree. Higher education in the technical area also starts after higher secondary level. Engineering, agriculture, business, medical and information & communication technology are the major technical and technological education areas. In each of the courses of study, except for medical education, a 5- year course of study is required for the first degree.

Primary level education is provided under two major institutional arrangements (stream)-general and madrasah, while secondary education has three major streams: general, technical-vocational and madrasah. Higher education, likewise, has 3 streams: general (inclusive of pure and applied science, arts, business and social science), madrasah and technology education. Technology education in its turn includes agriculture, engineering, medical, textile, leather technology and ICT. Madrasahs (Arabic for educational institution), functions parallel to the three major stages and have similar core courses as in the general stream (primary, secondary and post-secondary) but have additional emphasis on religious studies.

At secondary level, students pursue either Secondary School Certificate (SSC) vocational courses or enrol in one of the other secondary streams (Science, Humanities, and Commerce). From the ages of 16 to 18, students can study at Higher Secondary level (grades XI-XII) at Intermediate Colleges or in intermediate sections of Degree Colleges. Students can enrol for general education streams (Science, Humanities, and Commerce) which lead to a Higher Secondary Certificate (HSC), or enrol in

vocational programs leading to a Higher Secondary Certificate-vocational (HSC vocational). The Technical and Vocational Education System provides courses related to various applied and practical areas of science, technology and engineering, or focuses on a specific specialized area. Cadet colleges are important in the education system of Bangladesh. A cadet college is a special type of school-cum-college established in East Pakistan on the model of English public schools. Military education is compulsory at cadet college. At present there are 12 cadet colleges in Bangladesh. At all levels of schooling, students can choose to receive their education in English or Bengali. Private schools tend to make use of English-based study media while government-sponsored schools use Bengali. The Government has developed an ICT stream at the Higher Secondary level of education in 2005. A project on the introduction of computer courses in 9th grade has been in operation for the last few years in selected schools (Govt. & Non-Govt.).

1.2 Background (Review of Policies and Programmes with focus on Secondary Education)

1.2.1 National Policy on Secondary Education in India

Under the Constitution of India, education was a state matter until 1976. The central government could only provide guidance to the states on policy issues. In 1976 the constitution was amended to include education in the concurrent list. The initial attempts of designing a National Education Policy were made in 1968 but it was only in 1986 that India as a whole had a uniform National Policy on Education.

The National Policy on Education (NPE), 1986, has provided for environment awareness, science and technology education, and introduction of traditional elements such as Yoga into the Indian secondary school system. A significant feature of India's secondary school system is the emphasis on inclusion of the disadvantaged sections of the society. Professionals from established institutes are often called to support in vocational training. Another feature of India's secondary school system is its emphasis on profession based vocational training to help students attain skills for finding a vocation of his/her choice. The National Policy on Education programme of Action 1992 also aims at vocationalisation of secondary education and greater use of educational technology. A significant new feature has been the launching of a nation wide programme on secondary education known as the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) programme. The government aims at moving towards universalisation of secondary education (USE). The main aim is to provide high quality secondary education to all Indian adolescents up to the age of 16 by 2015, and senior secondary education up to the age of 18 by 2020.

1.2.2 National Policy on Education in Pakistan

The goals and objectives of secondary education in Pakistan[1] are to:

- Promote the educational and economic interests of backward classes or areas with special care.

- Remove illiteracy, and provide free and compulsory secondary education within minimum possible period.

- Make technical and professional education generally available on merit.

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[1] Source: Ministry of Education, AEPAM, Pakistan, (Website: www.aepam.edu.pk.

- Enable the people of different areas, through education, training to participate fully in all forms of national activities, including employment in the service of Pakistan.

- Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning, life skills and citizenship programmes.

- Achieving 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for adults.

- Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

- Eliminating gender disparities in primary and secondary education by 2015 and achieving gender equal access to, and achievement in, basic education of good quality.

Almost all the policies have been implemented in Pakistan as reflected in various programmes in the five year plans. One of the most important of them is the Policies for Special Persons in Pakistan where the National Policy for Persons with Disabilities (2002) and its Programme of Action, 2006, include measures to promote inclusive education, expand and reinforce vocational training etc. Today a considerable number of special education institutions are functioning under the control of the provincial governments for the children having different disabilities.

Box 1: Salient Features of Pakistan's National Education Policy 2009

Apart from due emphasis on governance issues and an implementation framework, some distinct features of the policy related to secondary education are mentioned as under:

I. Access and Equity

- Dakar EFA Goals and MDGs relating to Education shall be achieved by 2015.

- Equity in Education (gender, geographical-Urban-Rural areas) shall be promoted.

- Grades 11 and 12 shall not be part of the college education and merged into the school education.

- Waiver of maximum age limit for recruitment of female teachers, wherever required.

- Access will be extended by ensuring availability of Technical and Vocational Education (TVE) at district and tehsil levels. Relevance to Labour Market shall be ensured.

II. Governance, Quality and Relevance

- The Government shall allocate 7% of GDP to education by 2015 and necessary enactment shall be made for this purpose.

- Sector Planning in Education shall be promoted and each Provincial/ Area Education Department shall develop its

  sector/ sub-sector plan, with facilitation and coordination at federal level.

- A system for donor harmonization for aid-effectiveness and improved coordination between development partners

  and government shall be developed.

- Fragmented governance of education at federal and provincial levels including literacy shall be managed under one organization.

- Separate academic & educational management cadres with specified training and qualification requirements shall be introduced.

- In order to bridge Public-Private divide, governments shall take steps to bring harmony through common standards, quality and regulatory regimes.

- Deeni Madaris shall be mainstreamed by introducing contemporary studies alongside the curricula of Deeni Madaris.

- Minimum National Standards for educational inputs, processes and outcomes shall be established.

- Inter-Provincial Education Ministers' (IPEM) forum shall be institutionalized, with legal mandate to oversee implementation of NEP and making amendments in it, when required.

- Teacher training arrangements, accreditation and certification procedures shall be standardised and institutionalised.

- Governments shall take steps to ensure that teacher recruitment, professional development, promotions and postings are based on merit alone.

- The curriculum development and review process shall be standardised and institutionalised.

- Use of Information and Communication Technologies in Education shall be promoted.

- Curriculum Wing of Ministry of Education and provincial textbook boards shall ensure elimination of all types of gender biases from textbooks. Also adequate representation of females shall be ensured in all curriculum and textbooks review committees.

- publishing of textbooks and learning materials shall be introduced.

- Examination system shall be standardised to reduce differentials across students appearing in different boards of examinations.

- Career Counselling at secondary and higher secondary level shall be initiated.

- Matric-Tech stream shall be re-introduced and scheme of studies revised accordingly.

- Sports activities shall be organized at the Secondary, Higher Secondary, College and University levels.

- Matching with labour market, develop linkages with industry, innovation and promotion of research and development (R&D) culture are hall marks of NEP 2009.

- The policy proposes National Qualifications Framework (NQF) with a changed program structure that encompasses all qualifications in the country, both academic and vocational/technical.

(Source: Ministry of Education, AEPAM, Pakistan, (Website: www.aepam.edu.pk)

Recently, the special education institutions run by the federal government are devolved to the respective provincial governments in the consequences of the implementation of 18th amendment in the Constitution of the Islamic Republic of Pakistan. As per the National Education Policy 1998-2010, one model secondary school has been set up at each district level. A definite vocation or a career has been introduced at secondary level. Besides, Curriculum for secondary and higher secondary has been revised to include recent developments in information technology, such as software development, the Information Super Highway designing Web Pages, etc and multiple

textbooks have been introduced. The base for technical and vocational education has been broadened through introduction of a stream of matriculation (Technical) and establishment of vocational high schools. Multiple textbooks have been introduced at secondary school level. Besides, school libraries have been equipped with the latest reading materials/services. Internet connection with computer have been given to many libraries. Mobile library services for semi-urban and remote rural areas have also been introduced.

1.2.3   *Policies and Guidelines of Ministry of Education in Bangladesh*

Human resource development is at the core of Bangladesh's development efforts and access to quality education is critical to poverty reduction and economic development. The Government is committed to undertaking structural reforms that are expected to bring significant improvements in the education sector. Bangladesh's commitment to education has been clearly stated in its *Constitution* and development plans with education being given the highest priority in the public sector investments. Education sector allocations are currently about 2.3 percent of GDP and 14 percent of total government expenditure. Maintaining this commitment to the education sector is imperative in order to achieve *Education for All* (EFA) and the *Millennium Development Goals* (MDGs).

The Government of Bangladesh is strongly committed to alleviating the existing problems in respect of management and quality through reforms across the education system. At the primary level, Ministry of Primary and mass Education (MoPME) is supported by a multi-donor group through the Primary Education Development Program II (PEDP II), which aims to strengthen educational access, quality and efficiency.

In order to address issues at the secondary and higher levels, MoE has developed a medium-term framework for the secondary education sub-sector, focusing on quality improvements, policy measures and specific actions needed to reform the system. The development of this medium-term framework has benefited from an extensive range of consultations and workshops with stakeholders at the central, district, and upazila levels. The main objective of reforms being proposed is to address systemic governance issues aimed at raising the quality and cost-effectiveness of service delivery, and improve equity of access in secondary education.

Ministry of Education (MoE), Bangladesh is aiming to move towards a devolved system of governance within the current administrative structure. In this system the central government will be responsible for formulating policies, financing, setting quality standards, and monitoring and evaluation etc., while lower levels of government will be responsible for administering the system. MoE is empowering officials at the district and upazilla levels to take greater responsibility in monitoring school performance and ensure public disclosure of information (e.g., SSC passing rates, teacher absenteeism, class sizes, etc.) related to school quality. To ensure appropriate financial controls, MoE is implementing a *Financial Management Reform Program* (FMRP). This is intended to increase accountability and transparency in the use of resources.

However, science and technology has only recently found wide acceptance as a component of the school curriculum in all the countries of South Asia due to their policy reforms. Pakistan, as part of an organisational restructuring aimed at integrating science and technology education, merged the Institute for the Promotion of Science Education and Training (IPSET) with the National Institute for Technical Education (NITE) to form a new organisation called the National Institute of Science and Technical Education (NISTE). 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. The national curriculum framework in India has included science and technology education (NCERT, 2000) as a new curriculum component from 2002.

1.3   Status of Secondary Education in South Asia

Secondary education has become a growing concern and major challenge for education policymakers and researchers worldwide as it plays an increasingly important role in creating healthy and cohesive societies and spurs economic growth. It represents a critical stage of the system that not only links initial education to higher education, but also connects the school system to the labour market. Most governments today are endeavouring to widening and increasing access to basic education, which covers beyond primary, often lower secondary education, thus allowing a considerable proportion of young people to have access to upper level of secondary education too, if not universalizing its access. While this region has made a significant progress in enrolment in secondary education over the past decade, some countries are still struggling to find appropriate ways and means for further development, in particular at lower secondary, let alone upper secondary level, as is the case with most low-income countries.

South Asia Today

South Asia, with a population of 1.15 billion, contains 22 per cent of humanity, has 6 per cent of global real income and accommodates 46 per cent of the world's illiterate population. Fifty per cent of all malnourished children live in this region. The populations of the individual countries range from the Maldives with 0.3 million people to India with 1 billion. These are largely rural populations: about 90 per cent of the people in Nepal and Bhutan and 75 per cent of those in India live in rural areas with agriculture as their main source of livelihood. The rate of economic growth in South Asia is less than 2.5 per cent, but there has been a significant improvement over the years in the poorest countries e.g. in the case of Bangladesh it increase from 0.5 per cent in 1965-73 to 5 per cent in 1973-83. Bhutan saw a 7.4 per cent growth rate in the 1980s. However, inequalities in income distribution remain high. There is a clear urban-rural divide in terms of economic and educational opportunities. In urban areas, the fruits of science and technology are seen in terms of job possibilities and an enhanced quality of life, with the result that parental motivation for education is high. Monetary and intellectual resources tend to be concentrated in urban areas leaving the majority out of the fold of most development efforts.

Literacy Levels in South Asia

As a result of a sustained effort over the last thirty years, adult literacy has increased substantially, from 32 per cent in 1970 to 55 per cent in 1999, but this is still the lowest literacy rate in the world, lower even than Sub-Saharan Africa (UNDP, 2001). Until the mid-1970s, the literacy rate in South Asia was higher than that of Africa, but by mid-1980s the position had been reversed.

Literacy rates vary widely between, and within, the different countries, from highs of 96.2 per cent in the Maldives and 91.4 per cent in Sri Lanka to lows of 40.8 per cent in Bangladesh and 40.4 per cent in Nepal (UNDP, 2001). **India's** literacy rate has recorded a 9.2% rise between 2001 and 2011 to reach 74.04%, according to provisional data of the 2011 census. Interestingly, literacy rate improved sharply among females as compared to males. While the literacy rate for males rose from 75.26% to 82.14%   marking a rise of 6.9%, it increased by 11.8% for females to go from 53.67 to 65.46%. According to provisional totals of the latest census, literates constitute 74% of total population aged seven and above. Within India, literacy rates range from 92 per cent in the State of Kerala to 53 per cent in Rajasthan in 2011 (Census of India, 2011). Despite an increase in literacy rates expressed in percentage terms, the number of illiterates has increased, while the out-of-school population has remained static (in Bangladesh) or has increased (in India). In **Pakistan**, the literacy rate has increased from 16.4% (Male 19.2% and Female 12.2%) in 1951 to 26.2% (Male 35.1% and Female 16.0%) in 1981 and further to 57.0% (Male 69.0% and Female 45.0%) in 2009. The urban literacy rate increased from 47% in 1981 to 74% in 2009 and the rural literacy rate increased from 17.3% in 1981 to 48% in 2009. In **Bangladesh**, in 2005, the national literacy rate was 51.9%

(Male 55.8% and Female 48.1%) with literacy rates in rural areas 46.7% (male 50.4% and female 42.9%) and in urban areas 67.9% (male 67.6% and female 63.2%).

1.3.1 *Enrolment Trends at Secondary Level in South Asia*

The demand for secondary education continues to grow significantly since 1990. Since existing data prior to 1990 make no distinction between lower and upper secondary levels, the analysis is based on enrolment and participation in secondary education as per International Standard Classification of Education (ISCED): lower secondary education (ISCED 2) and upper secondary education (ISCED 3). Governments have made significant progress in expanding the capacity of secondary education systems in their countries. In South Asia, total enrolment at the secondary level increased from 26 million in 1970 to 136 million in 2009. This expansion exceeds growth of the school-age population, which more than doubled, from 116 million to 244 million, over the same period. As a result, the GER rose from 23% to 56%. The gender gap, in terms of access to secondary education, remains evident in this region where the GER for girls was 52% compared to 59% for boys in 2009. But this fact should not conceal the progress realized since 1970, when the participation of girls in secondary education was less than half that of boys (13% in 1970 as compared to 31% in 2009) (UNESCO, 2011).

The most populated country in the region, India, accounts for three-quarters of the regional leap in enrolment. From 1970 to 2009, enrolment in secondary education increased from 21 million to 102 million in this country alone. Many other countries in the region also expanded the capacity of their education systems. Whereas in Bhutan the annual average growth rate of enrolment in total secondary education was 12.3 per cent between 1999 to 2006, the annual average growth rate increased to 12.6 per cent between 2005 to 2008 and since then remained same till 2009 (UNESCO, 2011).

The enrolment at secondary level was grown at a rate of 9.2% and 6.2% respectively in Maldives and Nepal between 1999 and 2009. Bangladesh (0.13%) recorded the lowest growth rate in secondary enrolment followed by Pakistan (3.86%) and India (4.26%) between 1999 and 2009m (see Fig. 1). Except in Maldives, where the share of girls enrolment to total enrolment remains same, i.e., 50%, in all the remaining countries in South Asia the share of girls enrolment to total enrolment at secondary level has increased between 1999 and 2009 implying the improvement in the participation of girls at secondary level (see Table 1, Annexure 1).

Participation in secondary education also shows encouraging trends in **India**, at least in absolute terms. From 1.5 million in 1950/51, the total enrolment in secondary and higher secondary stage has gone up almost 26 times to 38.8 million in 2009/10. It is also observed that the trend line showing growth trends in the enrolment at primary level is much steeper compared to that of the middle and secondary levels, thereby implying relatively slow growth of enrolment at the secondary and higher secondary levels. It may be underlined that, at the all India level, during the period 2000/01 to 2009/10, the average annual growth rate of enrolment at secondary and higher secondary stage was highest (3.8%) compared to that of the middle (2.7%) and primary stages (1.8%) [Government of India (SES), various years and DISE and SEMIS, NUEPA, New Delhi]. Prior to 2000/01, the growth rate of enrolment in secondary education was lower than that of the primary and middle level enrolment (Government of India (SES), various years). Such a trend in the growth of enrolment at the national level, indeed, hides large variations across regions, gender and social categories in participation in secondary and higher secondary education.

In **Bangladesh** also, participation in secondary education shows encouraging trends. The total enrolment in secondary and higher secondary stage increased at an annual average growth rate of 4.1% between 1970 to 1990, but it increased at a higher growth rate of 4.6% between 1990 and 2010. It is interesting to note that the share of girls enrolment to total enrolment at secondary level not

only shows an increasing trend but also the share of girls to total enrolment (53.3%) is more than that of boys (46.7%) in 2010 (See Table 9, Annexure I).

In **Pakistan**, there were total 23,964 high schools, of which 9,911 (41%) are in public sector, whereas 14,053 (59%) are in private sector in 2007-08. The total enrolment at high stage is 2.426 million, of which 1.723 million (71%) is in public sector, whereas, 0.702 million (29%) is in private sector. The total boys enrolment at high school stage is 1.428 million (59%), whereas, the girls enrolment is 0.997 million (41%). The total teachers at high school level are 374,252, out of which 175,159 (47%) is in public and 199,093 (53%) are in private sector. There are 167,252 (45%) male teacher and 207,000 (55%) are female teachers.

Fig. 1:   Growth of Enrolment at Secondary Level from 1999 to 2009 in South Asia
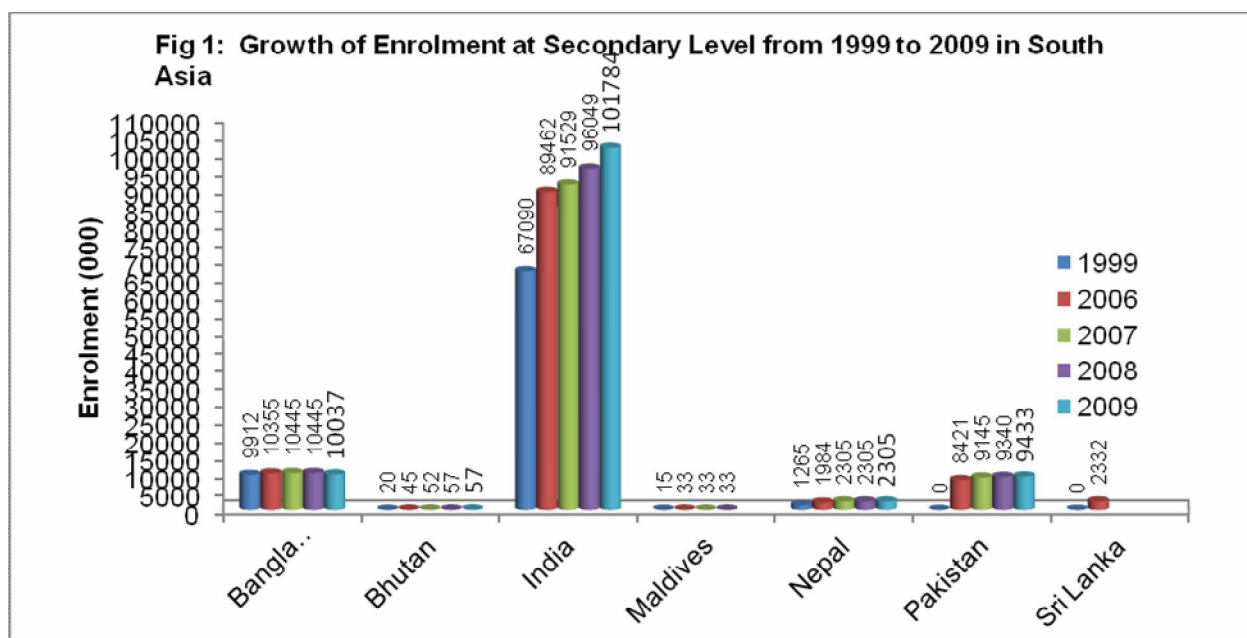
Source: Data from EFA Global Monitoring Report, various years, UNESCO,
                 UNESCO Publishing House, Oxford University Press, Paris, France.

There are total 3,213 higher secondary schools/ inter colleges of which 1,299 (40%) are in public sector, whereas 1,914 (60%) are in private sector. The total enrolment at higher secondary schools/ inter colleges stage is 919,543 of which 750,552 (82%) is in public sector, whereas, 168,991 (18%) is in private sector. The total boys enrolment at higher secondary schools/ inter colleges stage is 457,443 (50%), whereas, the girls enrolment is 462,100 (50%). The total teachers at higher secondary schools/ inter colleges level are 74,223, out of which 33,229 (45%) is in public and 40,994 (55%) are in private sector. There are 38,061 (51%) male teacher and 36,162 (49%) are female teachers. As per the latest data available, there are 24,322 Secondary Schools with 439,316 teachers are functional in 2008-09. An increase of 2.9 % in middle enrolment (2.556 million) in 2008-09 over 2007-08 (2.484 million) has been observed and during 2009-10, it is estimated to increase by

5.6 percent. There are total 12,448 Deeni Madaris of which 363 (3%) are in public sector, whereas 12,085 (97%) are in private sector. The total enrolment in the Deeni Madaris is 1.603 million of which 0.454 million (3%) is in public sector, whereas, 1.558 million (97%) is in private sector. The total male enrolment in Deeni Madaris is 0.999 million (62%), whereas, the female enrolment is 0.604 (38%). The total teachers in Deeni Madaris are 55,680, out of which 1,694 (3%) is in public sector and 53,986 (97%) are in private sector. There are 42,997 (77%) male teacher and 12,683 (23%) female teachers (MoE-AEPM, 2009).

Enrolment in Technical and Vocational education Training in South Asia

Defining TVET is often problematic because programmes are extremely heterogeneous in terms of content, frequency and duration. The main objective of TVET is to develop or maintain job-relevant skills for employment or for entry into the labour market. Job relevant skills can be defined as a set of competencies valued by employers and useful for self-employment, including skills relevant to a specific job and other skills that enhance a worker's productivity (World Bank, 2010b). For UNESCO, TVET is a part of the process of lifelong learning, which plays a crucial role in reducing poverty and increasing the likelihood of finding decent work or generating income through self-employment (UNESCO, 2009).

Though technology education is an innovation in South Asia region, a related subject, namely Technical and Vocational Education (TVE) has long been a mainstay of the educational policy of all the countries of South Asia. Using a slight modification of the terminology introduced by de Vries, TVE in South Asia has generally followed either a 'craft-oriented approach' or an 'industrial or agricultural production-oriented approach' (de Vries, 1994). Elements of technical and vocational education form part of the curriculum in South Asian countries from grade 6 onwards. In Sri Lanka, the current education reforms require 'Life Competencies' to be taught in grades 6-9 (the junior stage) and a technical subject to be introduced in grades 10-11 (the senior stage/GCE O Level). Up to the Junior Stage, students are able to move laterally from general education into technical and vocational streams.

Experience of integrating technical and vocational education with general education has rarely been positive. Mahatma Gandhi's scheme of craft-oriented basic education was tried out in India soon after independence but, in a few years, it was abandoned. Nepal, in its early years of democratic rule, experimented with an ambitious technical and vocational programme which was integrated with general education until the secondary school level. The Indian and Nepalese programs were abandoned for much the same reasons: - a lack of resources, inadequate teacher preparation and a general reluctance on the part of students and parents to depart from an academic-oriented education. In Nepal, the integrated programme was replaced in the early 1980s by one that focused on local needs and was directed at students who dropped out of the general system. Under this new programme, separate technical schools are now provided at three levels: lower secondary, secondary and higher secondary, each of which is a terminal level.

In **India**, vocationalisation of secondary education is still part of official policy and 'work experience' and 'pre-vocational courses' form part of the curriculum. In reality, however, such courses, except in a small minority of 'technical schools', are either non-existent or else completely meaningless. Even in post-secondary schools, where vocational subjects are offered, the choice is usually limited to one or two subjects. Further, the students who opt for the vocational stream often do so not to secure career-related training but because these subjects are considered to be 'scoring', i.e., they enable one to score high marks in the final examinations.

The most positive experience is perhaps that of **Bangladesh** where agriculture is a compulsory subject for grades VI-VIII, after which it is optional. It is meant to be taught through practical training by field-level experts. Although in Dhaka city this is not practicable, at the village level students do visit fields and use the school back lawn as an area for experiments. In grades IX-X,

basic trade training and technological drawing are optional courses. Technical training certificate programmes can be taken up after grade 8 and diploma courses after grade X.

Separate streams for technical and vocational education exist at various levels in all the South Asian countries. Given the major shortages of skilled labour in these countries, one would expect a high demand for such education but the reality is quite different. South Asian countries are characterised by low levels of enrolment in technical and vocational education programmes: 1.5 per cent of the total enrolment at the secondary level compared with 10.5 per cent in East Asia. The situation is worsened by the high dropout rate from technical and vocational education, around 50 per cent in India, Pakistan and Bangladesh. Paradoxically, although the number of graduates of institutions providing technical and vocational education is small and falls far short of requirements of the labour market, their unemployment rate remains high (Haq and Haq, 1998).

At present, despite the focused nature of the programmes in Sri Lanka and Nepal, the unemployment rates of their graduates remain high. In Bangladesh, the employment rates for informally trained workers are higher than those who have graduated from technical and vocational schools. Employers prefer workers who have acquired skills through on-the-job practice. A lack of coordination between industry and these schools is the most common shortcoming of the curricula that are provided.

The reasons for the general failure of technical and vocational education are the low social status of, and attitudes to, manual work, which is seen as meant for economically weaker and academically backward students. In addition, technical secondary education may cost up to ten times more than general education but budgetary allocations are low. However, a survey conducted in Maharashtra, India, by the Ambekar Institute of Labour Studies, suggests that attitudes towards technical and vocational education may already be changing in some regions so that an increasing demand may be expected in the coming years. The technical and vocational education needs of South Asian countries are similar.

Table 1.1: **Percentage Share of Enrolment in TVET to Total Enrolment at Secondary Level**

Country	2006		2007		2008		2009	
	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET
Bangladesh	1.6	27	2.4	30.0	2.4	30.0	3.0	30.0
Bhutan	1.6	36	N.A	N.A	N.A	N.A	N.A	N.A
India	0.8	15	0.8	7.0	0.8	N.A	1.0	25.0
Maldives	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
Nepal	1.1	22	0.7	N.A	0.7	N.A	1.0	N.A
Pakistan	3.4	39	3.6	35.0	3.7	35.0	4.0	41.0
Sri Lanka	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO
    Publishing House, Oxford University Press, Paris, France.

In Pakistan in 2007-08, there were total 3,125 technical and vocational institutions of which 936 (30%) are in public sector, whereas 2,189 (70%) are in private sector. The total enrolment in the technical and vocational institutions was 255,636 of which 111,119 (43%) is in public sector, whereas, 144,517 (57%) was in private sector. The total male enrolment in the technical and vocational institutions is 159,623 (62%), whereas, the female enrolment was 96,013 (38%). The total teachers in the technical and vocational institutions were 14,914, out of which 7,501 (50%) was in public and 7,413 (50%) was in private sector. There were 10,144 (68%) male teachers and 4,770 (32%) female teachers. As per the latest data available, there were 3159 TVE institutions of which 2212 (70%) in the private sector with 15092 teachers and 264,712 students enrolled (MOE-APEM, 2009). Despite the rise in the global GER for upper secondary education since 1999, enrolment in TVET programmes as a percentage of total enrolment at this level of education has marginally increased in all countries including South Asia (see Figure 2). Except in Bangladesh, where the enrolment in TVET programme as percentage of total enrolment at secondary level has increased considerably from 1.6 per cent in 2006 to 3.0 per cent in 2009, it was either marginally increased or decreased in remaining countries in South Asia (See Fig. 2) However, in all the countries of South Asia, the percentages of girls enrolment to total enrolment in TVET programmes in secondary education, though have shown a continuous increase during 2006 to 2009, are still very low in most of the countries (India with 15%, Maldives with 25%, Nepal with 22% and Bangladesh with 30%) except in Pakistan where it is relatively better (i.e., 41%) in 2009 (see Fig. 3).

Fig. 2:   Percentage Share of Enrolment in TVET to Total Enrolment at Secondary Level in South Asia from 1999 to 2009
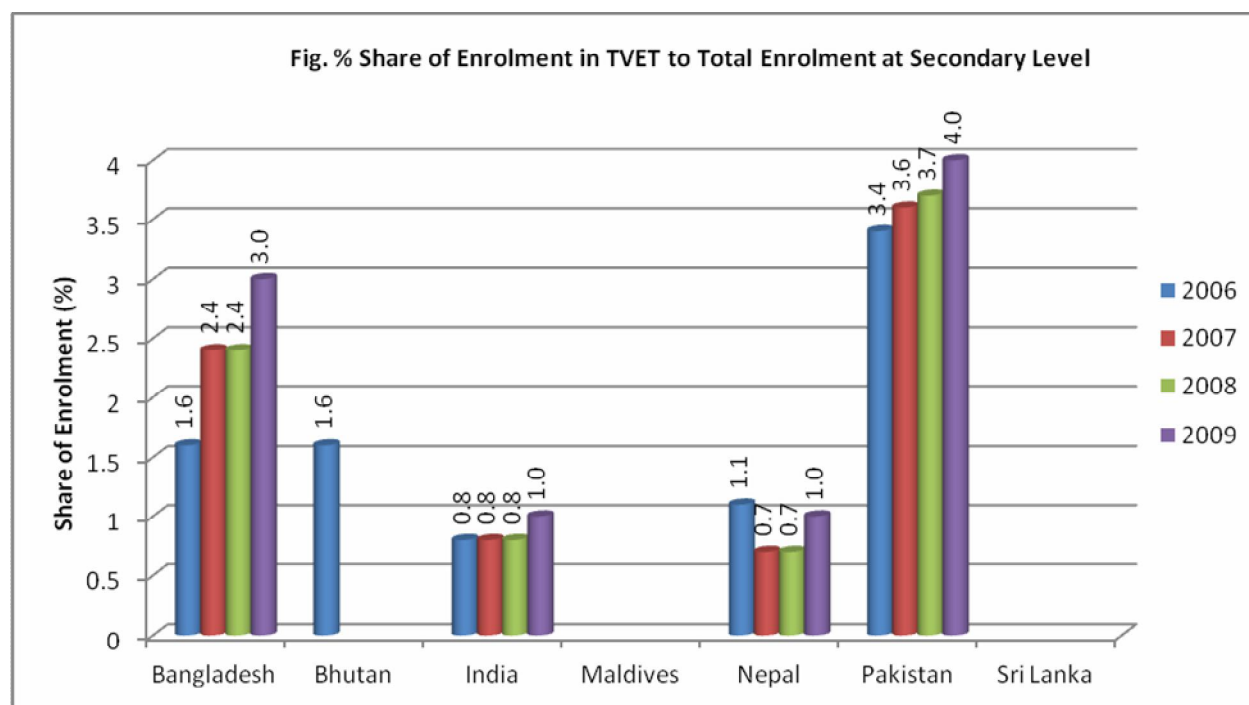
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France. (Table 1.1)

Fig. 3: Female Enrolment as % of Total Enrolment in TVET Programmes in South Asia from 1999 to 2009

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO
Publishing House, Oxford University Press, Paris, France. (Table 1.1)

1.3.2 GER at Secondary Level

Enrolment ratio provide a good indicator of the participation of secondary education. The gross enrolment ratio (GER). It is the ratio of total enrolment, irrespective of age, to the targeted population. A GER equal to or exceeding 100% indicates that the national system can accommodate all its school-age population at a given education level. Lower values of GER can reflect a shortage of supply, as well as the impact of other factors, such as the indirect and direct costs of attending school, which may limit enrolment.

Globally, the secondary level GER rose from 43% to 68% between 1970 and 2009. This means that enrolment in secondary schools represents 68% of the targeted school-age population. However, the situation varies considerably across and within regions. In South Asia, secondary school enrolment increased from 26 million to almost 136 million students between 1970 and 2009. The region also witnessed a remarkable rise in its participation ratio, with the GER increasing from 23% to 56% over the same period. Girls continue to face some barriers in terms of access to secondary education, yet real progress has been made with the female GER rising from 13% to 52% from 1970 to 2009 (see Fig.4).

Available statistics show that Bangladesh was the only country in South Asia that negative growth in secondary enrolment from 2006 to 2009; all the other countries experienced an increase in secondary enrolment with the decline in the school-age population. However, the participation rates of children at secondary level are very low in Pakistan (33%) and Bangladesh (43.2%) in 2009 as compared to Sri Lanka (87% in 2006) and Maldives (84% in 2008). The participation rates of children at secondary level not only showed an increasing trend but also were moderate in India (60%) and Bhutan (62%) in 2009 (See Fig. 4).

In both **Pakistan and Bangladesh**, the growth rates of participation (GER) were very low; GER at secondary level increased from 30% to 33% and decreased marginally from 44% to 43.2% respectively in Pakistan and Bangladesh between 2006 and 2009. In India and Bhutan GER at secondary level has constantly increased between 2006 to 2009. Where as in India, it increased from 54% in 2006 to 60% in 2009, it increased from 49% in 2006 to 62% in 2009 in Bhutan. However, GER at secondary level, increased marginally, it has already reached a very higher figure of 84% in 2008 in Maldives.

As per the latest data available, at the all **India** level, the Gross Enrolment Ratio (GER), which shows total enrolment in secondary stage (Grades IX-XII) as a percentage of the total population in the relevant age-group also increased steadily from 19.3 in 1990/91 to 40.0% in 2009-10. It may be noted that the GER figures for secondary stage (Grades IX-X) and higher secondary (Grades XI-XII) stages were not available separately until 2004/05 making it difficult to study their growth trends.

Fig. 4: Gross Enrolment Ratios at Secondary Level (Total) by Country from 1999 to 2009 in South Asia
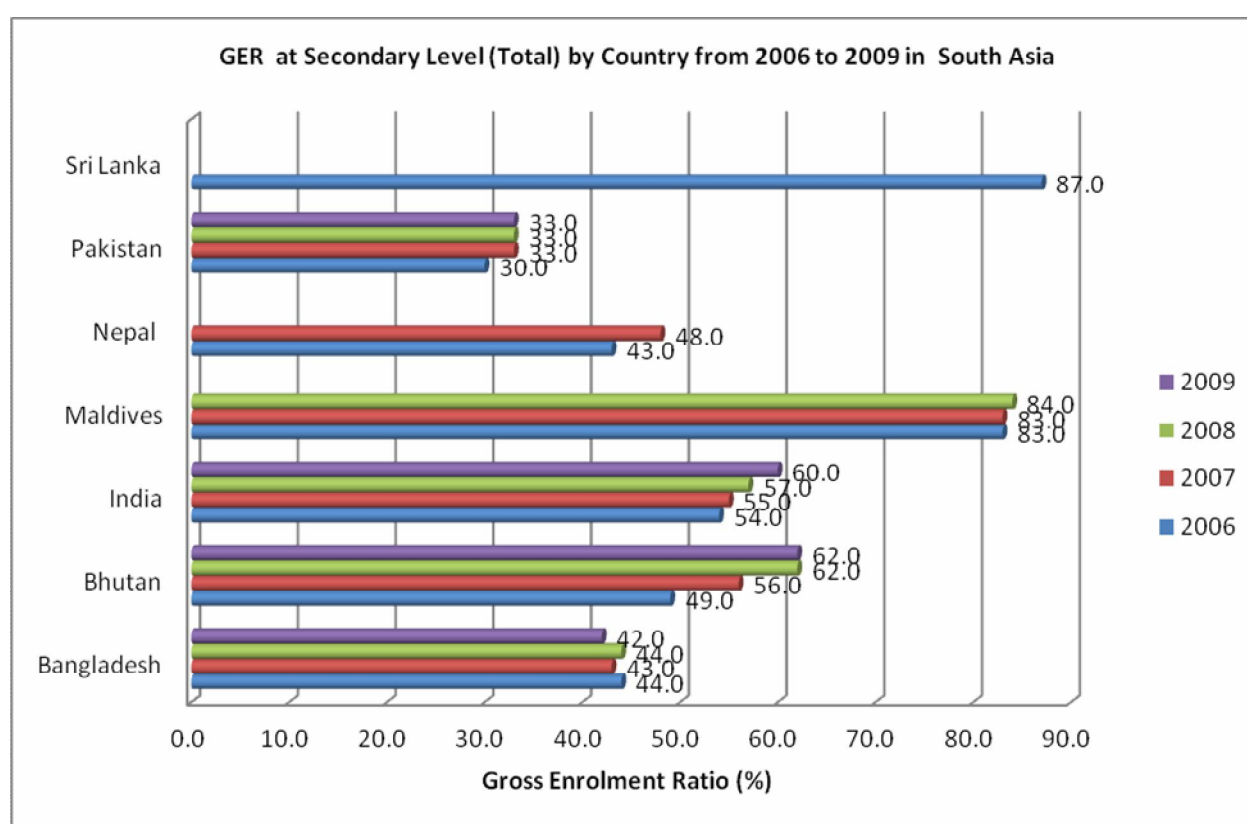
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 3, Annexure I).

In 2004/05 in India, the GER at secondary stage (Grades IX-X) was 51.65%, which increased to 58.15% in 2009/10; more than 6% points improvement during this period. In India similarly, the GER at the higher secondary stage (Grades XI-XII) was 27.8% in 2004/05 in India, which marginally increased to 27.9% in 2009/10 (See Tables 11 and 12, Annexure I). At the secondary level (Grades IX-X), the GER was 52.47% for Scheduled Castes and 43.27% for Scheduled Tribes in 2007/08. At the higher secondary level (Grades XI-XII), the GER was 27.91% for SCs and 20.33% for STs (Government of India (SES), 2007/08). Apart from variations by gender and social categories, the size of the GER varies greatly across states and union territories. In 2007/08, the GER at secondary stage (Grades IX-X) was less than the national average in 15 states and union territories. Similarly, at the higher secondary stage (Grades XI-XII), the GER in 17 states and UTs was lower than that of the country average. According to NSS 52nd Round (NSSO, 1998), the Gross

Attendance Ratio (GAR) at the secondary stage (Grades IX-X) and higher secondary stage (Grades XI-XII) was 51% and 32% respectively. Further, the Net Attendance Rate (NAR) was 26% and 15% respectively in Grades IX-X and XI-XII. Between the NSS 52nd Round (1995/96) and the 64th Round (2007/08), participation in secondary and higher secondary education has improved significantly. The GAR at the secondary stage (Grades IX-X) has improved to 70% (66% in rural areas and 85% in urban areas), and at the higher secondary stage (Grades XI-XII) it has increased to 48% (41% in rural areas and 65% in urban areas) in 2007/08 (NSS 64th Round). The net attendance Ratio (NER) at the secondary and higher secondary stages has gone up to 41% (38% in rural areas and 51% in urban areas) and 27% (23% in rural areas and 40% in urban areas) respectively in 2007/08. However, the level of participation at various stages of school education varies significantly across socio-economic groups. At the secondary level, while only 34 per 1,000 people (aged 5-29) in the lowest MPCE decile class participate in secondary education, it increases to 89 for the highest MPCE decile class (NSS, 2010). Similarly, only 12 people per 1,000 (aged 5-29) in the lowest MPCE decile class attend higher secondary institutions, and the number goes up significantly to 80 for the highest MPCE decile class. In other words, poverty is strongly associated with a lack of participation in post-compulsory levels of school education, particularly at the higher secondary stage.

1.3.3   *Participation in Lower Secondary Education*

The previous discussion focused on secondary education, with lower and upper secondary being treated as a single category for cross-national comparisons. However, in some countries lower secondary is the second and final phase of basic education. In these cases, primary and lower secondary levels are often combined in the same schools and taught by the same teachers. In other countries, lower secondary is clearly distinct from primary education, with pupils sharing the same schools with upper secondary students. These are important differences and, thus, good reasons for looking at lower and upper secondary education separately (UIS, 2005b).

Figure 5 presents changes in lower secondary GERs from 2006 to 2009 by countries in South Asia region. The GER for lower secondary education varies from as low as 44.07% in Pakistan to a high rate of 104.0% in Sri Lanka and 122.0% in Maldives. Whereas in both Bhutan and India, GER at lower secondary showed on upward trend during 2006 to 2009 and reached a level of around 75% in 2009. In Bangladesh the GER at lower secondary increased from 60% in 2006 to 62% in 2008 but thereafter decreased to 56% in 2009 (See Fig. 5). It is alarming to note that in all the countries of South Asia, the GER at upper primary not only showed a very slow growth but also remained at very low varying from as low as 25% in Pakistan to a maximum of 47.0% in India in 2009 (See Fig. 6). Analysis of data show that the GER at upper secondary increased from 29% ton 38% in Bhutan, from 21% to 25% in Pakistan, from 29% to 38% in India during 2006 to 2009. GER has reached a little high figure of 32% in 2007 from a low figure of 24% in 2006, but shows an upward trend in Nepal. However, Sri Lanka is the only country which has not only achieved a high GER of 73% at upper secondary by 2006 but also shows an upward trend.

Fig. 5: Gross Enrolment Ratio (Total) in Lower Secondary by Country   from 2006 to 2009 in South Asia
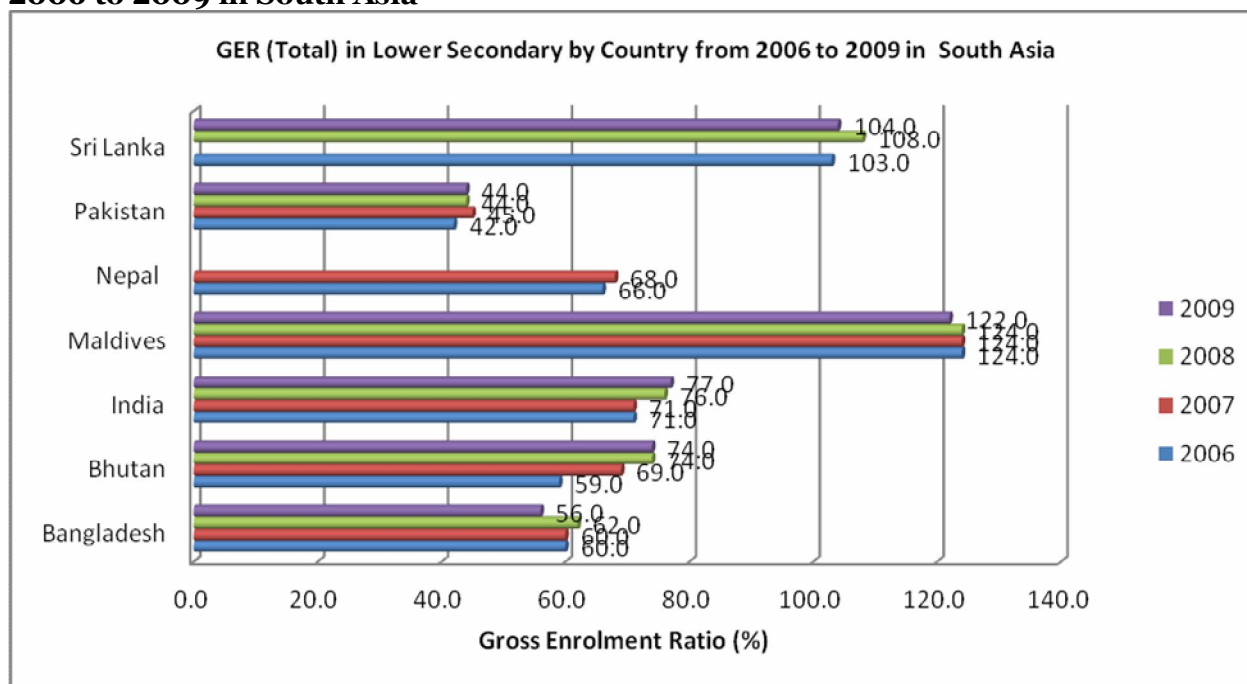
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 4, Annexure I).
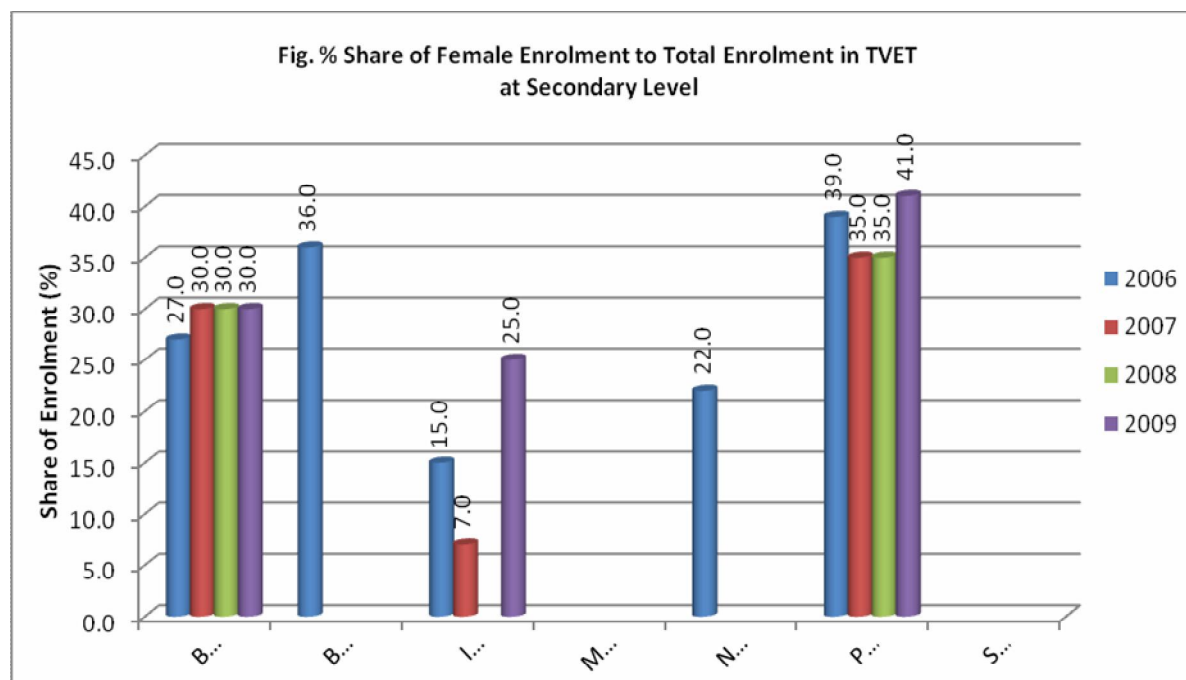
Fig. 6: Gross Enrolment Ratio (Total) in Higher Secondary by Country from 2006 to 2009 in South Asia
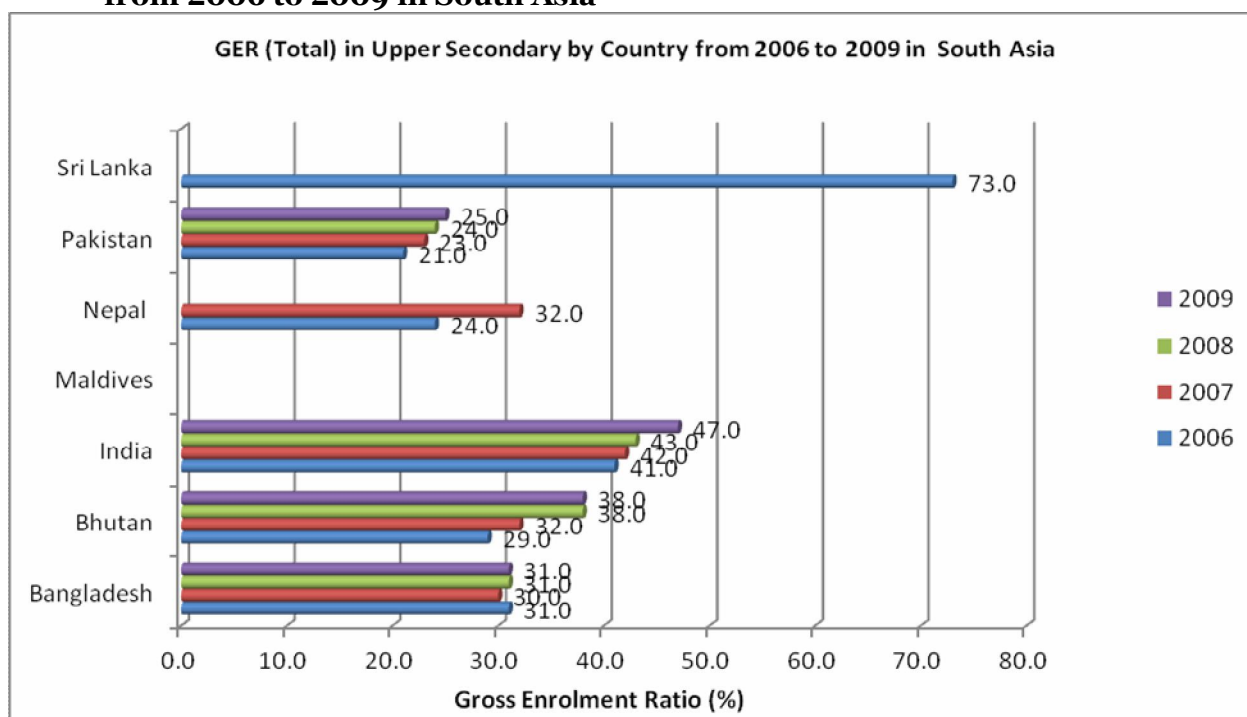
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 5, Annexure I).

South Asia is the sub region with the lowest enrolment rate at secondary level. This low participation is essentially the result of the low proportion of children who reach the last grade of primary education as can be seen in Bangladesh (where only 58 percent of the relevant age group reach the end of primary), Pakistan (where 60 percent of the relevant age group reach the end of primary) and in some States of India (e.g., Bihar, Madhya Pradesh Orissa, Rajasthan, Uttar Pradesh). The low participation rate can be further explained by the selection process that takes place at the end of every cycle. Indeed, some selection still exists at the end of primary in some countries as only pupils who have had satisfactory examination results are admitted to secondary level, for example in Bangladesh and Nepal. Another selection takes place at the end of the different cycles of secondary education, lower secondary and upper secondary, with or without a public examination. But as the educational pyramid of Pakistan illustrates, drop out occurs throughout the education cycle, in the middle or at the end of every grade. Besides socio-economic and cultural factors, political instability and problems of security may contribute to such drop out problems. In both Pakistan and Bangladesh, private schools contribute to the provision of secondary education. They enrol a high proportion of students, 31 percent in Pakistan and as much as 96 percent in Bangladesh where public schools are rare in rural areas.

The government supports teacher salaries in most of the Bangladeshi schools (government-aided schools), but a contribution may still be requested from families which may prevent children from poorer families attending school. In Bangladesh, the BRAC (Bangladesh Rural Advancement Committee), the largest southern NGO founded in the country, offers alternative primary education opportunities for young people in remote rural areas and in urban slums, encouraging them to transfer to the formal sector afterwards. Another alternative exists at post primary level. Madrasas, religious schools, enrol 17 percent of all secondary students in the country. Recognized madrasas offer a modern curriculum where alongside religious studies students are educated in secular subjects such as Science, Mathematics, English and Geography. Their graduates are eligible for admission to secular educational institutes for higher education. A similar parallel system of religious schools also exists in Pakistan and offers an education meant to be equivalent to the traditional system. India has announced a policy of universal secondary education to support its economic development. The country has witnessed a massive expansion of educational facilities in the past decades. Enrolment has grown fast up to secondary level but the coverage varies a great deal from state to state. In some states, coverage remains low as poverty and various socio-cultural factors continue to cause low enrolment and a high level of drop out. Drop out rates increase with grades and levels of education (Sujatha, 2010). Public examinations at the end of upper primary (grade VIII), secondary (grade X) and upper secondary ensure a fairly strict selection of those who are allowed to continue. The different states support government schools and some private schools (government aided schools). Although the proportion of students in the different kinds of schools varies from state to state, private unaided schools have mushroomed in recent years following the economic liberalisation policy.

This trend indicates a fairly strong demand for quality education that prepares students for higher learning. Thus in many South Asian countries, the expansion of secondary enrolment depends primarily on the success of policies aimed at improving primary completion rates. It depends too on selection procedures and policies concerning access to the different stages of secondary education. Specific measures are also needed to reduce drop out at lower secondary level, including improving the quality of education. Sri Lanka and Iran (Islamic Republic of) are exceptions: they have both high primary and secondary enrolment rates and they have reached gender parity. Sri Lanka has been for many years the example of a country which succeeded in offering wide access to secondary education in spite of limited government resources. The Asia-Pacific region is very large and very diverse. Each country and within each country, each province or state may present very specific conditions and problems. This quick diagnosis of secondary education coverage needs to be refined at the country level by analysing the concrete conditions of secondary education provision, the specific social and cultural dimensions, as well as government policy and its implementation.

1.3.4 *Progress towards Gender Parity in Secondary Education*

At the secondary school level, all the countries in South Asia have moved closer to gender parity. Bangladesh, Maldives and Sri Lanka had achieved GPIs of more than 1.0 by 2008, Bhutan has a good change of achieving gender parity by 2010 since it has already achieved a GPI of 0.99 in 2009. India is also moving on the track to achieve gender parity by 2015. However, Pakistan is the only countries where the gender parity is not only low (below 80%) but also has been moving at a very slower rate from 2006 to 2009 (see Fig. 7).

Fig. 7: Gender Parity Index (GPI) of GER at Secondary Level from 2006 to 2009 in South Asia
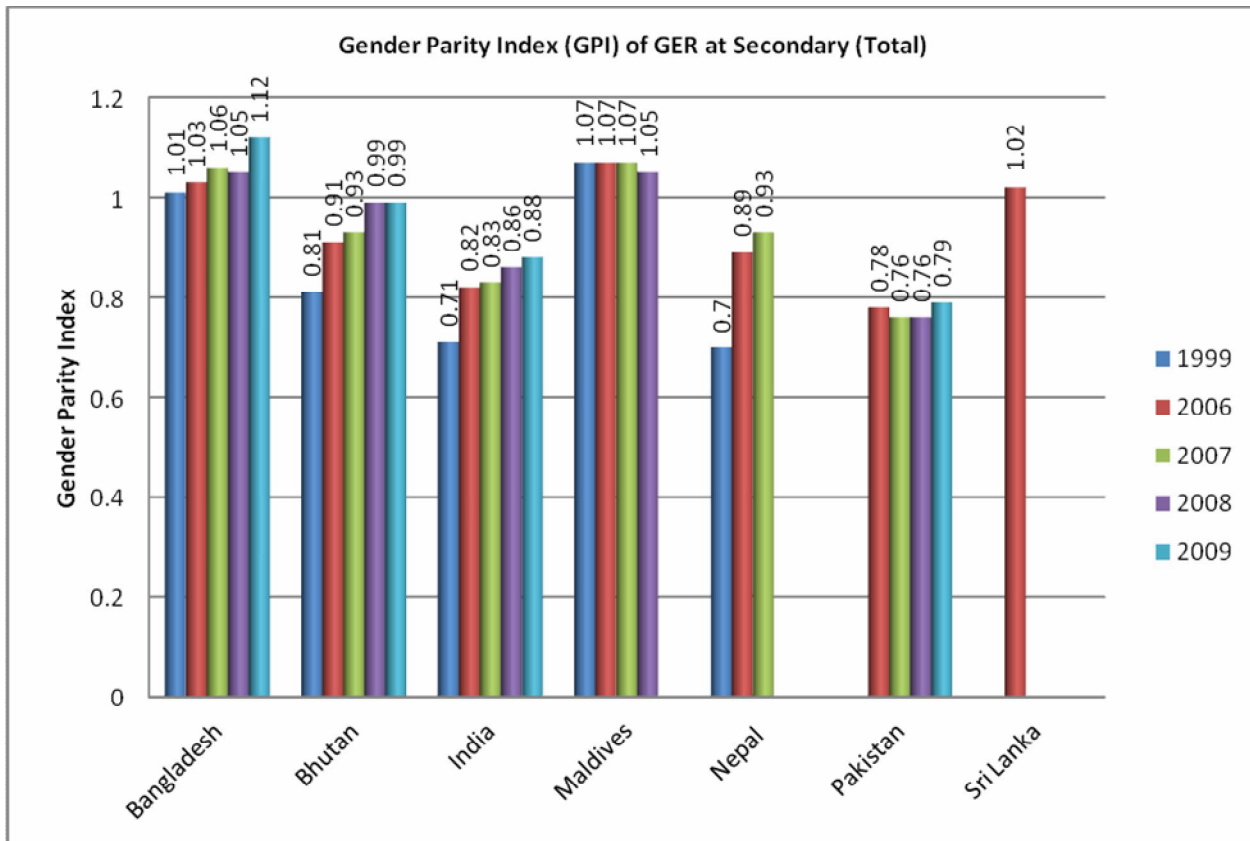
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO
 Publishing House, Oxford University Press, Paris, France. (Table 6,
 Annexure-I)

1.3.5   Gender Parity in Lower Secondary Education

Except India, Nepal and Pakistan all the remaining countries in South Asia have already achieved gender parity at lower secondary level. However, Nepal and India (0.94%) are very close to gender parity and are most likely to achieve it by 2015 as per the past trend. As per the latest data available, the GPI of Bangladesh at lower secondary (grade VI-X) stands at 1.2 in 2010 (see Fig. 8).

Fig. 8: Gender Parity Index (GPI) in Lower Secondary Education from 2006 to 2009 by Country in South Asia
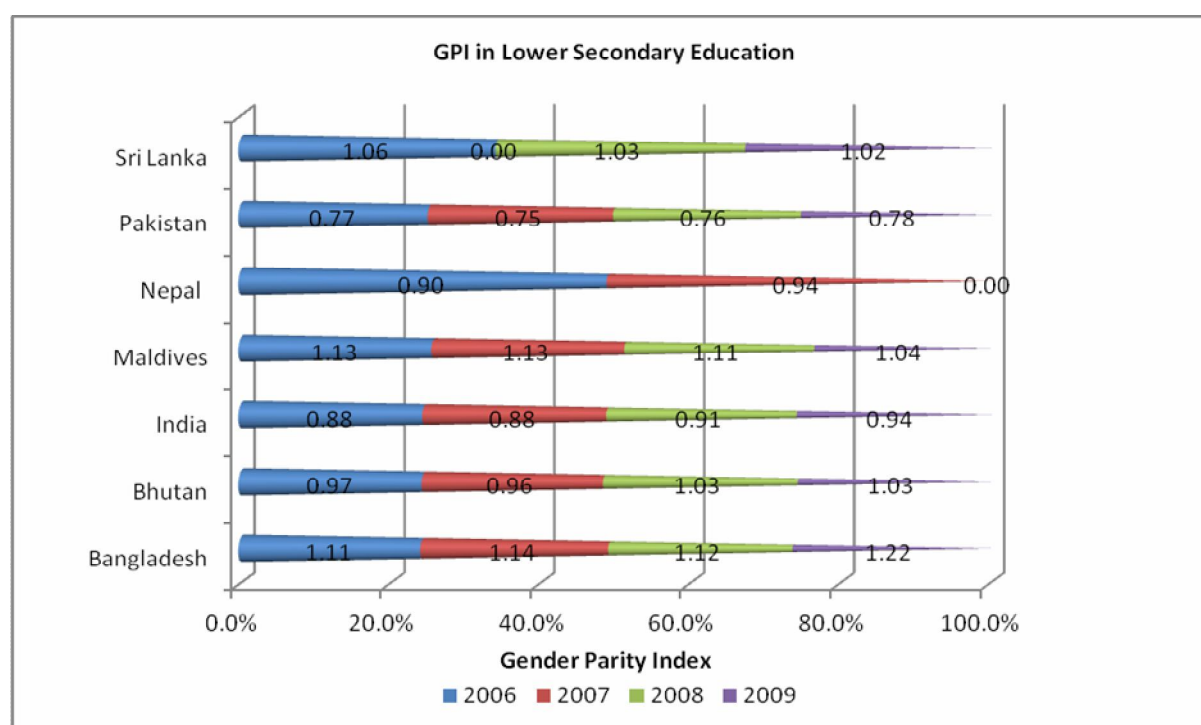
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House,
         Oxford   University Press, Paris, France (Table 7, Annexure-I)

1.3.6   Gender Disparities in Access to Upper Secondary Education

Data show that globally, the participation of young women in upper secondary education has increased, with the female GER at this level rising from 43% to 55% between 1999 and 2009. Women continue to face significant barriers to upper secondary education in South Asia. Except in Bangladesh where the gender parity is in favour of girls the gender parity at upper secondary level is about 0.8 in the remaining countries in South Asia (see Fig. 9).

Fig. 9: Gender Parity Index (GPI) in Upper Secondary Education from 2006 to 2009 by Country in South Asia
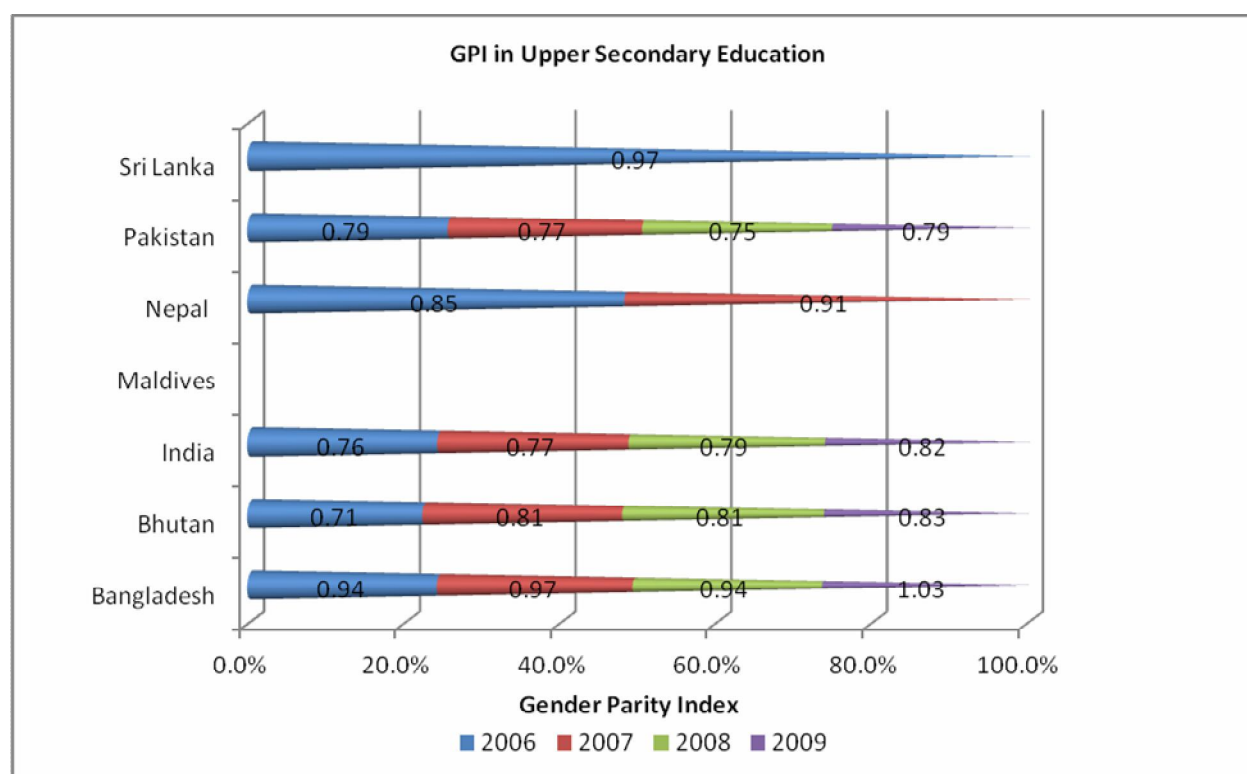
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 7, Annexure-I)

1.3.7   *Transition from Primary/Upper Primary to Secondary Level*

The transition from primary to lower secondary education explores potential barriers to secondary education in a country. Currently lower secondary education is compulsory in approximately 80% of countries in the world, and hence the transition to secondary education needs to be ensured in those countries. Greater priority should, thus, be given to the transition from primary to lower secondary education. The UIS has developed the effective transition rate to better reflect the real transition rate of pupils from primary to lower secondary education. This indicator can be used to inform policy makes who aim at reconciling imbalances between the supply of and demand for education. As illustrated in Figure 10, transition rates are 95% and above in most countries in South Asia. The notable exception is Pakistan with a transition rate of 73% (see Fig. 10).

The Effective Transition Rate

The UIS developed a new indicator, the effective transition rate, to show the likelihood of a student moving to a higher level of education. It reflects the estimated transition of students from one education level to the next regardless of repetition. Other indicators can underestimate the transition rate from primary to lower secondary education because the denominator includes pupils who repeat the final grade in primary education (i.e. those who neither leave primary education nor advance to secondary education).

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Fig. 10: Transition Rate from Primary to Secondary by Gender and Country from 2005 to 2007 in South Asia

Fig. Transition Rate from Primary to Secondary by Gender and Country from 2005 to 2007 in South Asia
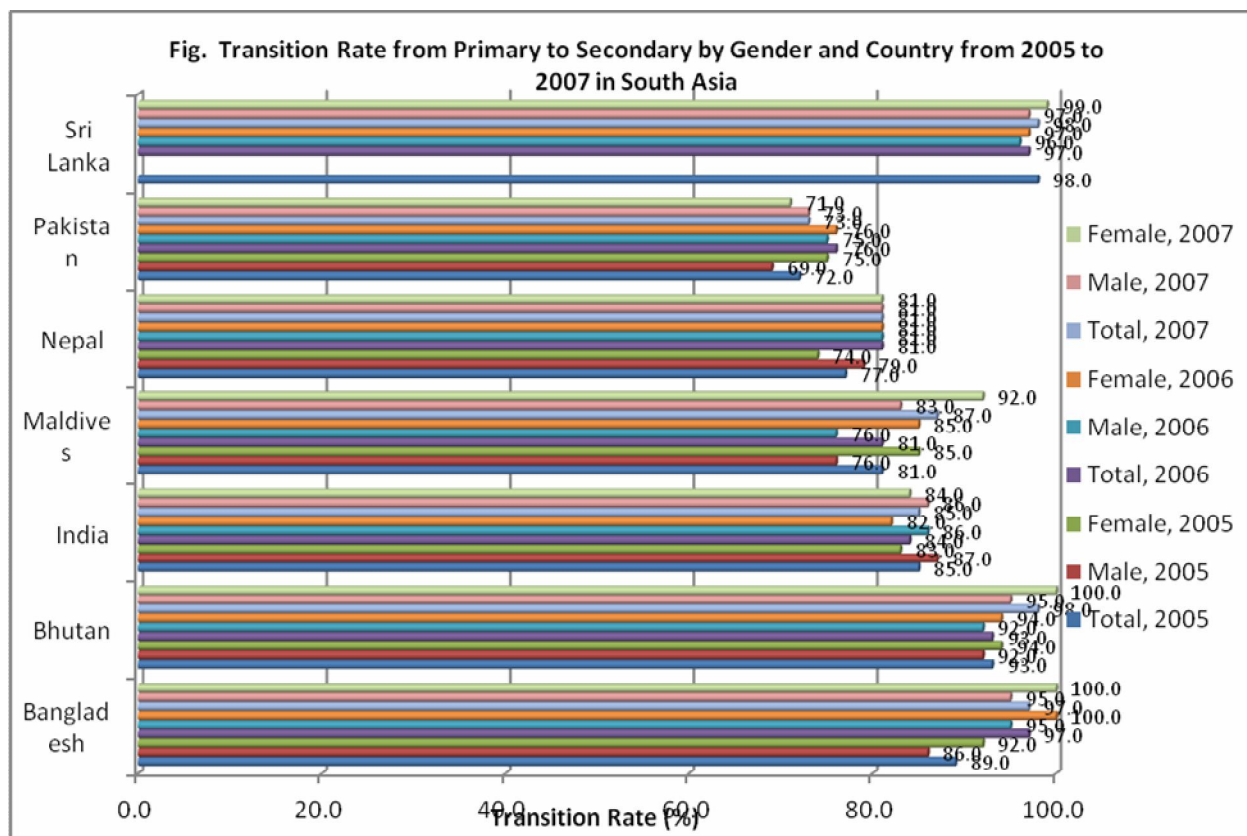
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 8, Annexure-I)

For secondary education, the effective transition rate in a given year (t) is based on the following calculation method: the number of new entrants to the first grade of lower secondary education for the following year (t + 1) is divided by enrolment in the last grade of primary education (in the given year (t)) minus the number of repeaters from the last grade of primary education in the following year (t + 1), and the result is multiplied by 100. This indicator can help assess the potential barriers in an education system. These barriers can be related to different factors, such as cost barriers (e.g. enrolment fees, expenses to purchase textbooks or school uniforms, etc.) or supply issues (e.g. limited number of teachers or classrooms). In general, a low effective transition rate is linked to two key factors: i) a high dropout rate from the last grade of primary education; and ii) limited access to lower secondary education. The new indicator better reflects situations where pupils repeat the last grade of primary education but eventually make the transition to lower secondary education.

Analysis of data shows that there is a gap in the effective transition rate from primary to secondary (from 2008 to 2009) in South Asia. While Bhutan has reached transition rate of 98% with Maldives (96%) and Sri Lanka (97%) Pakistan stands at 75% in 2009. In most of the countries the effective transition rates of girls are more than that of boys (See Table 1.2).

Table 1.2: **Effective Transition Rate from Primary to Secondary from 2008 to 2009 and Gross Entry Ratio to Lower Secondary in South Asia**

Country	Effective transition rate from primary to secondary (general Programmes				Gross entry ratio to lower secondary (ISCED 2)		
	2008 to 2009				General Programmes		
	Total	Male	Female	GPI	Total	Male	Female
Bangladesh	N.A	N.A	N.A	N.A	65.0	61.0	69.0
Bhutan	98.0	96.0	100.0	1.0	88.0	83.0	93.0
India	85.0	85.0	84.0	1.0	79.0	81.0	77.0
Maldives	96.0	93.0	100.0	1.1	127.0	131.0	121.0
Nepal	88.0	88.0	88.0	1.0	N.A	N.A	N.A
Pakistan	74.0	75.0	73.0	1.0	45.0	50.0	39.0
Sri Lanka	97.0	97.0	96.0	1.0	97.0	96.0	98.0

Source: EFA Global Monitoring Report, Various Years. UNESCO, Oxford University Press, Paris, France

1.3.8 Education Outcomes/Efficiency (Promotion/Passout/Drop-out and Repetition Rates)at Secondary Level in South Asia

The access to lower secondary education has been growing as indicated by high gross entry ratio in all the countries of South Asia except Pakistan (45%) and Bangaldesh (65%). It may be noted that the gross entry ratio for girls are more than that of boys in Bhutan and Sri Lanka. Gross graduation rates at lower secondary are very low in Pakistan (35%), Bangaldesh (45%) and Bhutan (67%). This may be attributed to high dropout and repetition rates (see Table 3). As per the latest data available, the secondary cycle (VI-X) dropout rate was as high as 57.2% (boys 60.5% and girls 53.8%) in Bangladesh in 2010. This dropout rate coupled with high repetition rate has led to low completion rate which was only 42.9% (boys 39.5% and girls 46.2%) and co-efficient of internal efficiency is as low as 50.1 (boys 48.87 and girls 51.37) in 2010 (Source: Bangladesh Bureau of Educational Information and Statistics (2010). Dhaka, BANBEIS) and similar situation is observed in Pakistan also. As per the latest data available, the promotion rate at secondary level (grades IX-X) in India is 73.8% (73.0% for boys and 74.8% for girls) in 2009-10 (Source: SEMIS 2009-10, NUEPA, New Delhi).

Table 1.3: Promotion/Graduation Rate and Repetition Rates at Lower Secondary in 2010 in South Asia

| Country | Percentage of repeaters | | | | | | | | | Gross graduation ratio for lower secondary (ISCED 2) | | | | | |
| | Total Secondary (ISCED 2 and 3), general Programmes | | | Lower Secondary (ISCED 2), general Programmes | | | Upper Secondary (ISCED 3), general Programmes | | | All Programmes | | | General Programmes | | |
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bangladesh	9.0	9.0	8.0	7.0	7.0	7.0	12.0	12.0	11.0	45.0	41.0	48.0	45.0	41.0	48.0
Bhutan	4.0	4.0	4.0	5.0	5.0	5.0	2.0	3.0	2.0	67.0	67.0	67.0	67.0	67.0	67.0
India	N.A	N.A	N.A	5.0	5.0	4.0	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
Maldives	7.0	8.0	7.0	8.0	8.0	7.0	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
Nepal	N.A	N.A	N.A	8.0	8.0	8.0	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
Pakistan	2.0	3.0	2.0	3.0	3.0	3.0	1.0	1.0	1.0	35.0	41.0	29.0	35.0	41.0	29.0
Sri Lanka	N.A	N.A	N.A	1.0	2.0	1.0	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A

Source: Ibid.

1.4 Teachers at Secondary Level in South Asia

1.4.1 *Secondary School Teachers: The Learning Environment and Educational Quality*

It is well recognized that expanding secondary education will be a key factor for improving social development and economic growth in the years to come. Section 1.3 shows that the number of secondary school students worldwide grew from 196 million in 1970 to 531 million in 2009. However, while improving rates of access to and completion of secondary education are important, improving the quality of secondary education is also essential for equipping children with a basic level of knowledge and a useful set of skills needed to succeed in today's world. For countries still striving to meet the international goal of UPE, additional demands to develop secondary education represent significant challenges, particularly where human and financial resources are tightly constrained. In particular, countries will increasingly need to consider policies targeting secondary education teachers. According to Mulkeen (2010), a successful policy for teachers should effectively address the following four interconnected challenges:

- Supply: training a sufficient number of teachers, including in specialised subjects;

- Distribution: ensuring a sufficient number of qualified teachers, with a fair gender composition and with geographical equity in deployment;

- Quality of teaching: this should be achieved through quality pre-service training, as well as continuous professional development, management and pedagogical supervision; and

- Cost: countries at various stages of social and economic development have to meet these challenges in the context of budget constraints and other competing educational priorities.

This section examines both quantity and quality issues related to secondary-level teachers. It addresses a range of policy-oriented questions such as: how has the number of secondary school teachers grown over the past two decades? What is the training status of thee teachers? What is relationship between teachers and students measured in term of Teacher-Pupil Ratio? Moreover,

wherever available, the data are disaggregated into lower and upper secondary education to better capture varying trends. This is particularly important from a policy perspective, given differences in how countries organize and provide secondary educational opportunities.

1.4.2   *Dramatic Rise in the Number of Secondary Teachers*

Table 4 shows that the total number of secondary teachers grew by 50%, from 20.3 million to 30.4 million between 1990 and 2009. During the same period, the number of primary teachers increased by 27%, from 22.2 million to 28.3 million. Globally, there have been more teachers working in secondary education than at the primary level since 2002.

The biggest increases in total numbers of primary and secondary school teachers from 1990 to 2009 were observed in South Asia (49%). In South Asia (in particular in India and Pakistan), growth has been especially rapid since 2000 with the passage of international agreements set out in the EFA Dakar Framework for Action. In absolute terms, the increase was maximum in India followed by Bangaldesh, Nepal and Bhutan. At lower secondary level the increase was highest in Bangaldesh followed by Bhutan, Maldives, Nepal and Sri Lanka and at Upper secondary level the increase in number of teachers was maximum in Bangaldesh followed by Bhutan and Nepal (see Table 4). However, South Asia is still faced with acute teacher shortages in its bid to meet the EFA goals by 2015. For example, assuming an average regional PTR of 40:1 South Asia need to increase their teaching workforce to 2.2 million to achieve the EFA goals by 2015 (UIS, 2011c).

Data on gender can also help educational planners make better use of untapped human resources by taking a more targeted approach to teacher training and recruitment. While there is no international target for the proportion of female teachers, there is a growing awareness that policies aimed at achieving gender balance in the teaching workforce are necessary, in particular since the teacher's gender may influence children's access, completion and overall achievement levels (Lewis and Lockheed, 2007; Lockheed and Mete, 2007; UIS, 2010a). Analysis of data in Table 4 shows that the proportion of female teachers at both lower and upper secondary levels increased since 1999. The largest increase occurred in Bhutan, where women now account for almost one-half (49%) of all secondary school teachers. The reverse is true in Nepal where the proportion of female secondary school teachers is not only the lowest of all regions, but this proportion has increased from 93% to 15% between 1999 and 2009. However, the participation of women teachers at the secondary level is more than 50% in Pakistan (51%) and Sri Lanka (63.07%) (see Table 4). Analysis of Table 4 also reveals that the proportion of female teachers has declined between lower and upper primary levels of education during 1999 to 2009 in almost all countries of South Asia (see Figs. 11, 12 and 13).

In **India**, the number of teachers in secondary/higher secondary schools has increased from 0.13 million in 1950-51 to 2.13 million in 2005-06 and to 2.91 million in 2009-10. The share of female teachers was 15.74 per cent in 1950-51 which has increased to 38.12 per cent in 2005-06 and further to 41.0% in 2009-10. Between 1950-51 and 2009-10, the increase in total number of teachers in secondary/higher secondary schools is more than 22 times (Source: SES, various years, MHRD, Govt. of India and SEMIS 2009-10, NUEPA, New Delhi). In **Bangladesh**, the number of teachers in secondary schools has increased from 0.14 million in 1995 to 0.24 million in 2006 and decreased to 0.21 million in 2010. The share of female teachers was 13.88 per cent in 1995 which has increased to 20.30 per cent in 2006 and further to 23.09% in 2009-10. Between 1995 and 2010, the increase in total number of teachers in secondary schools is nearly 1.5 times (Source: Bangladesh Bureau of Educational Information and Statistics , 2010, Dhaka, BANBEIS) (See Table 1.9, Annexure I).In **Pakistan**, the number of teachers in high schools has increased from 0.17 million in 1992-93 to 0.42 million in 2005-06 and further increased to 0.45 million in 2009-10. The share of female teachers was 41.12 per cent in 1992-93 which increased to 50.32 per cent in 2005-06 and further to 51.69% in 2009-10. Between 1992-03 and 2009-10, the increase in total number of teachers in

secondary schools is nearly 2.7 times (Source: Annual Pakistan Education Statistics Reports, AEPAM, Islamabad, Pakistan (See Table 1.10, Annexure I).

Table 1.4: Teachers at Secondary Level from 1999 to 2009 in South Asia

Country	Lower Secondary									
	1999		2006		2007		2008		2009	
	Total (000)	% of Female	Total (000)	% of Female	Total (000)	% of Female	Total (000)	% of Female	Total (000)	% of Female
Bangladesh	136	13.0	186	17.0	220	20.0	N.A.	N.A.	196	20.0
Bhutan	0.4	32.0	1	49.0	1.4	38.0	N.A.	N.A.	2	54.0
India	N.A.	N.A.	1312	37.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Maldives	0.8	25.0	3	39.0	3	39.0	N.A.	N.A.	3	40.0
Nepal	22	12.0	30	16.0	28	19.0	N.A.	N.A.	28	19.0
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	N.A.	67	64.0	69	69.0	N.A.	N.A.	68	69.0
Upper Secondary										
Bangladesh	129	13.0	192	19.0	193	20.0	N.A.	N.A.	175	20.0
Bhutan	0.2	32.0	0.8	28.0	0.8	25.0	N.A.	N.A.	1	41.0
India			1274	31.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Maldives	0.05	27.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nepal	18	7.0	N.A.	N.A.	28	11.0	N.A.	N.A.	28	11.0
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	N.A.	52	62.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Total Secondary										
Bangladesh	265	13.0	378	18.0	414	20.0	414	20.0	371	20.0
Bhutan	0.6	32.0	2	41.0	2.2	33.0	3	49.0	3	49.0
India	1995	34.0	2586	34.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Maldives	0.9	25.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nepal	40	9.0	N.A.	N.A.	56	15.0	56	15.0	56	15.0
Pakistan	N.A.	N.A.	197	51.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	N.A.	119	63.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Ibid.

Fig. 11: Percentage of Female Teachers from 1999 to 2009 at Total Secondary in South Asia
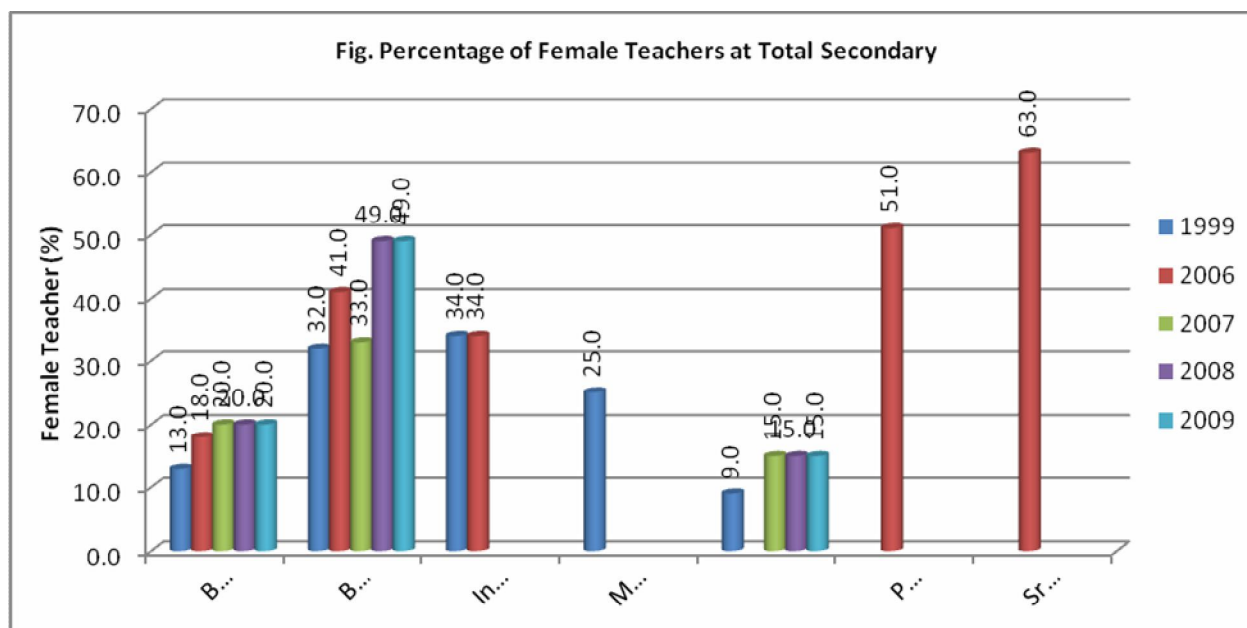
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 1.4)

Fig. 12: Percentage of Female Teachers from 1999 to 2009 at Lower Secondary in South Asia
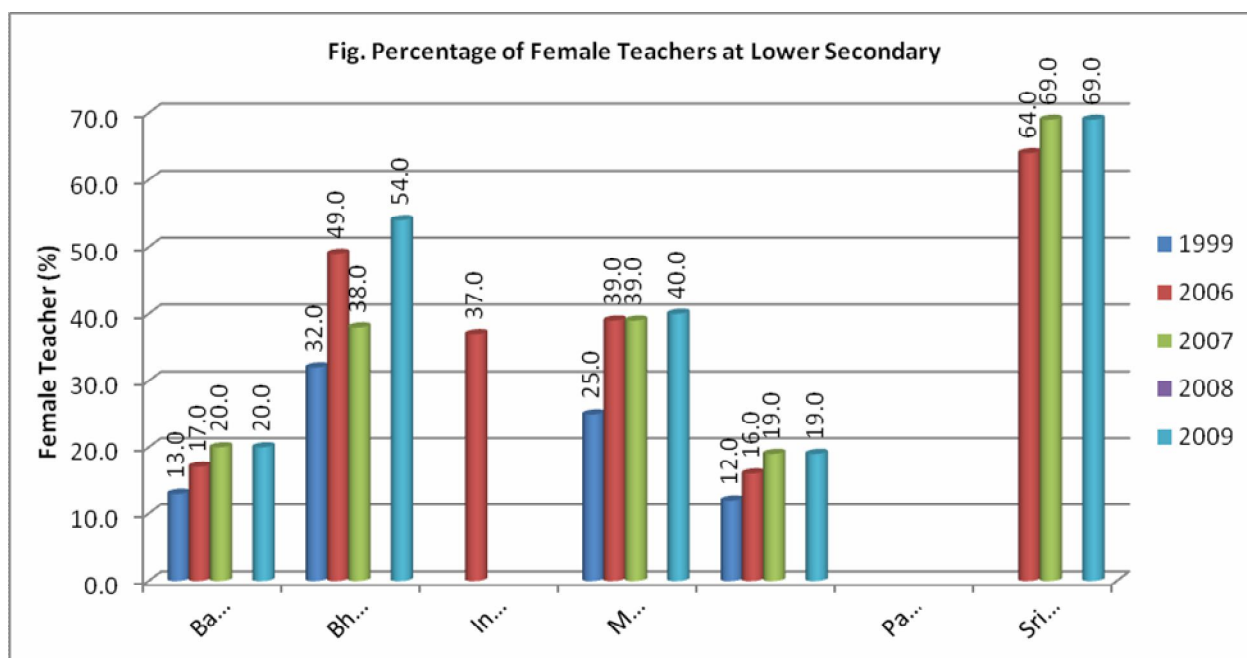
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 1.4)

Fig. 13: Percentage of Female Teachers from 1999 to 2009 at Upper Secondary in South Asia
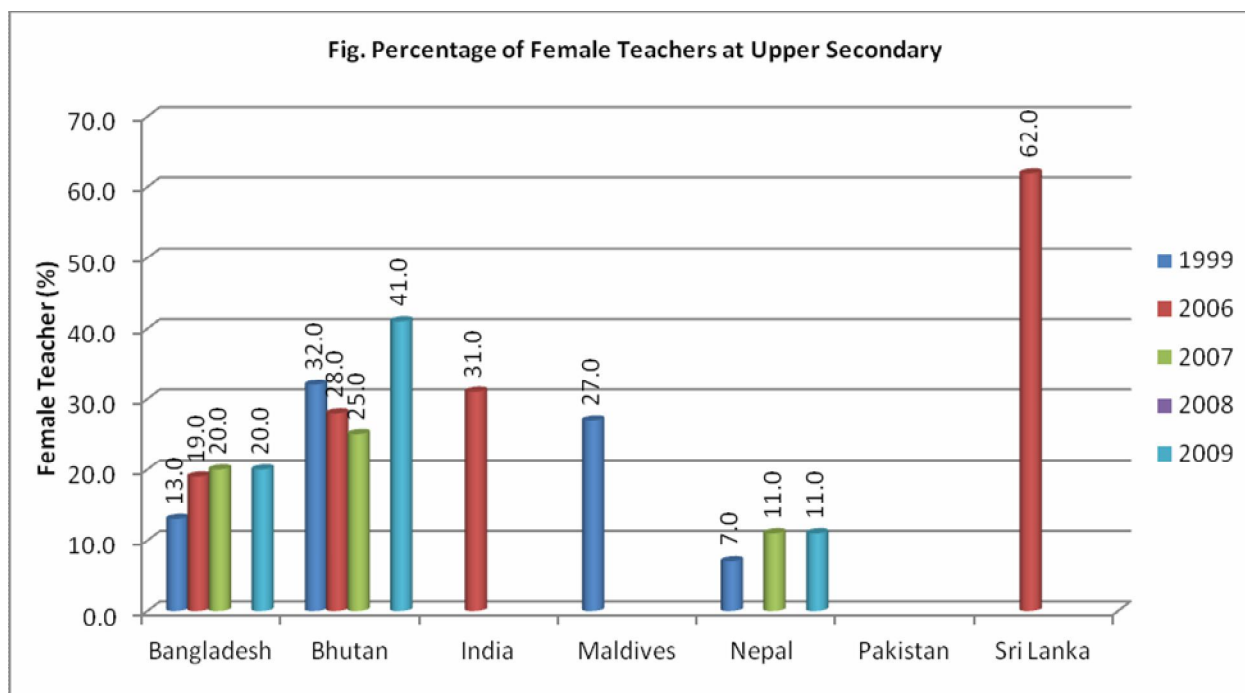
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 1.4).

1.4.3   *Teachers by Training Status*

Given the increasingly complex nature of the subjects taught in secondary education, most countries have policies to ensure that teachers at this level have higher qualifications than their primary school counterparts. Globally, primary school teachers show substantial variability between and within regions regarding the minimum required level of education, which ranges from secondary- to tertiary-level qualifications. In the majority of countries, lower secondary teachers must have a post-secondary non-tertiary (ISCED 4) or tertiary-level (ISCED 5) qualification, while upper secondary teachers are almost universally required to have a tertiary level (ISCED 5) accreditation (UIS, 2006).

The indicator 'percentage of trained teachers' is used to measure the quality of the teacher workforce. However, given the wide variety of teacher training programmes available globally, this indicator does not readily permit for international comparability. For instance, national standards for training primary school teachers in some countries may require completion of a two-year teacher training programme at the upper secondary level (i.e. ISCED 3), whereas in other countries, a primary school teacher must complete four years of training in a tertiary-level institution (i.e. ISCED 5) after completing secondary education.

Furthermore, some teachers hold a tertiary-level (ISCED 5) qualification without having completed a programme specifically in pedagogy. In some countries, these teachers would be considered untrained. Given the differences in teacher training strategies across countries, it is difficult to constitute internationally comparable data on the medicate percentage of trained teachers. At best, this indicator provides a useful measure of how well countries are able to meet their own standards and norms for training teachers.

Table 1.5: Percentage of Trained Teachers at Secondary Level from 2006 to 2009 in South Asia

Country	School year ending in 2006			School year ending in 2007			School year ending in 2009		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bangladesh	32.0	31.0	35.0	39.0	39.0	41.0	50.0	48.0	58.0
Bhutan	92.0	92.0	92.0	83.0	N.A.	N.A.	83.0	N.A.	N.A.
India	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Maldives	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nepal	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	58.0	58.0	60.0
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Ibid.

In Sri Lanka, only 56% of upper secondary teachers hold tertiary level (ISCED 5A) qualifications. Given the lack of qualified teachers, Sri Lanka recruits many upper secondary school teachers with qualifications no higher than the level they will teach, which raises questions about whether teachers can meet their students' learning needs. Bhutan is also challenged in the training and recruitment of sufficient numbers of qualified teachers in secondary education. In that country, 83% secondary teachers have tertiary-level qualifications (ISCED 5).

1.4.4   *Pupil-Teacher Ratio at Secondary Level in South Asia*

The pupil-teacher ratio (PTR) is an important indicator which measures the overall level of teacher deployment and, as such, needs to be considered when evaluating the demand for and supply of teachers. High PTRs may signify an overstretched teaching staff, while low ratios may indicate additional capacity. It is important to note that PTRs reflect the human resource capacities of education systems but should not be confused with class size, which is the subject of a distinct indicator. Fig.14 presents trends in PTRs for lower and upper secondary education from 1999 to 2009. PTRs are lower at upper secondary than the lower secondary level in all the countries of South Asia in 2009 (see Figs 14 & 15).

During this period, 1999 to 2009 PTRs in secondary schools remained stable for all countries except Nepal, where the ratio increased significantly. With a current ratio of 31:1, in South Asia Nepal has the highest PTR in the region (40:1). In Sri Lanka, however, there are only 20 pupils per teacher, which is the lowest PTR at secondary level in South Asia (see Table 1.6).

Fig. 14: Pupil-Teacher Ratio at Lower Secondary from 1999 to 2009 in South Asia
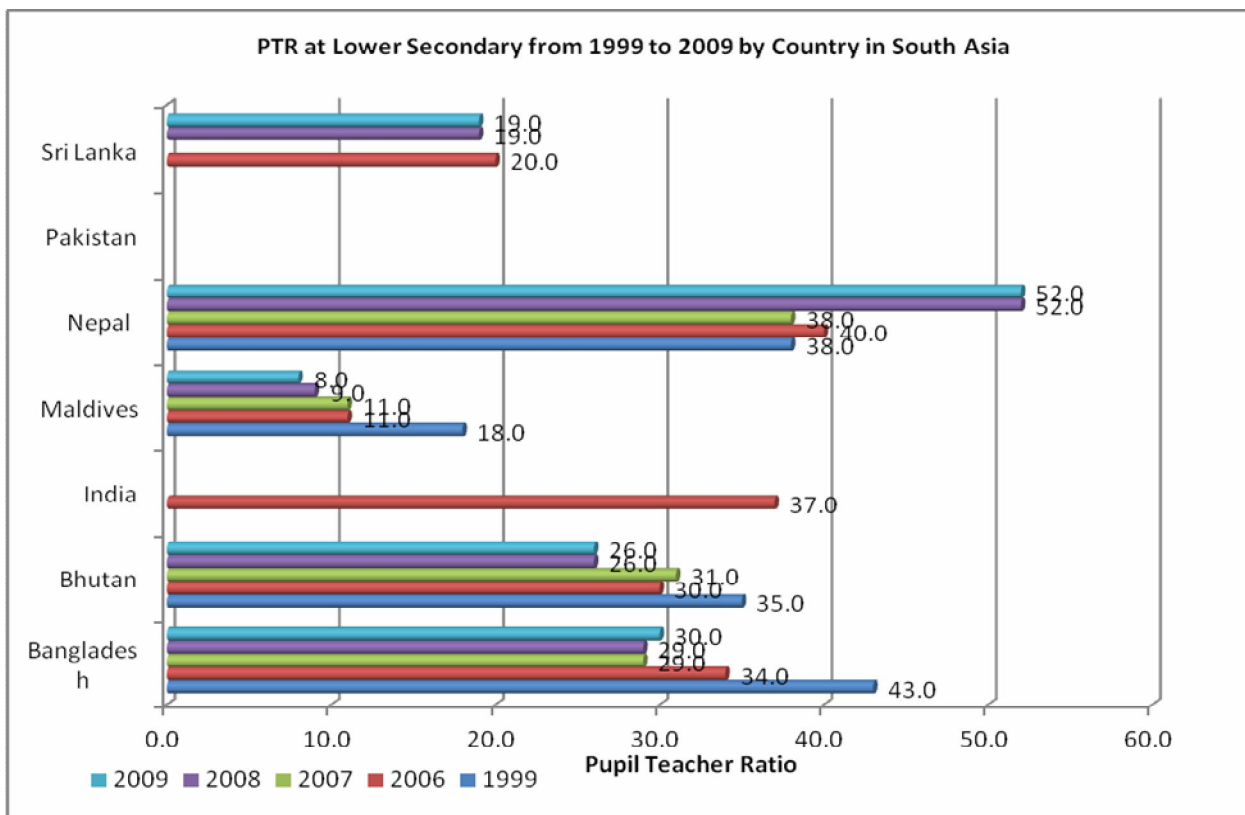
Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France (Table 1.6)

Fig. 15: PTR at Upper Secondary from 1999 to 2009 by Country in South Asia
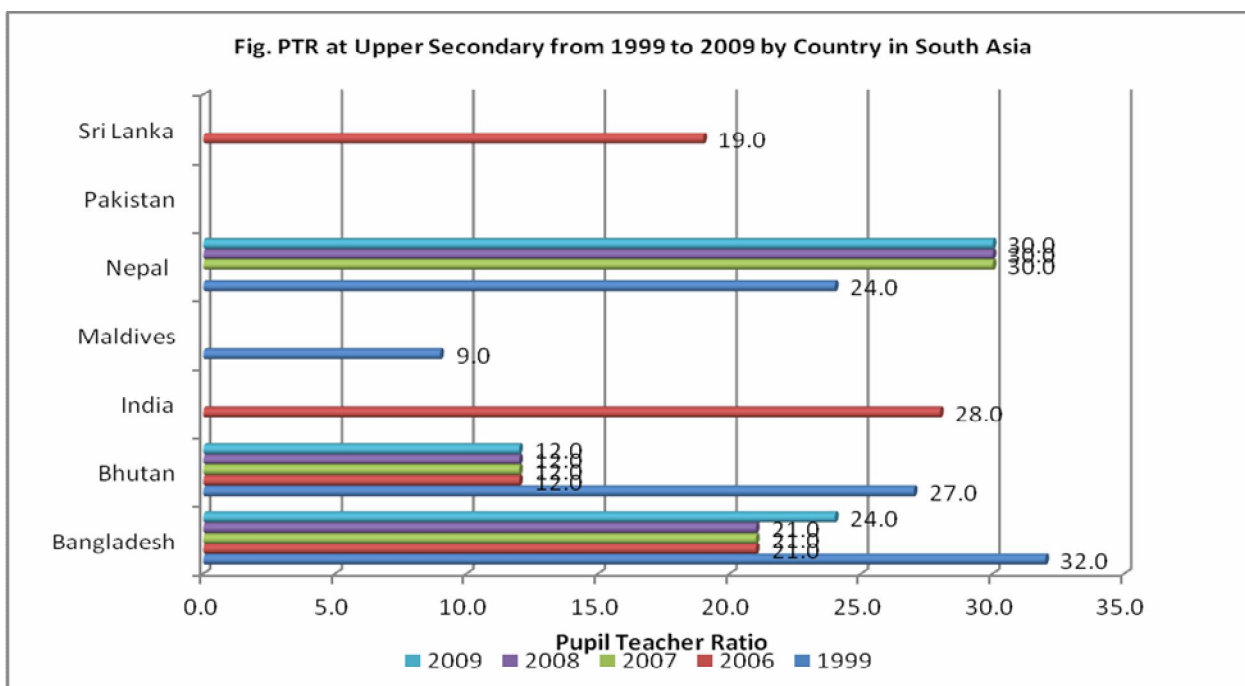
The PTR is often treated as a proxy for measuring educational quality. For instance, it can generally be stated that the higher the PTR, the less contact there is between teachers and their students. For a variety of children, this may have consequences which go further than just poor quality instruction. High PTRs can contribute to the risk of grade repetition or dropout among students. It can be seen from Table 6 and Figs. 13 & 14 that there is a close relationship between PTR (as a proxy measure of quality of education) and the gross graduation ratio (as a measure of education output).l it demonstrates that countries with high PTRs at the lower secondary level also tends to have lower graduation ratios at this level.

Table 1.6: Pupil-Teacher Ratio at Secondary Level during 1999 to 2009 in South Asia

Name of the Country					
Lower Secondary	**1999**	**2006**	**2007**	**2008**	**2009**
Bangladesh	43.0	34.0	29.0	29.0	30.0
Bhutan	35.0	30.0	31.0	26.0	26.0
India	N.A.	37.0	N.A.	N.A.	N.A.
Maldives	18.0	11.0	11.0	9.0	8.0
Nepal	38.0	40.0	38.0	52.0	52.0
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	20.0	N.A.	19.0	19.0
Upper Secondary					
Bangladesh	32.0	21.0	21.0	21.0	24.0
Bhutan	27.0	12.0	12.0	12.0	12.0
India	N.A.	28.0	N.A.	N.A.	N.A.
Maldives	9.0		N.A.	N.A.	N.A.
Nepal	24.0	N.A.	30.0	30.0	30.0
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	19.0	N.A.	N.A.	N.A.
Total Secondary					
Bangladesh	37.0	27.0	25.0	37.0	27.0
Bhutan	32.0	23.0	24.0	32.0	21.0
India	34.0	33.0	N.A.	34.0	N.A.
Maldives	17.0	N.A.	N.A.	17.0	N.A.
Nepal	32.0	N.A.	41.0	32.0	41.0
Pakistan	N.A.	42.0	N.A.	N.A.	N.A.
Sri Lanka	N.A.	20.0	N.A.	N.A.	N.A.

Source: Ibid.

1.5 Financing Secondary Education: Current Conditions, Cost Structures and Policy Options

1.5.1 *Public Expenditure on Education in South Asia*

Public spending on education is a vital investment in national prosperity and has a crucial bearing on progress towards the goal of Education for All in South Asia. Several countries in the region backed up stronger economic growth between 1999 and 2008 with increased commitments to education, but the recent financial crisis had a negative impact on government spending in education in some countries. Plans by donors and national governments to reduce fiscal deficits in coming years also threaten future increases in education spending required to achieve the EFA goals in the region.

Low levels of literacy and school enrolment were once thought to be a consequence of poverty. This myth has been destroyed by a number of studies, particularly those undertaken by the World Bank (World Bank, 1991). The experiences of Europe, Japan, and South East Asia suggest that, rather than being a consequence, universal mass education is probably a necessary prerequisite for economic growth (World Bank, 1993; Tilak 1994).

Education in South Asia is largely State-funded (95 per cent in Sri Lanka and 85 per cent in India). Even so, public expenditure on education remains low. Over the past decade, South and West Asia as a whole registered a slight decrease in the commitment to education, with the share of national income invested in education declining from 3.7% in 1999 to 3.5% in 2008. This is far below the world average of 5%. The percentage of GNP allocated to education is less than 3 per cent in Pakistan and Bangladesh, just over 3 per cent in India. Nepal increased its education financing effort over the period from 2.9% in 1999 to 4.6% in 2009,i.e., by 1.7 percentage point. The Maldives is an exception, with 10.3 per cent of its GNP spent on education in 2009. By contrast, India had reduced education spending as a share of GNP from 4.5% in 1999 to 3.6% in 2009 and Bhutan has reduced the same from 7.25 in 2006 to 4.8% in 2009 in (see Table 7). Most of the education budget is spent on teachers' salaries, leaving little to improve the infrastructure or raise the standards of teaching and learning.

The period from 1999 to 2008 was marked by high economic growth. The rate at which growth is converted into increased education spending depends on wider public spending decisions. In Nepal and Pakistan, real growth in education spending has been higher than rates of economic growth. However, Bangladesh, Bhutan and India have converted a smaller share of the growth premium into education financing. In India, real spending on education increased by an average of 1.9% annually between 1999 and 2009 while economic growth averaged 6.9% a year.

The commitment to education varies considerably. There are large variations in the share of national income devoted to education by countries in the region, with percentages ranging from 2.4% in Bangladesh to 10.3% in the Maldives. Countries with similar per capita income allocate different shares of national income to education. For example, Nepal allocates 4.6% while Bangladesh, with a similar level of income per capita, allocates only 2.3%.

In **Pakistan**, public expenditure on education lies on the fringes of 2 percent of GDP. However, the government recently approved the new national education policy, which stipulates that education expenditure will be increased to 7% of GDP, an idea that was first suggested by the Punjab government. During the past 37 years, the highest public expenditure on education was 2.80 percent of GDP in 1987-88. Public expenditure on education as a percentage of GDP was actually reduced in 16 years and maintained in 5 years between 1972–73 and 2008-09. Thus, out of total 37 years since 1972, public expenditure on education as a percentage of GDP either decreased or remained stagnant for 21 years. Hence, if linear trend were maintained since 1972, Pakistan could

have touched 4 percent of GDP well before 2015. However, it is unlikely to happen because the levels of spending have had remained significantly unpredictable and unsteady in the past. Given this disappointing trajectory, increasing public expenditure on education to 7 percent of GDP would be nothing less than a miracle.

Public Expenditure on Education as percentage to GDP is lowest in Pakistan as compared to other countries of the South Asian region. According to official data, Pakistan allocated 2.5% of GDP during 2006-07, 2.47% in 2007-08, 2.1% in 2008-09 and 2.0 % in 2009-10 which shows persistent declining trend. According to UNESCO's EFA Global Monitoring Report 2009, the Public Sector expenditure on Education as percentage of GDP, in other countries of the region was 2.6% in Bangladesh, 3.2% in Nepal, 3.3% in India, and 8.3% of GDP in Maldives in 2009-10. As a percentage of GDP, Pakistan spends only 2.9% of it on Education.

Table 1.7: Growth of Public Expenditure on Education from 1999 to 2009 in South Asia

Country	Total Public Expenditure on Education as % of GNP					Total Public Expenditure on Education as % of Total Government Expenditure					Public Current Expenditure on Education as % of Total Public Expenditure on Education				
	1999	2006	2007	2008	2009	1999	2006	2007	2008	2009	1999	2006	2007	2008	2009
Bangladesh	2.3	2.6	2.4	2.2	2.4	15.0	14.0	15.8	14.0	14.7	63.7	79.0	85.8	N.A.	N.A.
Bhutan	N.A.	7.2	5.8	5.2	4.8	N.A.	17.0	17.2	17.0	N.A.	N.A.	59.0	64.1	N.A.	N.A.
India	4.5	3.3	3.2	3.2	3.6	13.0	11.0	N.A.	N.A.	N.A.	98.0	N.A.	99.3	N.A.	N.A.
Maldives	N.A.	8.3	8.3	8.4	10.3	N.A.	15.0	11.0	12.0	16	N.A.	81.0	80.6	N.A.	N.A.
Nepal	2.9	3.2	3.8	3.7	4.6	12.0	15.0	N.A.	19.0	19.5	74.0	77.0	90.5	N.A.	N.A.
Pakistan	2.6	2.7	2.8	2.9	2.7	N.A.	12.0	11.2	11.0	11.2	89.0	75.0	73.9	N.A.	N.A.
Sri Lanka	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France.

The investment priorities in most of the region have worked against universalisation, because expenditure has traditionally been skewed towards secondary education (Tilak, 1994). There has thus been a top-heavy growth in enrolment. In India and Pakistan, higher education has expanded rapidly, probably at the cost of primary education. Another neglected area has been technical and vocational education, where not only have budgetary allocations been low but expenditure has also fallen far short of targets (Haq and Haq, 1998). Traditionally, the need for technological development has been used to justify more spending on higher education. Good research and development requires focused spending on higher education but this should not be at the cost of primary education, since the social returns from investment in primary education are known to be higher than from those from comparable investment at secondary or tertiary level. The UNDP (2001) report recommended more private spending on higher education while retaining public funding for primary education.

The UNDP Human Development Reports have persistently pointed out that education is not at the top of the policy agenda within South Asian countries. India has appointed a series of committees and commissions on education but their recommendations have largely gone unimplemented (Ghosh, 2000). A similar situation prevails in Pakistan. These two countries spend around twice as much on defence as they do on education. If only a fraction of this money were spent on primary education, universal education might become a reality (Watkins, 2000).

1.5.2 *Expenditure on Education at Secondary Level (Commitment and investment by governments in secondary education)*

Governments with limited resources must strike a balance when financing primary, secondary and tertiary education. The drive to provide free elementary education has led to a rising demand for secondary education. However, extensive resources are required to provide quality secondary education to increasing numbers of young people. At the same time, governments must consider financing for tertiary education so that an adequate number of teachers for secondary schools and other professionals can be trained to support the expansion of education and provide opportunities for students aspiring to further their skills and knowledge. Evidence shows that many developing countries will continue to face severe problems in financing the expansion of their secondary education systems if present conditions and cost structures do not change (Lewin, 2008; UNESCO-IIEP, 2010; World Bank, 2005). Many governments are unable to mobilize sufficient domestic resources, while others rely heavily on external funding .

This section discusses the financial challenges faced by developing countries seeking to expand their secondary education system. The discussion begins with a global perspective on national commitment to secondary education before examining the unit costs, which tend to be relatively high in many developing countries. These financial shortfalls are evident in the high contributions that households make to pay for secondary education. The conclusion presents a series of policy options that could be considered in efforts to expand this level of education.

Globally, public spending on primary and secondary levels of education as a share of GDP is equally distributed. Public expenditure for secondary education accounted for 1.6% of the world's GDP in 2009, while primary and tertiary education attracted 1.7% and 1.0% of GDP, respectively. However, the situation varies considerably between and within the different regions. In all countries of South Asia, except in Bhutan (54%), the government spends less than 50% of their public expenditure on education on secondary education, even as low as 25% in Nepal (See Table 8). The expenditure on secondary education as percentage of GNP is below 2% in all the countries in this region (see Table 8).

In **India**, the education sector has always received a low priority in comparison to other sectors in the economy in terms of its share in the total public expenditure. In absolute terms, the public expenditure on education has increased from 644.6 million Rupees in 1950/51, to 1,864,985.85 million Rupees (BE) in 2008/09. In relative terms, public expenditure on education has never crossed 15% of the total public expenditure during the last six decades. As a percentage of GDP, public expenditure on education has never crossed 4%, except for in 1999/00 and 2000/01. In 2008/9, the budgeted public expenditure on education was as low as 3.78% of GDP. Further, while elementary education takes away more than half of the education budget (i.e. 52.13% in 2008/09, BE), the share of public expenditure on secondary education in the total public expenditure on education continues to be as low as 29.34% (2008/09, BE); almost no increase since 2005/06 (BE), when its share was 28.79%.

Table 1.8: **Growth of Public Expenditure on Secondary Education from 1999 to 2009 in South Asia**

Country	Public Current Expenditure on Secondary Education as % of Public Current Expenditure on Education					Public Current Expenditure on Secondary Education as % of GNP				
	1999	2006	2007	2008	2009	1999	2006	2007	2008	2009
Bangladesh	42.0	47.0	43.5	44.0	N.A.	0.6	1.0	0.9	N.A.	N.A.
Bhutan	N.A.	44.0	53.9	54.0	N.A.	N.A.	1.9	2.0	N.A.	N.A.
India	38.0	N.A.	42.9	43.0	N.A.	1.7	N.A.	1.4	N.A.	N.A.
Maldives	N.A.	47.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nepal	28.9	28.0	24.2	25.0	N.A.	0.6	0.7	0.8	N.A.	N.A.

Country										
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford
University Press, Paris, France.

The imbalance in the pattern of public expenditure within the school education sector in India is clearly visible. While India spends around 62% of its planned education budget on elementary education, secondary education receives only about 16% of this budget (2008/09, BE). In fact, the share of secondary education in the total planned expenditure on education was around 11% (in 2005/06) prior to the launch of several centrally sponsored development programmes like the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) in April 2009. However, the matter of concern is that, over the years, there is an increase in the private costs of post-compulsory levels of education while the public subsidy at this level school education has remained more or less stagnant. For example, the average annual per capita expenditure on secondary/higher secondary education was Rs. 1,577 in 1995/96 (NSS 52nd Round), which increased to Rs. 4,351 in 2007/08 (NSS 64th Round). In rural India in 2007/08, the poorest households (in the bottom MPCE decile) were spending on an average Rs. 1,623 per pupil per annum at the secondary/higher secondary stage compared to the average annual per capita private expenditure of Rs. 5,517 by the richest households (in the top MPCE decile) (Biswal, 2011).

These low levels of investment are not simply due to a lack of government commitment but also to very weak and limited domestic tax bases in many challenge in attracting the most qualified candidates developing countries. In addition, a government's investment in education is determined by a number of other factors, such as the size of the primary and secondary school-age populations, national educational priorities, and competing funding priorities from other social sectors, like health.

1.5.3   Unit Cost at Secondary Level in South Asia (Assessing the public costs associated with secondary education)

Expanding access to secondary education is often constrained by relatively high costs that governments must bear per student. Some existing studies point out that substantial expansion of access to secondary education will not be attainable in many developing countries without bold cost-saving reforms (Lewin and Caillods, 2001; UNESCOIIEP, 2011). To better evaluate the extent to which countries which are most in need can expand their secondary education systems, it is useful to consider public expenditure per secondary school student as a ratio of GDP per capita.

Analysis of data in Table 9 shows that the per student cost (at PPP in constant 2005 $) of providing secondary education has increased considerably since 1999 and particularly since 2006 in all the countries of south Asia except Bhutan. Besides, unit costs vary considerably among countries with low secondary GERs. For these countries, the first priority will be to reduce these costs in order to expand participation in this level of education.

Table 1.9: Unit Cost at Secondary Level from 1999 to 2009 in South Asia

Country	Public Current Expenditure on Secondary Education Per Student (Unit Cost) at PPP in Constant 2005 US$					Public Current Expenditure on Secondary Education Per Student as % of GNP Per Capita				
	1999	2006	2007	2008	2009	1999	2006	2007	2008	2009
Bangladesh	140	265	159	160	187	8.0	13.0	13.6	42	14.9
Bhutan	N.A.	N.A.	1134	N.A.	1509	N.A.	N.A.	28.8	62	31.5

India	600	N.A.	333	370	N.A.	24.0	N.A.	16.7	60	N.A.
Maldives	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	84	N.A.
Nepal	151	144		97	N.A.	11.0	10.0	10.2	48	N.A.
Pakistan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	33	N.A.
Sri Lanka	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	**87**	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House,
    Oxford University Press, Paris, France.

There are several possible reasons for the elevated costs associated with secondary education. First, secondary schools are geographically far from students' homes, which entails additional costs for transportation or provision of room and boarding. Second, secondary school teachers must have higher academic qualifications and, thus, receive higher salaries than primary school teachers. Overall, public spending on secondary education may vary considerably, depending on the cost-sharing mechanisms that are in place, such as contributions by households and other private entities. Although most of the South Asian countries have instituted school fee abolition programmes to make primary education free for all, households still shoulder a relatively heavy burden in financing secondary education. Household spending is still widely needed to supplement public expenditure on secondary education and remains an essential source of funding for educational development in South Asia.

In the light of domestic budget constraints in South Asian countries, there is an urgent need for bold, innovative and sustainable strategies to reinforce the financing of secondary education. Increasing public expenditure for secondary education is needed as the secondary GER is extremely low and public financing for this level is insufficient. Additional resource mobilization for secondary education is necessary and could be achieved in two ways: i) finding new sources of financing; and ii) reallocating funding from primary and tertiary levels to the secondary level. Besides, the following options could be considered, depending on the country context: i) reducing the price of inputs (teachers, books and school construction); ii) increasing internal efficiency (lowering repetition and dropout rates); and iii) developing cost-sharing mechanisms (such as increasing private contributions to finance the cost of secondary education). Cost reduction measures and additional allocations to secondary education should be accompanied by strategies to ensure that available funds are effectively spent at the proper destination and used for appropriate goods and services.

1.6   Findings and Conclusions

The secondary level is a crucial stage in the education system for the social and economic development of a country. The past decade has seen marked advances towards Education for All (EFA) in South Asia. The region has increased primary enrolment rates despite an increase in the school age population. Gender gaps have narrowed at the primary and secondary levels and more children are moving from primary level to secondary education. The demand for secondary education has been increasing worldwide as more countries achieve UPE. Yet major challenges remain. The South Asian region is home to 27% of the world's out-of-school children, levels of learning achievement are low, gender disparities are still large, and the learning needs of young children, adolescents and adults continue to suffer from widespread neglect. The knowledge, attitudes and skills that young people acquire through secondary education are important for their future as productive and healthy citizens of their countries. Today, more countries need a sophisticated labour force equipped with competencies and skills that cannot be acquired through primary education alone. Moreover, workers who have completed upper secondary education earn more than those with less education (UIS, 2005b; UIS and OECD, 2003; World Bank, 2005). This

section summaries the current situation and identifies the problems and issues and possible solutions in secondary education in South Asia.

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

1.6.1   Key Findings

Participation at secondary level

Secondary school participation in South Asia has expanded, but the level of unmet needs is high. Despite considerable increase in total secondary school enrolment since 1999, a large number of adolescents were still outside the education system in 2008. On average, half the children in the region participated in secondary education in 2008, pointing to a high level of unmet need. Participation levels were particularly low as reflected by a secondary GER of 33%. On the other hand, Maldives had a ratio of 80% in 2008. Secondary school attendance and completion are strongly influenced by poverty, location and gender. Second-chance programmes can provide a skills development lifeline to youth and adults who missed out on earlier opportunities, but the availability of such programmes remains scarce in the region.

Gender disparities

One of the objectives of the Dakar Framework for Action and one of the Millennium Development Goals is to reach gender parity at all levels of education by 2015. Gender inequalities start at primary level but they increase as children grow older. The expansion of secondary education opportunities has reduced disparities and a number of countries have reached gender parity. In South Asia, five out of seven countries have achieved gender parity. The situation is particularly serious in Pakistan. India is doing well on this indicator, and is expected to achieve gender parity by 2015. A noticeable exception is Bangladesh which has reached gender parity in both lower and secondary education.

Rural-urban disparities

A similar divide exists between urban and rural children. First, the opportunity cost may be higher for rural children than for urban children. Second, the distance to reach secondary school may be discouraging and the cost of food, transportation or lodging can be a deterrent.

Factors limiting access to secondary education and possible measures for improving access

The factors explaining the low participation of young people in secondary education are numerous and some have been mentioned above. They are generally regrouped into two categories: supply-related and demand-related factors. Supply-related factors concern the existence (based on the walking distance), cost (both public and private cost) and quality of school provision (including infrastructure, teacher, teacher-pupil ratio, teaching-learning material, curriculum etc.). As such, they are more easily affected by government policy. Demand-related factors concern the willingness of families to send their children to school. They depend on the characteristics of the education provided and also on socio-economic and cultural factors.

1.6.2   *Conclusions and Policy Implications*

There are large variations in the secondary school coverage and the degree to which young people access secondary education in South Asia region. The situation varies a great deal from one country to other. Coverage is particularly low in South Asia. Yet globalization has created new job opportunities for educated young people completed secondary education. Developing access to secondary education is essential for the economic development of the countries in the region. Some countries have a fairly high enrolment rate in both lower and upper secondary. However, the issue is to reduce drop out among disadvantaged children and youth. In some countries the low coverage is due to government policies which select students at the end of lower secondary. In other countries, poverty and socio-cultural problems are leading to fairly high drop out throughout primary and secondary education. Factors restricting access can be economic (the high cost of education), related to supply (lack of schools places or the long distances to be covered), the low quality of the education provided and inefficient flow of students through the education system (selection through examination). Learning from the above lessons firm government policy commitment and stakeholders' support in providing additional resources, will help to solve these problems. Socio-cultural factors discriminating against girls and disadvantaged groups are more difficult to address and may need more fundamental societal changes and time.

Policies have been implemented throughout the world that address these different factors. Many measures which have been tried and implemented in different countries of the region offer a wide range of options. These vary from creating more schools, eliminating fees, offering stipends and other incentives, to improving the quality of education. In all cases, these measures require increasing the amount spent on education in general and on secondary education in particular. The success of these measures will depend on the way they are managed, the proportion of the teenagers who benefit from them and the duration of the programmes put in place. They require strong political commitment.

Human resources with more advanced levels of knowledge and skills are required in many countries, including developing countries, to meet the needs of a knowledge-based economy. Upper secondary education could also be provided more widely, depending on the social and economic demands of each country. Compared to primary and lower secondary education, access to this higher education level is still limited in this region. The content of upper secondary education should, therefore, be relevant to the demands of the labour market. Furthermore, the provision of upper secondary education should be planned to meet the specific social and economic needs of each country, taking into consideration various issues—such as school location, physical capacity of schools, insertion of vocational components into the curriculum, local labour market demands, and the provision of teachers and instructional equipment. Out-of-school children and the barriers that prevent their participation in education should be better identified. As primary and lower secondary enrolment rates increase, children who remain out of school may face increasingly complex and compounding disadvantages that prevent their participation in education. Comprehensive profiles of out-of-school children, which identify key personal and household characteristics, as well as past and expected school exposure, can help policymakers to formulate interventions aimed at increasing lower and upper secondary school enrolment and graduation rates.

Since 1960, secondary education in Asia has expanded rapidly in response to an increasing demand for skilled manpower, economic growth and strong private requirements. Different countries have chosen varied approaches to developing the structure of secondary education, which include: diversifying the curriculum; financing institutions and student support; and assessing student-learning performance. Almost all countries in the South Asia region have experienced substantial growth in secondary school enrollments over the past decade.

With regard to the quality of secondary education, South Asian countries have focused on curriculum reform: "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). In order to realize the major goals of curriculum reform, South Asian countries have developed detailed strategies for secondary education: 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 South 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".

The reform and renewal of school curricula is clearly a priority for all the countries. They recognize this process as integrated with the improvement of education. Many countries are presently implementing reforms (Bangladesh and Sri Lanka) or are preparing for major curriculum change (Maldives); others are monitoring or evaluating the impact of recent reforms (Bhutan, Nepal and India); the tradition of four-year curriculum reform cycles (Pakistan). The focus of reform in a number of countries has been on primary or basic education, 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. The Section 2 of the report will focus on the innovative models/practices in secondary education followed in South Asian countries, particularly in India, Pakistan and Bangladesh which aims at improving access, coverage and quality of secondary education including developing the skills for employability of the secondary aged students.

SECTION 2: INNOVATIVE MODELS OF SECONDARY EDUCATION IN SOUTH ASIA

Globalization accompanied by rapid scientific and technological change over the past decades has created a new world that demands higher-order skills, adaptability, cross-cultural communication, and innovation for individual and national success. Borderless economies now need to relook into their education structures not only for meeting the skills in domestic labour markets but also the generic skills required to adapt to the multi-cultural work places and competitive global knowledge economy. While access to knowledge and innovation is seen as key drivers of growth in today's competitive global economy, expansion of quality secondary education is increasingly considered being the minimum necessary to participate in the knowledge economy. In the 21st century, the country that is open to new ideas about learning from around the world and provides equitable schooling opportunities will be the country that succeeds. Countries that focus on innovations aimed at promoting equitable learning opportunities and educational excellence, therefore, benefit greatly in the global knowledge economy. While 'innovation' in education in its narrow sense may be identified with originality, broadly, it may refer to 'planned change' for improving the quality of practices in education that aim at creating the required skills and promoting socially equitable distribution of learning opportunities. According to UNESCO (Innodata), 'innovation' in education can be defined as "initiatives new within a specific sub-regional, national, local or institutional context, even if familiar in other settings." This definition sits comfortably within the broader idea of innovation as 'planned change' (Wilson, 2001). Considering its broader definition, innovation in secondary education is being attempted at a variety of levels for improving access, quality and equity in all countries in South Asia.

In South Asia, secondary education has become a growing concern and major challenge for education policymakers and researchers as it plays an increasingly important role in creating healthy and cohesive societies and spurs economic growth. It represents a critical stage of the system that not only links initial education to higher education, but also connects the school system to the world of work through development of skills. Besides, the social returns on investment in secondary education are greater than in higher education regardless of the income level of the country (Psacharopoulos and Patrinos, 2002). Data from middle-income countries show that wage premiums for secondary school graduates can be observed for both women and men. Workers with upper secondary education earn higher salaries than those with a lower level of education (UIS and OECD, 2003).Furthermore, an analysis of data from OECD countries indicates that persons with

upper secondary and post-secondary non-tertiary education are much more likely to be employed than those with less education. Also, across OECD countries, unemployment rates decrease as educational attainment increases (OECD, 2010a).

Keeping in view the benefits of secondary education, almost all countries in South Asia have made several reforms in the sub-sector over the years in order to enhance the learning opportunities and quality of learning achievements. . Countries in the sub-region have made a number of interventions in the secondary education sub-sector which address different components like access, participation, quality and relevance, including the very objective of producing skilled secondary education graduates for today's global job markets. However, the question arises as to whether the secondary education reform programmes have led to sub-sector-wide sustainable innovative models in the South Asian countries? Hence, the attempt in this section is to review the innovative secondary education models or practices presently being implemented in the South Asian countries.. However, due to data limitations the present attempt is to review the innovative models/practices with the following objectives:

(1)   Which models are effective in delivering high-quality, relevant skills?
(2)   Which models are best suited to target populations?
(3)   What is the cost of delivering these models?

The review of the innovative models of secondary education primarily focuses on in-school innovations and includes:

- Use of technology in formal schools;

- Non-formal secondary schooling, including work place education schemes, new apprenticeships, part-time study, community education, peer-to-peer education, youth clubs and other non-formal models;

- Self-access models of secondary education, including on line learning and certification

- Private sector provision of innovative models of secondary education including NGOs, not-for-profit and faith based organizations;

- Demand side innovations to increase participation in secondary education, including scholarships, vouchers, cash transfer schemes and others; and

- 'Innovation climate' in the secondary sub-sector, including the availability of financing to support innovation and social entrepreneurs inside and outside the mainstream education system.

Based on the objectives and the consequent outcomes, the innovative models or practices of secondary education may be broadly classified into two categories:

Category I: Models addressing the issues relating to access, participation and   equity   in secondary education;

Category II: Models addressing the issues relating to quality and relevance in
        secondary education (ICT and other life-skill development
programmes);

This section is divided into two parts. The first part provides a critical review of different innovative models of secondary education presently operative in the South Asian countries, particularly India, Pakistan and Bangladesh, with an in-depth investigation of innovative models implemented in formal and non-formal as well as public and private secondary educational institutions in India. The second part presents an in-depth analysis of the innovative models in secondary education focusing on their delivery and effectiveness in terms of skill generation *vis-a-vis* the cost of implementing such models, where related data are available.

It may, however, be noted that some of the major limitations of the models discussed in this section include non-availability of data and information on the costs and affordability of various innivative models of secondary education in countries in South Asia. In the absence of such data, it becomes difficult to assess the scalability of the successful innovative models discussed in this section in other settings, particulrly in terms of financial sustainability. Moreover, lack of analysis and documentation of the impact of these models often make some of these modes stand alone success stories. Indepth studies of these select models of secondary education are necessary to assess their effectiveness, scalability and sustainability.

2.1   Innovative Models of Secondary Education in Bangladesh

Bangladesh, in its policy planning, seems to have given more emphasis on public-private partnership and the role of non-state providers in improving access, participation and excellence in secondary education. In fact, private providers mostly dominate in expanding access to school education in Bangladesh. More than 97% of secondary and 54% of primary education in the country is provided by the private providers. The partnership is in the framework of government provision of financial support through Monthly Payment Orders (MPOs/grant-in-aid) and stipends to girls up to class X. Bangladesh has a policy on public-private partnerships (PPPs), particularly for vocational education and ECE (National Education Policy, 2010). The Government also provides subsidies to create demand for education in favor of the poor and girls.

Moreover, schools run by NGOs have created access to the poorest of the poor in Bangladesh. They also promote joyful learning but appoint less qualified "community teachers", who are given on-the-job training by the NGOs. Because of low teacher qualifications, quality in these schools is an area of concern, especially after class VIII. Private schools mostly serve the upper middle and elite classes. As far as the regulation of private players is concerned, the recognition of these schools is different from the private universities since the universities have to be registered prior to establishment while the schools have to be registered after establishment. For example, around 9325 *Madrashas*, almost all of them non-government managed, operate in the secondary school education sub-sector in the country.[2]

In Bangladesh, there exist two kinds of private providers, one for-profit, and the other, with non-profit motto, along with public institutions, the later is actually lagging behind the former, in terms of enrolment and   recruitment of the required number of teachers. There are also a considerable number of religious educational institutions in the country run at primary and secondary levels, which are actually privately managed and contribute a lot towards expanding access to education.

For instance, the largest private provider in the country, **BRAC (Bangladesh Rural Advancement Committee)** started its Non- Formal Primary Education Program in 1985 in 22 one-room schools, which grew to more than 32,000 primary schools by 2007 enrolling 11% of primary school children. BRAC schools though teach the same competencies as government schools, they are able to have a higher rate of retention amongst the hard-to-reach segments of the population, especially girls. BRAC also works with secondary schools to support government efforts in improving quality of secondary education by improving teaching quality and school management.

On November 30, 2011, BRAC launched an education site, i.e. e-education.brac.net to make secondary education one step ahead. From the site high school teachers, students and, in fact, anyone can view online or download interactive educational material, which are based on based on the national curriculum. It is an endeavor to make the textbook contents easier, interactive and stimulating. It also ensures conceptual clarity and better application of learning materials and aims to increase the teachers' understanding of the lessons. On April 3, 2011, BRAC launched two

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[2] http://emis.gov.bd/App_Pages/Client/DSHE_Show.aspx?val=121

interactive educational CDs for General Science and General Math for high school education in Bangladesh. These are the very first CDs launched by BRAC Education Programme. Initially in e-education.brac.net site General Science (grade 6) and General Mathematics (grade 6) and English (grade 9 & 10) were available. The web site is always upgraded with more interactive contents as per National Curriculum & Textbook Board, Bangladesh. These contents have been introduced through various activities, games, cartoons and animation to make the learning joyful and participatory. It is expected that e-education has its own attraction, which holds students in study, and consequently, leads to reduction in dropout rate, which is very high among high school students. Besides, it enhances teaching quality.

Under the **Female Secondary School Assistance Project (implemented by the Government with funding support from the Asia Development Bank and the World Bank)**, scholarships are given to girls if they satisfy a set of pre-requisites and the schools they attend are paid the entire tuition amount, in addition they also receive stipend for as much as 50% of the school fees.

Specifically, the project aims to improve the quality of, and girls access to, secondary education in rural Bangladesh. The first component of the project aims at improving the quality of secondary education by financing teacher education, training, and support; incentive awards for school performance and improvement; incentive awards for student achievement; and improved school facilities, specifically providing access to safe drinking water and sanitation. The second component aims at increasing access to education and retention of girls by supporting stipends and tuition, and an outreach programs. The third component focuses on strengthening educational management, accountability, and monitoring by bolstering the program management and project operations supporting school management and accountability. Thus, the project focuses on curriculum reform, development of instructional materials, improvement of school infrastructure and institutional capacity building.

Another scholarship programme *(Medhabikash)* roughly translated means "Promoting Talent." *Started in 2005, Medhabikash* is an innovative intervention of the BRAC Education Programme where talented but disadvantaged students receive financial support to pay their college/university tuition fees both home and abroad, as well as capacity-building assistance. These students are typically high-achievers, scoring at least 80% in the Secondary School Certificates (SSC)/ Higher Secondary School Certificates (HSC) examination. In other words, students scoring 5.0 GPA at SSC/HSC GPA having family income not exceeding 3,000/- per month and land not exceeding 50 decimals are eligible for the scholarship. However, financial pressures often hinder their academic performance and restrict their ability to pursue higher education. The programme firstly provides financial support. For example, students receive funding for admission fees, private tuition, books and other education materials. In addition, female students receive a stipend for transportation and incidental expenses. As of July 2011, 2036 students received this scholarship.

The *Medhabikash* programme, however, does not provide financial support only. The programme consists of specially designed training modules to develop students' confidence and skills in English and computer studies. The English language course has been designed to help students learn more advance aspects of the English language that are often not covered in the traditional curriculum. With the general standard of English language teaching being rather poor in most secondary schools, especially due to a reliance on rote learning, the English course is fundamental in helping students' English language proficiency move to the next level. The Information Technology training programme covers the elementary skills that are essential to carry out common office tasks, including basic competency in Microsoft Word and Excel. In another model of PPP in secondary education , the government subsidizes at least 9 teachers at 90% of government base teachers' salaries in community- managed, non-government schools. Subsidies increase with increases in enrolment by paying for additional teachers, provided that other conditions are met. Bangladesh, therefore, provides evidences of increasing possibility and scalability of various models of PPP in school education in general and secondary education in particular.

Model 1:   Female Secondary School Stipend Programme in Bangladesh

The secondary school system in Bangladesh is structured mostly on the basis of public-private partnership (Mahmud, 2003). As such, more than 97 per cent of schools are in private management while the government does provide 90 per cent or more of teacher salaries through grants-in-aid. However, despite the increase in girls' access to basic education only two -third of the girls enrolled in primary education complete grade five (BANBEIS GER Survey, 2010). Low completion and low transition rates of girls in primary education in Bangladesh was one of the rationale for implementation of the Female Secondary School Stipend Programme in 1982. The programme aimed at addressing the existing social norms such as early marriage of girls, vulnerability of adolescent girls, etc. which had adverse impact on girls' participation in and completion of secondary education in the country. .

This programme was started as an experiment by a local NGO in one *Upzila* (Sub-District) with USAID financial assistance for increasing participation of girls in secondary education. By 1992, seven *Upzilas* were included in this programme, and in 1994, the Government of Bangladesh launched a nationwide programme in all 460 *Upzilas*. Further, demand-side financing strategy was adopted in the programme and stipends were extended up to higher secondary grades.

Salient Features

The Female Secondary School Stipend Programme (FSSSP) in Bangladesh is one of the successful demand-side financing models implemented for increasing participation and retention of girls in secondary l education. Multiple donor agencies of this program i.e. the World Bank, the Asian Development Bank, Norwegian Agency for Development and the Government of Bangladesh -- has affirmed the justification for the provision of financial incentives through stipends and free tuition for increasing equitable access to and retention of girls in quality secondary education.

The specific objectives with respect to the provision of stipends to girls in secondary school, shared by all the four component of the programme, are;

(a)   to increase girls' enrolment in secondary school and retain them in secondary   education;

(b)   to assist them in passing the SSC examination to enhance their employment opportunities as primary school teachers, extension workers, health and family planning workers and NGO workers; and

(c)   to delay girls' marriage. The long term stated aims are to enhance women's capabilities to participate in the socio-economic development of Bangladesh leading to poverty reduction, to improve women's status and reduce gender disparity and to reduce population growth by delayed marriage and higher contraceptive use by educated girls.

The programme considered as an innovative model has the following salient features:

(a) Emphasis on targeted access: - With the implementation of this programme there was a shift from access to secondary education for girls to the emphasis on targeted access of sustaining improved gender equity and addressing regional and rural/urban inequities in access of girls insecondary education.

(b) Universalized Stipend Programme: - Equal and universal stipend are paid for all girls but vary by grades of education. As there is no selection of the stipend awardees, the intervention is simple to implement. This system provides free tuition and stipends to all eligible female secondary school students enrolled in recognized institutions outside the metropolitan areas. To be eligible for a stipend a girl must attend the school for at least 75 per cent of the days of the school year; she must achieve at least 45 percent of marks in examinations; and she must remain unmarried.

(c) Strategic Importance of the Programme: - Many social and demographic goals are attached with this programme such asincreasing access by paying part of the cost of parents and to schools, improving quality by putting pressure for good performance and delaying marriage of girls.

(d) Gender Empowerment: - The payment to girls is done directly through their own bank accounts is an empowering experience for girls in the male dominated public domain. It also minimizes leakages and is less likely to have hidden costs since school authority is not directly involved except for clarifying compliance with stipend eligibility and performance criteria.

Outcomes of the Programme

This nation-wide programme (FSSSP) is implemented through four different sectoral projects of the Ministry of Education (MoE), sharing the overall broad objective of developing and reforming the education sector. The effect on school participation of girls has been a mixed experience. While enrolment and attendance at the lower secondary level has significantly improved for girls, both in absolute number and relative to that of boys, their retention in school and performance have not improved significantly. Moreover, both enrolment and performance of girls have been much lower at the higher secondary level. These trends suggest that the programme, to a large extent, has been able to mitigate the direct monetary costs of sending girls to school, as well as some non-monetary costs, but that the improvement in education quality is not sufficient to mitigate the costs of keeping girls in school or providing an alternative to early marriage. The impact assessment study reports of Pathmark Associates (2001) suggests a wide range of positive impacts of the stipend programme on girls' lives, such as the increase in age at marriage, greater birth spacing, positive attitude to smaller family size, and higher employment and earning levels.

Table 2.1: Number of schools and students receiving stipend and tuition subsidies, 1994-2001 Year

Year	No. of schools or madrasahs	% annual increase	No. of stipend awardees	% annual increase	Annual disbursement (million takas)	% annual increase
1994	12713	-	70886	-	297.1	-
1995	14119	11.06	1409382		894.4	
1996	16722	18.44	2300062		1459.2	
1997	17847	6.73	2825350	20.88	2065.1	24.27
1998	18721	4.90	3198559	19.80	2409.9	21.42
1999	18788	0.36	3564404	11.63	2668.6	11.33
2000	19919	6.02	3961194	3.30	2770.8	3.83
2001	21027	5.56	4191058	9.07	3034.5	16.21

Source: WB 2002

Under the IDA supported FSSAP in 1994 nearly twice as many girls as estimated were attracted to stipend entry points in Grades 6 and 9 in the 59 selected thanas (World Bank, 2002, pp3). NORAD assistance in 7 thanas, IDA assistance in 118 thanas and ADB assistance in 53 thanas. Madrasahs were covered under the World Bank and ADB programme components but not under the Norad component.

Principles of Best Practice

The specific objectives of the Government of Bangladesh FSSSP, as stated in the project document, are as follows (FSSSP At a Glance, Third Revision, pp. 4):

(a)   To enhance and retain female students in the secondary stage and thereby   promote female education;

(b)   To reduce population growth by motivating the stipend clientele group to refrain   from marriage till completion of the SSC examination or until the   attainment of 18 years;

(c)   To increase involvement of women in socio-economic development activities;

(d)   To increase women's self-employment for poverty alleviation;

(e)   To assist in improving the status of women in society; and

(f)   To strengthen the Directorate of Secondary and Higher Education through implementation support and capacity building at Upazila level all over the   country.

The linking of the stipend programme to overall development and reform of the secondary education sub-sector has both positive and negative aspects. The advantage of this model is that the stipends would increase grls' access and reduce gender inequality more effectively if other non-monetary costs of schooling are also reduced through improvements in school   quality and provision of better management support services. Stipends alone may not be sufficient to generate demand for girls' secondary schooling. Linking stipends to broader structural change and efficiency of delivery would make stipends socially more sustainable. The negative aspect is that the other changes are more difficult to achieve as is already evident, so the stipend programme itself becomes undermined by the lack of achievement in the reform process. In addition, if access to stipends is to be increased to include more underserved areas and girls from poor households, then the non-monetary costs that limit access, such as availability of schools and their quality, must be addressed simultaneously.

Evaluation of the programme shows the increase in the numbers of secondary school students nation-wide (see Table 2). The figures show that there was a jump in the female share of secondary school students from 38 percent in 1994 to 42 percent in 1995, possibly reflecting the introduction of the stipend programme, but since 1997 the rise in female share is not visible. On the other hand, the rise in female share has continued in the sample FSSAP schools, suggesting that the uptake of the stipend programme varies according to the project.

Table 2.2: Secondary school enrollment nation-wide and in sample FSSAP schools, 1994 to 2002 (in thousands)

National				FSSAP Sample Schools (1826)		
Year	Males	Females	% female	Males	Females	% female
1994	3008	1876	38.4	284.49	261.67	47.9
1995	3204	2327	42.1	303.06	289.94	48.9
1996	3277	2511	43.4	321.38	314.71	49.5
1997	3239	2718	45.6	321.88	344.75	51.7
1998	3448	2841	45.2	293.94	362.63	61.7
1999	3646	3034	45.4			

Source: WB 2002

The FSSAP (phase 1 from 1994-2001) total cost was $85.8 million of which Bangladesh government contributed 26%; and the stipend component was 77% of the total cost (WB, 2002a). Phase 2 (June 2002 to Dec 2007) total cost was $144.62 of which Bangladesh government's share was 16%. NORAD FESP (phase 2 Jan 1997 to Dec 2000) the total cost was Tk. 6000 lacs or NOK 100 million entirely for stipends, and there was no Bangladesh government share.

The SESIP (phase 2 Dec 1999 to April 2006) the total cost was $86 million ($60 million net of taxes, duties and interest); Bangladesh government contributed 30%; stipend component was $17.458 million (20% of the total cost) and 34% of the cost component was for equitable access to secondary education.

Government expenditure on the stipend programme was financed through the annual development programme (ADP) budget. In 1998-99, government expenditure for the stipend programme

including donor supports accounted for 14.5 percent of the total secondary education budget and 6 percent of the total education budget (WB 2002, pp47). Of the total amount allocated for stipend and tuition in that year (Tk 2847.6 million) government funded FSSP accounted for 59 percent indicating the government's strong commitment to increasing girls' access to secondary education.

Table 2.3 : Allocation to female stipend project under different programmes

(million takas)

Programme	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
FSSAP (IDA)	380.0	409.9	584.0	697.1	811.2	868.1
FSSP (GoB)	642.4	950.0	1401.4	1535.0	1690.0	1799.0
FESP (Norad)	45.5	47.5	46.6	160.0	100.0	165.0
SEDP (ADB)	44.9	100.7	170.3	207.7	246.4	277.0
Total	112.8	1508.1	2202.3	2599.8	2847.6	3109.1

Source: WB 2002

The cumulative numbers of stipends provided under the various projects are: FSSAP1 925,000 by 1999, FESP 650,629 by 2000 and SESIP 1,350,000 by 2003. Under the SESIP 2 project, the number of stipends provided (1,350,000) far exceeded the number targeted (765,000) but no impact assessment studies have yet been undertaken to inform about the real effects of the stipend programme in increasing enrolment.

However, according to a study by Pathmark Associates (2001), FSP has clearly had impact in terms of increasing girls' enrolment. Less clear is exactly what other impact it has had in terms of stated Program objectives such as fertility control, getting girls/women into paid employment, or empowerment of women. While there has been documented progress in such areas, in many cases, it has not been possible to clearly link the FSP to the educational or societal changes that have occurred since the program began. While the FSP has been widely-acclaimed as a model for achieving gender parity of enrolment, little is known of its impact beyond access to schools.

Very little has been done in the way of 'rigorous' impact assessment, and only one tracer study has been located. There have been various interesting studies on isolated aspects of the program, and they contribute to analyses of impact but do not reveal the big picture. The FSP may have had or may be having enormous positive impact, but as there is little clear evidence of this and this must be seen as one of its weaknesses. There needs to be far more information available for governments and development partners to consider the FSP as a model for development or to consider what changes might be made in program design to make it more effective. For example, the 45% pass rate unaccompanied by a concerted effort to increase the standards of education generally or to increase the quality of provision of education for girls in particular, shifts the onus onto the girls who fail. The failure is attached to the girls rather than the overall failure of the education system to provide them with the quality education. The extra tuition required outside of school to achieve the necessary marks excludes the poorest girls from achievement. The attendance criterion also militates against those girls from poorer families whose support to the household is crucial and therefore removes them from school.

Sustainability is linked very closely to poverty issues. A program such as the FSP is expensive and almost certainly comes at the expense of other desirable development objectives such as poverty alleviation. This is not necessarily to say that the money has been wasted; it seems to have been very useful in convincing parents that it is a good thing to keep their daughters in school. But there are indications that the need for financial support may be dwindling as findings suggest that many parents 'will continue to send their students [to school] even if there is no stipend' (S. S. Ahmed, 2004:40). These findings call such a large-scale stipend program into question and suggest a closer targeting of those in *real* financial need that could lead to a more cost-effective, sustainable program.

Model 2:   Ganokendra - An Innovative Model for Poverty Alleviation

The model, *Ganokendra,* is primarily an approach to literacy based programme for combating poverty. It was started in 1992 in Bangladesh. The rationale behind this programme was to combat low literacy rate (65 per cent as government estimates) and high poverty head count as 45 per cent of the population lives below the poverty line of US$ 1 per day. According to the Director of Dhaka Ahsania Mission (DAM), which is the main credit providing agency to *Ganokendras,* at present, the number of effective *Ganokendras* stands at 807 spread over 7 districts of the country with a membership of 80700. In fact, 80700 families with an average of 5 members per family (around 403,500 persons) are directly benefiting through their membership. Out of 807, 247 *Ganokendras* are implementing programmes on income generating activities; some of them are providing skill based training and supporting the locality by offering micro-credit for poverty alleviation. Some *Ganokendras* are working for improvement of the status of women. It was reported that this programme has been adopted by other organizations too.

Salient Features

This is another programme which has a motive of comprehensive social development of the community with the help of local organization. It perceives education as an important element of social development and addresses the issue of literacy, particularly among females and disadvantaged groups, in its prominence along with poverty. The model has been widely recognized in various forums and has won Japanese Award for Most Innovative Development Project. This model of community based development initiative has been successful in improving literacy, livelihood, social awareness and economic self-reliance in many parts of Bangladesh. *Ganokendras* have targeted adult education to improve literacy level and skill development programmes. Some of the salient features of *Ganokendras* are as follows:

(a) *Use of ICT for improving Adult Literacy*: ICT has been reportedly used in 5 *Ganokendras* for improving adult literacy and supporting post-literacy teaching. These *Ganokendras* are also used as community research centres.

(b) *Supporting other programmes of government:* Some government programmes are linked with *Ganokendras* and successfully implemented with the help of other non-governmental organizations. The organizations utilize the *Ganokendra* as the focal point or as their service delivery unit for vaccination, dissemination for health related information and managing other social issues.

(c) *Improving Social Awareness*: *Ganokendras* has been instrumental in improving social awareness and this has been proved with the test conducted on activity areas of these *kendras*. Tests conducted showed that some social awareness and survival skills of neo-literate members of GKs were higher compared to those of non-members. Differences showed particularly in : (i) capability to write (simple) letters, (ii) adoption of family planning and contraceptive prevalence rate, (iii) attitude towards/ rejection of dowry system, (iv) adoption of sanitary latrine, (v) use of hygienic procedures for personal health, (vi) being member of an organization, (vii) women attending public meetings, (viii) women keeping control over their earnings, and (ix) women participating in family discussions and having a say in family decisions.

Combating Poverty and Economic Backwardness

The *Ganokendra* members strongly expect that the *Ganokendra* will help address their income generation needs. People are much concerned and voice strong opinions about the proper combination of: (i) training for income generation, (ii) having access to loans, (iii) the proper timing and amounts of loans, (iv) repayment schedules. This way social group ensures credit facility in the locality and provides desirable trainings for employment or self-employment.

Best Practices of the Model

Undoubtedly, this is one of the most diversified social development models practised in seven districts of Bangladesh. Although it focuses on literacy, continuing education, training and skill development, nonetheless, it does not focus on secondary education in any particular context. To some extent, it has overlooked the issue for formal education in the pursuit of combating poverty and economic self-reliance of its members and community. Lack of willingness for co-operation of the community, inconsistent motivation of the workers and non-availability of continuous training and orientation might mislead the objectives of this model. However, this model has got wide-ranging acclamation from various government and non-government agencies. It was found that the programme had been effective and had a positive impact on education and poverty alleviation of the target beneficiaries. As has been noted above, the programme has been running for over a decade with a positive impact on the life and living of the target group. Indirectly, it has helped in promoting awareness about the benefits of education, particularly education of girls for socio-economic empowerment. To that extent, household decision to send their children, particularly girls, to secondary schools has been influenced by the *Ganokendras*. Besides,it has its favourable impact on various fields like literacy, social awareness and survival skills, empowerment, reaching the broader community, creating employment, establishing linkages with other organizations, development of management skills, gender equality, taking care of the needs of adolescent girls and above all community ownership and sustainability of the programme.

Model 3: Ushagram Trust for Displaced Bangladeshis in West Bengal, India

Ushagram is a trust based multipurpose, multifaceted voluntary organization. This trust was founded in 1980 and working for the development of rural population in West Bengal, India. Ushagram trust claims to be inspired by the philosophy of Sri Aurobindo and aims to bring Auroville Project to small areas of rural Bengal. The educational mission of this trust has been in operation amongst the weaker sections of the population in 14 adjoining villages of West Bengal. The inhabitants of these villages are mostly persons displaced from Bangladesh and living in extreme poverty.

Salient Features

One of the founder members of *Ushagram* trust had started its education mission with establishing a primaryschool ,Vidya Niketan Sishu Bihar, in 1972. This school has been experimenting with various curriculum and models of education programmes. Over the years, the school has gained success and respect in neighbouring area for its accomplishments. Subsequently, the school taken over by Ushagram Trust in 1980. The Ushagram trust has paid attention to early childhood education of children of the illiterate parents. It has also extended its support to the disadvantaged students for preparation for secondary and higher secondary examinations. The trust initiated the operation of open schooling centres under affiliation from West Bengal State Council of Open schooling (Rabindra Mukta Vidyala) in the year 2002. The trust has been providing support to 630 secondary and 652 higher secondary school students through regular classroom coaching by 20 teachers. Hostel facility has also been arranged for girls coming from extremely poor families. The trust mostly mobilises its resources from individual donations and donor funding.   It has not got any financial support from government so far. This kind of support services, however, is not directly linked with innovative practices in secondary education. But, the activities of the trust promote the goal of equitable distribution of learning opportunities among the displaced Bangladeshis in India.

Vidyaniketan Sishubihar running under the trust got the affiliation of West Bengal State Council of Open Schooling (Rabindra Mukta Vidyalaya) in the year 2002 for secondary courses of education. It is to be noted that the status of Rabindra Mukta Vidyalaya is equivalent to Madhyamik courses under West Bengal Board of secondary Education. Affiliation was also obtained for higher secondary courses in the year 2005. At present, 20 teachers are engaged for conducting classes for the subjects in secondary & higher secondary courses. 630 students have been admitted into Madhyamik and 652 students have been admitted in higher secondary courses respectively.

2.2   Innovative Models for Secondary Education in Pakistan

In Pakistan, the shift in education policy came about in the mid-1990s, when the Government of Pakistan started involving the private sector and the civil society organizations in financing, management and delivery of education services. This move was officially recognized by the Education Sector Reform (ESR) Action Plan,2001-2005, which stated that the government was unable to single-handedly manage the education sector and thus actively encouraged PPP. In other words, PPP in education was considered a critical innovative strategy for expansion and effective delivery of education in Pakistan, and accordingly, necessary institutional arrangements were made for its implementation. Some of the select innovative models in secondary education in Pakistan are discussed in the following sub-sections.

Model 1: Punjab Education Foundation: Foundation Assisted Schools

The Punjab Education Foundation is an autonomous institution, funded by the Government of the Punjab province to promote high quality education for the poor through partnership with the private sector. The program aims at three components: vouchers, teacher training and monetary incentives to schools for improved academic performance. The foundation pays a subsidy to participating private schools on a per pupil basis, the schools must meet the eligibility criteria in terms of enrolment, physical infrastructure, etc. Subsidies are paid directly to the schools. Another project of the Foundation -- the **Pilot Education Voucher Program --** aims to give vouchers to children from urban slums in Lahore to encourage girls' enrolment in schools. The Urban Girls Fellowship was a pilot program launched in 1995 in the Balochistan province, where the government paid a declining subsidy to private schools over a period of three years to enrol girls from low-income families, as well as tuition fee per girl per year for 100 girls in each school. These pilot programmes have not only improved access and school choices but also contributed towards reducing gender disparity in participation in secondary education Pakistan.

The Strategy of the Punjab Education Foundation

The foundation would help provide better education to the poor through the private sector by offering teacher training and professional development for private schools in less affluent areas, and by providing financial assistance to school children through vouchers given to households in the slum areas. The PEF would also grant monetary rewards and financial assistance to schools with good track records, and would make a special effort to encourage the enrollment of female students. This strategy reflects the Board's vision for the foundation: "To promote quality education through public–private partnership, encourage and support the efforts of the private sector through technical and financial assistance, innovate and develop new instruments to champion wider educational opportunities at affordable cost to the poor.10 The initiatives taken by the PEF have since won national and international acclaim.

Programs of the Punjab Education Foundation

The PEF operates a number of programs, all of which use PPPs to provide affordable high-quality education to children from among the poorest of the poor. These include the Foundation-Assisted Schools (FAS) program, Continuous Professional Development Program (CPDP), Teaching in Clusters by Subjects Specialists (TICSS) program, and the Education Voucher Scheme (EVS).

The Foundation-Assisted Schools Program

The FAS program is the PEF's flagship program, providing financial assistance to private schools for each child enrolled under its auspices. The PEF has demonstrated that, through PPPs, quality education at the primary, middle, and secondary levels of private schools can be made available to poor children at a much lower cost than at the public school system. FAS's success has been

primarily due to the financial, academic, and managerial support provided by the FAS partner schools, and to the continuous monitoring and evaluation of student learning outcomes, which is done in a transparent and accountable manner. Continued financial assistance from the PEF to an FAS partner school hinges on that school's performance on the Quality Assurance Test (QAT), administered in March and October of every year. The results of this collaboration between the PEF and its FAS partner schools have been better student achievement, reduction of the dropout rate to zero, and better attendance among teachers.

Foundation-Assisted Schools Selection Criteria

Through its FAS program, the PEF has demonstrated that , while it is the responsibility of the state to ensure free education for all children, it does not necessarily have to provide the service, i.e., funding of a service can be separated from its actual provision**.** Through PPPs, better-quality education can be provided to a child at significantly less cost than that in the public school system. Financial assistance on a per-enrolled-child basis through FAS is driven by considerations of equity, quality, and access to all.

The process for selecting schools is transparent. Advertisements inviting schools to apply for FAS partnerships are placed in leading national and local daily newspapers. The following criteria have been adopted for the selection of schools to participate in FAS:

(i) Target schools cannot charge tuition of more than PRs350 per month (increased from PRs300 in 2008). Schools charging higher fees were subsequently allowed to join the FAS program by the Board of Directors in 2006.

(ii) The schools must have an enrollment of at least 100 students at the   time of application.

(iii)   Schools may be at the primary, middle**,** or secondary level.

(iv) Preference is given to female educational institutions, so that the overall proportion of girls in FAS will be at least 50%.

(v) Schools must be located in districts with the lowest literacy rates and the highest number of children not attending school.

(vi) Apart from such criteria as school location (rural areas, urban slums) and adequate physical infrastructure, the schools' delivery of quality education is one of the most important requirements for qualifying for the FAS program.

(vii) It is mandatory that secondary schools have science laboratories and a library.

Foundation-Assisted Schools Operating Rules

The PEF's Academic Development Unit administers QAT to two classes in every primary school and to three classes in every middle and secondary schools seeking acceptance into the FAS program. It is mandatory that two-thirds of the students pass the test with a grade of at least 40%. After a school joins the program, continued QAT testing serves as the chief factor to determine whether the school may continue its FAS partnership. For a partner school to qualify for a continuation of its FAS partnership, two-thirds of its students must score at least 40% on the QAT. School fees paid by the FAS program are subject to change on an annual basis and are linked to the country's official inflation rate. Participating schools cannot charge their students any additional fees after entering into a partnership with FAS. The PEF provides all parents with information about FAS through brochures, newspapers, radio, and television. The number of students enrolled in partner schools is verified through surprise visits by the PEF's M&E teams.

The FAS pilot program was launched in 2005 in 54 schools in five districts of Punjab, which were representative of all 36 districts of the Punjab province in terms of literacy and the human

development index. In 2006, the pilot program was increased to include 184 schools in 10 districts. In 2007, it was evaluated by the Punjab's Planning and Development Department and was rated as a successful intervention in terms of enrollment, retention, and learning outcomes. Table 2.4 shows the number of schools and students (male and female) participating in the FAS program from 2005 to 2009.

Table 2.4: Number of Students and Schools in Foundation-Assisted Schools, 2005–2009

Year	Number of Schools	No. of Students		
		Total	Male	Female
2005	54	8573	4321	4252
2006	184	70345	35140	35205
2007	678	256456	128100	128356
2008	1085	449712	229311	220401
2009	1337	529210	267107	262103

Source: Foundation-Assisted Schools Department, Punjab Education Foundation. 2009.

There was a sharp rise in the number of schools and a meteoric rise in the number of students between 2005 and 2008. For starters, there was an increase of 720.5% in the number of students in 2006 compared to 2005. The increases continued every year: 264.6% in 2007, 75.4% in 2008, and 17.7% in 2009. By 2008 the PEF, through the FAS program, supported 1,337 schools with 529,210 students.

Impact of the Foundation-Assisted Schools Program on the Quality of Instruction

The PEF administers the QAT in March and October of every year in all the FAS partner schools. Two classes are tested in each elementary school and three classes in each middle and high school each year. The figures for each year are aggregates of the two QATs given in 2006, 2007, and 2008, as well as the one test given in March 2009 shows that there have been (i) a continuous improvement in the percentage of students scoring more than 90% in the QATs—from about 1% in 2006 to over 17% in 2009, and (ii) a continuous decrease in the percentage of students scoring under 40%—from over 21% in 2006 to just over 4% in 2009. Overall, the mean QAT score at FAS partner schools rose from 63% to 79% over the 4-year period. In general, girls outperformed boys on QATs.

The FAS program also underwent a third-party evaluation (TPE) conducted by Innovative Development Strategies (IDS), an international firm based in Islamabad. IDS tested 5,790 students from the seven selected districts, which comprised 2,617 Grade 4 pupils; 2,126 Grade 7 students; and 1,047 Grade 9 students. The IDS tests featured especially prepared questions covering four subjects: science, mathematics, Urdu, and English. They closely resembled the QATs to ensure comparability and to preclude any hidden biases. The test scores for Grade 9 were best for Urdu (80%), followed by mathematics (70%), and then by science and English (50% for both) **(**Source: Academic Development Unit, Punjab Education Foundation, 2009**).**

IDS also checked a sample of 40% of the FAS partner schools, administering its own tests to students at these schools. Moreover, IDS also reviewed the funding patterns and governance of the PEF, the transparency of PEF decision making, and the service delivery by the partner schools The overall finding from the study was that FAS had made significant progress in making quality education accessible to the poor, particularly from the slums across Punjab. According to the study, the FAS program has improved the quality of education for poor households across the board and for poor, rural, and slum households in particular. Findings also noted a marked improvement in the quality of education and that the program is addressing poor households **(**Source: Innovative Development Strategies. Third-Party Evaluation, p. 60**).**

The Education Voucher Scheme

In collaboration with the Teachers College, Columbia University, and the Open Society Institute of George Soros Foundation, the PEF designed the Education Voucher Scheme (EVS) for the slums (or *katchi abadies*) in the province of Punjab. The EVS aims to promote freedom of choice, efficiency, equity, and social cohesion. A pilot project was started in 2006 in the urban slums of Sukhnehar, Lahore, with 1000 vouchers enrolled and 13 schools were affiliated. By March 2009, the scheme has grown to 15,000 students and 69 schools. All these schools are private and provide co-education facility. Out of 15,000 students, 7986 students are females.

Under this scheme, 'vouchers' worth Rs. 300 per month per student are given to selected low income households chosen on the basis of economic profiling. These vouchers enable these parents to select a school of their own choice in their vicinity. Upon admission, parents present these vouchers to school administration, which then deposits these vouchers with PEF, which credits an equal amount to the bank account of the participating school.

International literature supports this idea and empirical research carried out proves that these vouchers increase the choice of students, ensures equality in opportunities, and provide incentives for the private schools to enhance enrolment and quality. The EVS makes its partner schools accountable to the parents rather than to the bureaucrats at the Ministry of Education. In the FAS program, every school principal has the choice of admitting a student or not. In the EVS, however, the decision regarding where a child attends school is up to the parents because they are the ones carrying the education voucher issued by the PEF. The partner schools are also accountable to the PEF: they are subject to periodic reviews of their student learning outcomes, additional private investments, and improvements in working conditions of the teachers.

Criteria for Selection of Partner Schools

EVS works with private schools only. As it provides incentive to parents to send their children to school, EVS naturally becomes a source of competition for private schools of the area. The criteria for selection of partner schools are:

(i) The fee being charged by the private school should not be more than Rs. 300.
(ii) The enrolment should vary between 100 and 500.
(iii) The school should have respectable infrastructure.
(iv) The partner schools should lie within ½ kilometer radius of the selected area.

Achievements of the Education Voucher Scheme

Table 2.5 shows the number of schools and students participating in the EVS over 2006–2009.

Table 2.5: Number of Students Benefiting from the Education Voucher Scheme, 2006–2009

Year	Number of Schools	No. of Students benefitted		
		Total	Male	Female
2006	11	1,053	505	548
2007	35	5,000	2,465	2,535
2008	52	10,000	5,154	4,846
2009	69	15,000	7,014	7,986
Total	**167**	**31,053**	**15,138**	**15,915**

Note: Figures quoted in the table are updated to 1 October 2009.

Source: Education Voucher Scheme, Punjab Education Foundation. 2009.

The EVS is providing free quality education to 31,053 students in 167 schools throughout the Punjab Province. The ways in which the program has benefited students, parents, and the partner schools.

(i)   The scores of EVS students on QATs clearly demonstrate the difference   between EVS and non-EVS students. EVS students from low-income families   with   poor   educational backgrounds tend to do as well as or better than   students from middle-income families with better educational backgrounds.

(ii)   Of the total number of students participating in the EVS program, 15,138 are   males (48.7%) and 15,915 are females (51.3%). The parity between male and   female   students   is ensured by an EVS policy that makes it mandatory for   participating households to enroll both girls and boys. If a household enrolls   its boys using an EVS voucher but not its girls, the voucher will no longer be   valid. This condition, coupled with an awareness campaign, has persuaded   parents to send both their boys and girls to school.

(iii)   The key benefit for the private schools participating in the EVS program has been increased enrollment. As the EVS meets the costs of needy students, more low-income parents start sending their children to EVS partner schools, and eventually more self-financed students are attracted to these schools. The overall increase in enrollment has been on average as high as 100%. This enhanced enrollment further improves the reputation of EVS partner schools, enabling them to grow even more.

(iv)   The facilities at EVS partner schools, particularly those charging fees lower   than   the voucher amount (PRs300 per month), have improved because   administrators have been able to invest their surplus funds. The extra funds have also been used to raise teacher salaries and improve working   conditions.This has not been the case for schools charging more than   PRs300 per month, however. For them, vouchers serve only to meet the costs   of   the additional students.)

(v)   As the EVS gives parents the right to choose; the parents acquire bargaining   power over the school administrators. Once their children are admitted to a   school, the parents can switch them to any other EVS partner school if they   are not satisfied with their current school. And since the EVS selects schools within the same communities, such transfers are practical. In fact, during the   formative years of the scheme, many parents exercised this right quite often,   to the discomfort of the school administrators. For that reason, the PEF   imposed a requirement that students must be in a school for at least six   months before they can transfer to another school.

(vi)   The EVS has also had the effect of significantly reducing child labor: Boys who   would   have otherwise been employed in workshops and hotels and girls   who would have been doing household chores were all busy studying at EVS   partner schools.

Model 2: Adopt-a School

Viewed to be a brainchild the Sindh Education Foundation, the Adopt a School Programme has become the most popular PPP programme within education sector in Pakistan since 2001. The programme, however, had its inception during mid 1990s and by 2000 had already been experimented by some big NGOs. The programme implies that a non-state actor, NGO or for-profit, takes responsibility to improve the status of a government school. The exact nature of adopters' engagement with the school varies enormously: some simply focus on improving the infrastructure while others are more concerned with improving the educational content. Even in the latter case there are variations, whereby some NGOs just focus on occasional teacher training sessions while

others adopt a more interventionist approach and take over the entire school management including monitoring the day-to-day performance of teachers.

The model involves a diverse range of non-state providers: individual philanthropists, corporate philanthropists, and NGOs. The number of schools adopted by one adopter also varies enormously: some take up just one school, while organizations like Sindh Education Foundation, who help individual and corporate philanthropists and small NGOs adopt government schools, have over 150 schools in their portfolio. There are no national level figures of the total number of adopted government schools— adoptions are approved at the district government level— but a per centage of the total government schools, the number is miniscule. Examples of this variation rest in the approach of two big NGOs involved in adopt a school programme. Idara-e-Taleem-o-Aagahi (ITA), which runs this programme in five different districts, focuses on improving the educational content through occasional teacher training sessions and weekly visits to the adopted schools. CARE, a Lahore based NGO, which has adopted over 350 schools, on the other hand closely regulates the educational process and the learning environment within these school. The principals and teachers are trained by CARE in line with a closely developed checklist and a team of coordinators, volunteers and personnel from the head office, ensure that the training is actually put into practice. In addition, professional monitors are employed for the purpose of staff appraisal and training.

Some year ago, Nazeer Foundation adopted the Government Girls Lower Secondary School through the Sindh Province Adopt-a-School Program. In April 2009, Nazeer Foundation took the necessary steps to add grade 9 at the school as well. The enrollment as of February 2010 is 72 girls, more than twice the number from one year ago. Nazeer Foundation has also hired three additional teachers for this school. Now, it has added grade 10 in 2010.

Some donor agencies have also invested in this programme. The USAID supported the Pakistan Centre for Philanthropy (PCP), a national level NGO, to administer a programme of three-way partnership to adopt government schools. In this programme, a business concern is asked to provide financial support to a government school while a local NGO is made responsible for implementing the programme and mobilization of the community. USAID in turn finances PCP administrative costs and those of the NGO.

The Aga Khan Foundation provides a number of school improvement programs – student-centred education and computers in classrooms to strengthen the capacity of low-cost private schools. The **Adopt- a School** program enables the government to hand over under-utilized/failed schools to the NGO Itara –e-Taleem-o-Agahi (ITA), which takes them and provides free schooling. ITA' role is also to provide teacher training and infrastructure. The arrangement is under the PPP between the Department of Education, Punjab and ITA. Anonther important initiative with regard to school management is in the form of a PPP arrangement between government schools in Lahore city and in Sarghoda and Cooperation for Advancement, Rehabilitation and Education (CARE) – a local NGO, which takes over the management of public schools by hiring internal, external ad academic coordinators who work with school staff and monitor teacher attendance, performance and test administration.

A study of adopt a school programme of 10 major NGOs notes that despite the emphasis on PPPs, there is a lot of suspicion about NGOs in minds of a majority of those working for the government, many regard NGOs at best as 'fashionable' and 'trendy', and at worst as international spy organizations. This tension is reflected in conflicting ideas about the role of the NGO in the programme: the government officials ideally want the adopter to bear the financial costs of reform and become a resource provider and facilitator of processes and programs rather than intervene within the education content like teacher training, lesson planning, checking teacher of student attendance. Adopters trying to improve the state of education are perceived as an intruder who has encroached on the authority of those who are directly concerned. There is no systematic mechanism to introduce the programme to the teachers of the adopted government schools. The result is that

teachers in the adopted schools are often highly insecure and unsure about their future and fear that the schools will be privatised resulting in loss of their jobs (Rashid 2000). The most critical factor in determining the nature of partnership, however, remains the background of the adopting agency. It is very clear that bigger NGOs, corporations, and politically or economically influential adopters are able to get things done as they desire much more quickly compared with those adopters who have few connections in the government or the education department. Rashid (2000) notes, 'A number of adopters found problems with the rather complicated hierarchical structure of the education department, yet at the same time Pakistan Navy faced much fewer problems with the same hierarchical structure.' The ability of these influential adopters to gain approvals for the extensive interventions within the adopted schools often makes the teachers nervous. This makes the adopter too influential to be challenged even on genuine issues, as the teachers in the adopted schools feel that any dissent could lead to them getting transferred elsewhere (Rashid 2000). Thus, the access that an adopter is able to gain to the adopted school is contingent on its networks. The result is that very few small NGOs have been involved in adopt the school programme, when they are involved it is normally under the patronage of umbrella organizations like Pakistan Centre for Philanthropy or Sindh Education Foundation, which are powerful enough to gain access to the government authorities.

2.3   Innovative Models of Secondary Education in India

The National Curriculum Framework (2005) in India outlines the learning achievements and skill development objectives in secondary education. . The overall 23 objectives of education, which cover a range of skills, values and attitudes, are outlined in the National Curriculum Framework for elementary and secondary education. The objectives include the development of basic skills in language, communication, mathematics, science and environmental studies. Contextualized knowledge is important and the values to be inculcated include national pride, an appreciation of the history and cultural diversity of India, an awareness of social and economic issues, and the development of personal and spiritual values. In sum, the goals of secondary education are to develop responsible citizens and leaders in the community. Though the National Curriculum Framework refers to national norms, it has not been possible to ascertain the extent to which states have adopted these norms or alternatively have redefined or incorporated these objectives into the state's goals for education.

Keeping in view the above, both the public and private sectors have developed and implemented various models for delivery of secondary   education in India. Though these models addresses different components of secondary education like access, participation, quality and relevance, due to data limitations the present attempt is to review some of the select innovative models that fall in one or other components of secondary education.

2.3.1   *Innovative Models addressing issues on Access, Participation and Equity (Gender Empowerment) and Social Development*

Model 1: Jawahar Navodaya Vidyalayas: Promoting Rural Talent and Social Development

The Jawahar Navodaya Vidyalaya (JNV) system is a unique experiment unparalleled in the annals of school education in India.. Its significance lies in the selection of talented rural children as the target group and the attempt to provide them with quality education comparable to the best in a residential school system. Such children are found in all sections of society, and in all areas including the most backward. These talented children otherwise would have been deprived of quality modern education traditionally available only in the urban areas. Such education enables students from rural areas to compete with their urban counterparts on an equal footing. The National Policy on Education (1986) envisaged the setting up of residential schools, to be called Jawahar Navodaya Vidyalayas that would bring out the best of the rural talent.

Organisational Structure

Navodaya Vidyalayas are run by the Navodaya Vidyalaya Samiti, which is an autonomous organisation under the Ministry of Human Resource Development, Department of Secondary & Higher Education, Government of India.The Samiti functions through an Executive Committee under the Chairmanship of Hon'ble Minister of HRD. It is responsible for the management of all affairs including allocation of funds to the Samiti and has the authority to exercise all powers of the Samiti. The Executive Committee is assisted by two Sub-Committees, i.e. Finance Committee and Academic Advisory Committee.

The executive head of the administrative pyramid is the Commissioner who executes the policies laid down by the Samiti's Executive Committee. He/she is assisted at the Headquarters level by Joint Commissioners, Deputy Commissioners and Asstt. Commissioners. At the Regional level, he/she is assisted by the Deputy Commissioners and Assistant. Commissioners.

The Samiti has established 8 Regional Offices for the administration and monitoring of Navodaya Vidyalayas under their jurisdiction. For each Vidyalaya, there is a Vidyalaya Advisory Committee and a Vidyalaya Management Committee for the general supervision of the Vidyalaya. District Magistrate of the concerned district is the Chairman of Vidyalaya level Committee with local educationists, public representatives and officers from the District as members. The Vidyalaya Management Committee has two sub-committees i.e. Vidyalaya Purchase Advisory Sub-Committee and Vidyalaya Appointments Sub-Committee. As on August 31, 2010, 600 JNVs are functioning across the country with 1,80, 371 students on roll as on March 31, 2007, the year for which latest data are available.

Box 2: Jawahar Novodaya Vidyalayas: Advancing Learning Opportunities for the Talented Poor in Rural India

The specific objectives of the JNV are:

- To serve the objectives of excellence coupled with equity and social justice.
- To promote national integration by providing opportunities to talented children, largely rural, from different part of the country, to live and learn together and develop their full potential.
- To provide good quality modern education, including a strong component of culture, inculcation of values, awareness of the environment, adventure activities and physical education.
- To ensure that all students of Navodaya Vidyalayas attain a reasonable level of competence in three languages as envisaged in the Three Language Formula; and
- To serve, in each district, as focal point for improvement in quality of school education through sharing of experiences and facilities.

Salient features

Location of Jawahar Navodaya Vidyalayas

Navodaya Vidyalayas are located in rural areas across the country. The State Government is to offer free land and rent free temporary buildings for the setting up of a Navodaya Vidyalaya. As on August 31, 2010, 600 JNVs are functioning across the country.

JNV : Entrance on the basis of Merit

Navodaya Vidyalayas draw their students from talented children, selected on the basis of a merit test, called the Jawahar Navodaya Vidyalaya Selection Test (JNVST), designed, developed and conducted initially by the NCERT,and currently, by the CBSE. The test is held annually on an all India basis at block and district levels. It is objective, class neutral and is so designed as to ensure that rural children are not at disadvantage.

Reservation for Rural SCs, STs and Girls

Jawahar Novodaya Vidyalayas primarily admit children from the rural areas, with a provision of 75% seats for rural children. Further, seats are reserved for children from the SC and ST communities in proportion to their population in the district but not less than the national average. One-third of the seats are reserved for girls and 3% of the seats are reserved for disabled children.

JNV: Co-educational Residential Institution with Free Education

Navodaya Vidyalayas offer free education to talented children from Classes VI to XII. Navodaya Vidyalayas are affiliated to the CBSE. Entry to a Navodaya Vidyalaya is in Class VI only along with lateral entry into Classes IX and XI. Each Navodaya Vidyalaya is a co-educational residential institution providing free boarding and lodging, expenses on uniforms, text books, stationery, and to and fro rail and bus fare. However, a nominal fee @ Rs. 200/- per month is charged from students of Class IX to XII for Vidyalaya Vikas Nidhi. The students belonging to SC and ST categories, girls, disabled students and children of the families below poverty line are exempted from this fee.

Adherence to Three Language Formula

The Regional Language is generally the medium of instruction from Classes VI to VIII and from Class IX onwards, it is English for Science and Mathematics and Hindi for Humanities.

Promotion of National Integration

Navodaya Vidyalayas aim at inculcating values of national integration through migration scheme though which the inter-regional exchange of students between Hindi and Non-Hindi speaking States and vice-versa takes place for one academic year. Efforts are made to promote better understanding of the unity in diversity and cultural heritage through various activities.

Academic Excellence

In Jawahar Navodaya Vidyalayas, all out efforts are made to develop competencies among students in scholastic and non-scholastic areas of education which leads to effective personality development of each child.

Source: www.navodaya.nic.in

Art in Education Programme

One of the objectives of the Navodaya Vidyalaya Samiti is to provide good quality modern education including a strong component of culture and inculcation of values. The other objectives of Navodaya Vidyalayas, i.e. to promote national integration and enrich the social content, are fulfilled through its Art in Education Programme, which facilitates an understanding and appreciation of the common and composite heritage of people among students. Under this programme, eminent personalities from the fields of literature, arts, theatre, and sciences are invited to interact with students who are given training in traditional art forms under the tutelage of traditional Gurus (teachers) and contemporary artists and experts.

Games and Sports

Games and sports are encouraged in the JNVs to develop fitness, physical and neuro-muscular skills and promote the spirits of co-operation and sportsmanship. These Vidyalayas organize National Sports Meets to identify talented children in sports. The meets happen at cluster and regional levels every year where students from different JNVs compete. The students picked at regional level compete at national level. Based on the performance at the national level, children get a chance to play on behalf of the Navodaya team. Specialised sports like Archery, Judo and Gymnastics are encouraged in some of the JNVs.

Migration

One of the important features of the Navodaya Vidyalayas is a scheme of exchange of students from one Vidyalaya in a particular linguistic region to another in a different linguistic region to promote understanding of the diversity and plurality of India's culture and its people. The aim of the

migration in Jawahar Navodaya Vidyalayas is focused on national integration. According to the scheme, selected 30% of 9th class students are exchanged between JNVs of non-Hindi speaking region and Hindi speaking region for one year.

Other courses

In 1999, [Navodaya Vidyalaya Samiti](#) and [Intel](#) joined hands to conduct a pilot program for few selected schools on integration of technology in teaching and learning process. After the success of the pilot project, around 3486 teachers across all schools of the Samiti were trained during their summer and autumn vacations in 2001-2002.

The NVS in collaboration with an NGO, the [Dakshana Foundation](#), in year 2007 provided free IIT-JEE coaching to selected students, a batch of forty students from each region..

Faculty

The NVS provides extensive educational opportunities and have specialized faculty for every subject .Apart from normal subjects, JNVs have faculty for Music ,Games, Drawing, Computer, SUPW (Socially Useful Productive Works) and Library, which ensure all round development of students . To ensure the quality of education and consistence guidance, these schools have introduced extra remedial classes in which the faculty clear doubts of each and every student. This is especially helpful for students (10th and 12th grades) who appear in board examinations. The JNV schools are fully funded by the MHRD, Government of India.

Deliverable or Best Practices

The major outcome or the deliverable output of this model of education is the identification and development of talented bright and gifted children predominantly from rural areas who otherwise are denied good educational opportunities. Besides, the objective of quality education is achieved through effective academic, co-curricular and adventure activities, physical education, and reasonable level of competency in three languages. The scheme also fosters   decentralised planning of education as the respective districts becomes the focal points for improving quality of education through sharing of experience and facilities with continuous interaction with local community and helping these institutions to develop as centres of academic excellence. In other words, the JNVs also often function as resource centres for other government and aided schools in the district in terms innovative methods of classroom practices, use of technology, teacher empowerment, school management, communication with the stakeholders, etc.

Model 2:   Rishi Valley Education Project (Model Residential School)

Another innovative model in secondary education worth highlighting is the Rishi Valley School, run by Krishnamurti Foundation, India. It is located in a sheltered valley in the interior of rural Andhra Pradesh, about 15 km from the nearest town, Madanapalle, and about 140 km north-east of Bangalore, India. Regarded as one of the leading residential schools in India, Rishi Valley School provides a distinctive educational environment that enables young persons to grow not only in intellectual capacities, but also in other dimensions of their being. Rishi Valley School has 360 boarding students (around 190 students in classes 4 to 8 and 160 students from classes IX to XII) from different states of India and sixty highly qualified faculty members.

The Senior School, with 160 students from classes IX to XII, is affiliated to the ICSE and ISC examination boards. The emphasis at this level shifts towards an in-depth preparation of students to meet the academic requirements of the prescribed syllabi. While developing the students' intellectual faculties, there is a conscious effort towards creating a wider awareness of the world and giving space for the development of the aesthetic, moral and emotional dimensions. It is envisaged that students passing out from Rishi Valley School would grow into self-aware, sensitive and

responsible human beings who remain life-long learners. While the residential school is only one unit among others in the Education Centre, it functions as a resource base for other units by providing them with administrative support and broadly sharing with them its educational and human resources.

Box 3: Rishi Valley Rural Education Centre

The Rishi Valley Rural Education Centre (REC) consists of RIVER (Rishi Valley Institute for Educational Resources), a residential Middle School for students from the immediate neighbourhood and twelve 'Satellite Schools'. While RIVER, along with two 'Satellite Schools', and the Middle School are located on REC's 14-acre campus, the other ten 'Satellite Schools' are located in nearby hamlets. Rishi Valley School is dedicated to drawing the phlosopher J. Krishnamurti's challenging vision of education into the daily transactions and practices of a school situated in the Indian countryside. The vision, among others, emphasises on education to awaken the intelligence and the generosity of spirit in students so that they are able to meet an increasingly complex world without losing their humanity. The cultivation of a global outlook, a love of nature and a concern for mankind are all part of the educational aims of the Centre.

Aims of the Programme are:

- To promote village-based education;
- To train teachers and teacher trainers in a multi-grade multi-level methodology (MGML) developed by RIVER;
- To publish instructional materials in the MGML methodology;
- To draw working children into the school system;
- To create green spaces around the school campus for the conservation of bio-diversity in general and medicinal plants in particular;
- To raise awareness of health, nutrition and sanitation; and
- To actively involve the community in the day-to-day management of their children's school

The Multi-grade Methodology

The Rishi Valley structure for village education that consists of a network of Satellite Schools where a community-based curriculum is taught by village youth trained in especially designed multi-grade methodologies, where the academic curriculum is graded for individual levels of learning, grounded in up-to-date information, and framed in the local idiom and, finally, where the curriculum is integrated with activities aimed to promote conservation, and sustain local culture.

The education kit called 'School in a Box' consists of graded cards. These cards represented a breaking down of the learning process into smaller units. Groups of cards are then assembled into a set of 'milestones', which lead students from level I to level V in the areas of language, mathematics and environmental science. These carefully designed 'study cards' and 'work cards' are supported by a pictorial 'achievement ladder' that gives a clear sequential organization to what are essentially self-learning materials. Children at different levels within a single classroom share the same kit. A textbook in each subject for each child can be dispensed with or used as enrichment material.

The cards allow children to learn at their own pace by selecting, with the help of the 'achievement ladder', the appropriate 'study card' for their level and performing the necessary follow-up activities or exercises contained in the 'work cards'. This method encourages silent self-study and individualized learning, though teacher instruction and group work are also a necessary part of the learning process. It gave ample room to the fast-learner as well as the slow-learner to progress at their own pace. Student absenteeism is not a problem in these schools because a student is able to simply take up where he or she had left off on returning to school after a period of absence. Learning by rote and dry comprehension exercises are abandoned in favour of activity-based learning. Work cards supported by teaching aids are prepared in such a way that children are actively involved in what he/she is doing and the possibility of his/her sitting "dreaming" in front of an open book is reduced to the minimum.

Given the rich folk tradition in which the villages are steeped, folk art, folk songs and stories and legends are also incorporated into the curriculum. Education is seen not as a process of trying to bring every educated person's competencies to one homogenized level, thereby alienating the child from his own roots and ironing out cultural differences, but as a tool for deepening an understanding of himself/herself, of his/her traditions and roots, while also exposing his/her to a wider cultural and knowledge base. This value-based model of education communicates ideals such as tolerance for other cultures, protection of the environment, preservation of folklore and local medicinal traditions. The model of rural education provides a viable and attractive alternative to traditional education in villages, based on the one teacher per class, mono-grade, mono-

Funding Sources

The Rishi Valley School is financially autonomous. Funds generated from its approximately 310 fee-paying students cover all running expenses. The Rural Education Programme of the Centre, however, incurs an annual expenditure of around Rs 2,500,000. The Ministry of Human Resource Development, Government of India, has since 1987 provided support from its Scheme of Assistance under Experimental and Innovative Programmes. Sir Ratan Tata Trust contributed funds for community programmes, and for documentation, including a film on RIVER's methodology and a 5-volume Teachers' Resource Pack. The Rockefeller Foundation gave a one-time grant for publication in 1996. Catholic Relief Services of India supported aspects of the community programme. The Rishi Valley School continues to make and annual contribution of Rs. 125,000 to the programme. Any shortfalls in income are met through training programmes conducted by the centre. **However, the model is applied to one higher secondary school only. No study has been conducted to see the scalability of such a model and comparing costs of this school with government schools.**

Source: http://www.rishivalley.org/default.htm

Aims of Education

The purpose, the aim and drive of these schools, is to equip the child with the most excellent technological proficiency so that the student may function with clarity and efficiency in the modern world. A far more important purpose than this is to create the right climate and environment so that the child may develop fully as a complete human being.[3] This means giving the child the opportunity to flower in goodness so that he or she is rightly related to people, things and ideas, to the whole of life. The intention of the school, in other words, is to awaken the intelligence and the generosity of spirit in students so that they are able to meet an increasingly complex world without losing their humanity. The cultivation of a global outlook, a love of nature and a concern for mankind are all part of its educational aims. More specific goals of the educational philosophy of Rishi Valley School are:

To educate students so that they are able to explore both the world and their inner being;

To inculcate a love for nature and respect for all forms of life;

To create an atmosphere of affection, order and freedom without either fear or license; and

Not to condition the students in any particular belief, either religious, political or social, so that their minds may remain free to ask fundamental questions, enquire and learn.

Based on this philosophy, teachers attempt to create an atmosphere of space, freedom, care and security in which students are helped to enlarge their horizons and grow. The school is concerned with developing the individual talent and intelligence of each student. It is assumed that parents should be aware equally of their children's talents as well as limitations, and allow them to develop in their own way, and not on the basis of predetermined expectations.

The senior school is housed in a separate complex of buildings. The facilities include a separate, well-stocked library, various specific subject rooms, an audio-visual room, separate laboratories for Physics, Chemistry and Biology and a computer room. An open visitor's lounge, a work space for teachers and a large staff-room are also part of the main senior school building.

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[3] J. Krishnamurti, founder of Rishi Valley Education, advocated that "a human being must be the total human being, not just a technological human being. If we concentrate very much on examinations, on technological information, on making the child clever, proficient in acquiring knowledge while we neglect the other side, then the child will grow up into a one-sided human being. When we talk about a total human being, we mean not only a human being with inward understanding, with a capacity to explore, to examine his or her inward state and the capacity of going beyond it, but also someone who is good in what he does outwardly. The real issue in education: to see that when the child leaves the school, he is well established in goodness, both outwardly and inwardly."

Learning Atmosphere and Curriculum up to Cass X

Moving into class IX in the senior school entails a longer working day, and more organized study time for students, who, at this stage, are expected to become more independent in their learning; however, a close and supportive relationship continues to exist between students and teachers. To ensure continuity between teachers and students, teachers take students up from class VIII through to class IX in many subjects.

In the senior school, the educational programme shifts in its emphasis towards preparation of students in the syllabus for the ICSE (at the end of class X) examinations. Students take an internally administered cumulative exam for the first time at the end of class IX. The academic curriculum is balanced by arts and crafts, dramatics, sports and participation in a variety of clubs ranging from journalism, to astronomy and chess. Participation in other work of the centre such as afforestation, rural health, and rural education is also encouraged and organized. Students are also encouraged to research topics of their interest and present these at morning assemblies. Assemblies, student-council meetings and specially convened staff-student meetings are forums where discussion and debate over issues of concern in the school community or in the world are encouraged. Culture classes - intended to extend intellectual and emotional horizons of the students – remain an integral part of the timetable, right until class XII.

The 'plus two' programme

The last two years at Rishi Valley School - classes XI and XII - form a separate programme in which each student in selects four subjects in addition to English. These elective subjects are studied intensively for two years. The subject combinations are broadly divided between Science, Humanities and Business Studies (Subjects offered are Mathematics Physics, Chemistry, Biology, Computer Science; English Literature, History, Geography, Economics, Commerce, Accountancy, Environmental Studies, Music in the Carnatic style, Fine Arts, Hindi and Telugu Literature). A General Studies Programme broadly focusing on environmental crisis, and its impact on human societies on food security and issues of poverty are also taught at this stage.

Students in the 'plus two' programme are seen as 'young adults' and greater responsibility is expected of them in terms of understanding and sustaining the ethos of the school. They are encouraged to take on responsibilities, help in organization of events and participate constructively in discussions of school policies related to student life.

Evaluation in the Senior School

Evaluation for all students in the senior school is based on a series of written assignments and tests, apart from project work and classroom observations. The reports contain comments and suggestions on formatted report forms, along with a qualitative achievement grade. The principal's and house-parent's reports also give an overall profile of the student's growth, interests and involvements in life at school.

Student Residences

There are around 20 small hostels, which are called houses, each of which accommodates a number ranging anywhere between 12 to 22 students. Boys and girls belonging to class IV live together with older girls of classes VI and VII in the same house. Older boys and girls live in separate houses, usually with a mixed-age of two classes living side by side. Members of the teaching staff, who live in staff quarters within a house, act as house-parents. Life in the houses is meant to develop the values of co-operation, self-restraint, and sharing. The interaction between teachers and students outside the classroom is considered a very important part of living and learning at Rishi Valley. In this ambience, students generally relate to each other in a friendly and accepting manner like a large and extended family, with younger ones not afraid of the older ones.

Other Facilities and Activities for Students

The school's location in a serene and beautiful valley creates a natural, pollution-free environment for children to grow up in. During their stay here students are encouraged to explore the surroundings through walks and hikes in the valley and its surroundings. An evening gathering of the whole school, described as astachal, is held whenever the weather permits. Students sitting together and observing the evening sky changing colours have an opportunity to examine their thoughts in quiet reflection and come upon a quality of silence. There are also ample facilities for sports and games. Regular physical exercise is conducted in the morning, and an annual athletics meet provides a focus for the development of athletic prowess and talent.

Music and dance are offered for interested and talented students. Senior boys and girls enjoy an evening of western folk-dancing on the weekends. The Arts and Crafts department is large, with facilities for teaching drawing and painting, batik and needlework, pottery and carpentry, design and construction of toys and models. Interaction between subject areas is actively fostered. Whereas all students have ample time for arts and crafts, fine art is also a popular choice as a subject of study for the ICSE and ISC examinations. The arts are an integral part of students' life at Rishi Valley School. Students sing, paint, sculpt, embroider, and learn the techniques of woodworking, dyeing, printing weaving, and embroidery. The Fine Arts Department holds an end-of-year exhibition Srujana where students' work is exhibited. Students can specialize in art, leading to examinations at both ICSE and ISC levels.

The Department of Music provides instruction in vocal music, mridangam, tabla, violin and veena. The Dance Department offers instruction in Bharatnatyam style of dance. Around two dance and six musical performances are scheduled each term. Concerts by visiting musicians form highlights of the school term. Students who wish to specialize can take the music examination, where they gain proficiency in both theory and the practice of Karnatik music, at the ISC and ICSE levels.

Financing of Rishi Valley School

Rishi Valley School is financially autonomous. Funds generated from its approximately 310 fee-paying students cover all running expenses. In a typical year there are about 6 scholarship students, including children from families engaged in social work in remote parts of the country. Fee reductions are made available so that fees are adjusted to family incomes provided students qualify on the entrance tests. The School contributes about Rs. 125,000 to the Rural Education Centre and its activities.

The Rural Education Programme incurs an annual expenditure of around Rs 2,500,000. The Ministry of Human Resource Development, Government of India, has provides support from its Scheme of Assistance under Experimental and Innovative Programmes. Private Trusts like also contributes funds for community programmes. Sir Ratan Tata Trust has provided funds for documentation, including a film on RIVER's methodology and a 5-volume Teachers' Resource Pack. Besides, Rockefeller Foundation had given a one-time grant for publication in 1996. Catholic Relief Services of India supported aspects of the community programme. Rishi Valley School continues to make and annual contribution of Rs. 125,000 to its outreach programme. Any shortfalls in income are met through training programmes conducted by the centre.

Model 3: Passport to Success (A Programme of the International Youth Foundation)

The International Youth Foundation (IYF) and Youthreach have collaborated since 2003 on implementing the Passport to Success model for Indian youth aged 14-24 years old. The program, which was renamed the Udaan Life Skills Program in India, targets vulnerable youth, including those from urban slums in government schools, job training programs for leprosy patients and their

dependents, vocational training courses for out of school youth, such as street children, child labourers, and children affected by HIV/AIDS.

On their journey to adulthood, many youth around the world face daunting challenges in an increasingly complex, competitive, and often threatening world. Demographic data for young people in widely disparate countries indicate a high probability that they will be under- or unemployed, have low self-esteem, and be at high risk of problematic social behaviour. In order for them to take their place in the global marketplace and prepare for positive healthy futures, these young people need to become self-motivated, reliable, productive, and confident decision-makers -- able to overcome adversity, and be responsible through life's many challenges. They also need to be able to exercise good judgment, work well in teams, know their personal strengths, and apply knowledge learned in the classroom.

Keeping in view the above, **Passport to Success (PTS) Program** was launched in 2004 in India and Mexico with a grant from the GE Foundation with the objective to equip young people, ages 14 to 24, with a range of skills that help them stay in school and get the education, professional skills, and confidence they need to succeed in life. In January 2006, the program was expanded to Poland and Hungary. The program targets youth who are either in school but at risk of dropping out, or are out of school, out of work, or working in dangerous environments, including on the street.

Deliverable of the Programme

The Passport to Success life skills curriculum, currently available in 12 languages, has been successfully tested in a variety of venues, including both public and private secondary schools, vocational technical institutes, teacher training colleges, and youth-serving non-profit organizations. The curriculum and program model has been easily transported and adapted to a variety of cultures and languages according to local needs and market demands. To ensure the long-term sustainability of the program, IYF and local partners engage key institutions in local functions, such local universities and schools to conduct local assessments, teacher training, and teacher support for sustainable growth.

A key measure of success of the programme is the extent to which young people are either in school or employed six months after participating in the program. To date, over 40,000 young people have completed the program in eight large cities in India having PNGOs (Partner Non Government Organisations) operating in these cities. Evaluations of the Passport to Success program have shown it to have a significant impact among participating young people in four essential life skills categories: Personal Development, Problem Solving, Healthy Lifestyles, and Workplace Success, as well as in reducing school drop-out rates and increasing employment, and in helping at-risk youth increase their levels of self-confidence and hope for the future.

Box 4: Passport to Success (PTS) Program

Passport to Success (PTS) Program targets youth who are either in school but at risk of dropping out, or are out of school, out of work, or working in dangerous environments, including on the street. It aims at equiping young people, ages 14 to 24, with a range of skills that help them stay in school and get the education, professional skills, and confidence they need to succeed in life.

Goals and Objectives

The goals of the program are to help young people:(1) Strengthen personal competencies, such as communication, self-confidence, decision- making, and goal setting.2) Learn about critical health issues that affect them within their country.(3) Develop skills for successful employment, such as effective work habits, teamwork and cooperation, and financial literacy.(4) Engage in planning and implementing community-based projects to address community problems.

Curriculum

The leaders guide compliments the training provided to youth leaders when they impart the curriculum. The leaders guide has lesson design which contains for each lesson, information that is needed for the leader to prepare to teach the lesson and actual instructions for conducting the lesson. The leaders guide lists out teaching skills and strategies, guidelines to engage with participants with limited reading and writing abilities. Unit One helps in strengthening personal competencies such as communication, self-confidence, decision making, and goal setting. Unit two helps participants analyze various problems and conflicts in their daily lives, and develop strategies to manage and resolve them. Unit three teaches participants about youth reproductive health and the importance of a healthy life style. Unit four helps participants understand the concept of entrepreneurship and provides an understanding of roles/responsibilities of an entrepreneur. Unit five engages in planning and implementing community-based projects to address community problems. In unit six, the participants understand the importance of a healthy life style and harmful effects of alcohol and substance abuse.

Source: www.youthreachindia.org

During the large scale-up phase starting in 2007, Youthreach concentrated on training Master Trainers, who could then instruct other facilitators on how to deliver the life skills course. To date, the Udaan Life Skills Program has trained 33 master trainers in each of the 24 youth-serving partner NGOs in Delhi, Bangalore & Hyderabad. The Master Trainers successfully trained 464 facilitators who subsequently utilized the curriculum to teach life skills lessons to over 21,600 youth.

Success Stories

Youthreach conducted a follow-up survey with 374 youth participants six months after they graduated from the program to track their progression. This survey found that 58% of respondents were continuing with their vocational skills training after attending the PTS program, and 38% had either found a job/internship, or had started their own enterprise. The majority of youth who found employment after graduating from the program indicated that they are performing better at their job, working more effectively in teams, and better understand how to behave in an office setting as a result of the PTS training. It may be mentioned that Youthreach conducted a follow-up survey with 374 youth participants six months after they graduated from the program to track their progression. However, the survey did not include non-PTS young people and neither a comparison between PTS and non-PTS was done.

Some Success Stories of PTS Programme

Nandini from Kolar Gold Fields, India

Nandini is a 14 year-old student who took part in the life skills program that BREADS implemented at her school in Kolar Gold Fields, India. After participating in the program, Nandini realized that the life skills lessons influenced many aspects of her personality and changed the way she hoped to lead her life.

Before enrolling in the life skills program, Nandini would sit alone on the last bench in her classroom and not mingle with her peer group. The life skills lessons taught her to communicate with her peers in a constructive way, and she has since made many new friends. The lessons also influenced the way that she perceives school. Nandini reflects, "Before, I was very lazy and not interested in my studies, but when I started attending these classes I became more responsible and got higher marks in my class 9 exams. I realized that it is important to have goals." Now, Nandini wants to become a doctor and travel to villages helping and healing people.

The life skills have also helped Nandini to address difficult family matters. She remarks, "My father has a second wife and I would see my parents fighting all the time. This image was always stuck in my head and would make me feel low and depressed. Life skills teach you that one has to tackle many problems in life. I now feel confident about facing any problem that comes my way." Nandini believes that the life skills that she was taught through the Passport to Success program should be implemented throughout India and become a core subject in every training course.

Ashwat from Bangalore, India

Ashwat participated in the Passport to Success program while taking a Retail and Sales Marketing course at Unnati in Bangalore. As a student, goal-setting and time management skills helped motivate Ashwat to make good marks in class, and he was ultimately able to finish his course and get a degree. He then interviewed for and was immediately hired for a job as a Data sales manager in a library. Ashwat credits the life skills training for teaching him confidence and skills that he was able to use during the interview.

Ashwat is constantly using life skills in his new job, and explains that it helps him a great deal while interacting with customers. He reflects, "Before I took the life skills course, I did not speak much, but now I have become more confident and can speak frankly and openly with my colleagues. I have also made many new friends." Aswat's relationship with his family has also improved. He says, "In the past, I would avoid visiting my parents, but now I realize that it is important to take the time to build a relationship with my parents and sister." Ashwat's parents are proud and pleased that their son is able to speak articulately, has a good job, and is happy in his life. Ashwat hopes to continue working at his current place of employment for years to come.

Source: www.youthreachindia.org

Model 4: Yuva Parivartan: Creating Livelihood through Skill Development

Yvva Parivartan is a project of Kherwadi Social Welfare Association, set up in 1928 by Mr. B.G.Kher, the first Premier of the then Bombay Presidency, has emerged as the largest livelihood NGO in the country training over 85,000 students during 2011-12.

Yuva Parivartan focuses on a segment of society that is relatively ignored by the government as well as the NGOs – i.e. less educated and deprived out-of-school youth. Yuva Parivartan works for the youth who do not complete school; hence, have little livelihood opportunities and end up as casual labourers in urban or rural areas. It focuses on the interventions for economic and social development of these forgotten deprived youth in an equitable manner by providing short term employment oriented courses, thereby mainstreaming them and helping them to become contributing members of the society. The program/courses provides these youth with exposure to market realities, training in the skills and practice in the skills. This exposure leads to opening of their minds where they start thinking of the future. The program helps build their confidence and realize their potential. The program also trains them to take up jobs, make them employable through job preparedness, interviewing and CV writing skills, grooming, etc. Yuva Parivartan has also been working with the Police Department and the Prisons to train First Time Offenders and under-trials to re-rehabilitate them and keep them away from crime.

Courses Offered by Yuva Parivartan

The courses offered include Electrical Wireman, Domestic Appliances Repairs, Multi-skill Technician, Air Conditioning & Refrigeration Mechanics, Mobile phone repairs, Motor Mechanic, Motor Driving, Tailoring & Fashion Designing, Beautician, Mehendi, Nursing, English Speaking & Life skills, Basic Computers & Entrepreneurship. Some of the recently added new courses include Retailing, Hospitality and Construction.

Yuva Parivartan: Providing the Socio-economically Disadvantaged Youth with Employability Linked Vocational Skills

Yuva Parivartan today has emerged as one of the largest NGOs in the field of Vocational Education. While there are several other smaller and regional organisations (for profit as well as non-profit), YP's uniqueness lies in its single minded focus of targeting the school dropouts constituting 500 million + "forgotten youth".

Yuva Parivartan is one of the few national level NGOs with a proven, scalable and replicable model for skills development and employment. It has evolved innovative models and formats for reaching out to segments which are so far not covered through a focused and organised skill development initiative.

Yuva Parivartan's Delivery Model

The delivery model of Yuva Parivartan is based on the basic principle that the problem faced by the school dropouts from the underprivileged families is not only of income poverty but also of social poverty. It may be underlined that the Social poverty refers to the absence of social support systems and the socio-cultural atmosphere that positively impacts youth towards improving themselves.

Accordingly, Yuva Parivartan works in 4 areas, which form the 4 pillars of its unique model:

- **Community Engagement** - to mobilize youth and prepare them to unleash their potential;
- **Livelihood Training** - including vocational skills, work readiness and life skills;
- **Industry partnership** - for creating industry relevant curriculum, industry exposure and on job training; and
- **Placement Support** - to get them successfully aligned to the mainstream.

Each of these initiatives is aligned to one singular objective - to provide the socially disadvantaged youth with employability linked vocational skills thereby helping them get self or wage employment.

The **Yuva Parivartan Livelihood Development Centres (LDC)** is typically located in a slum or rural backward area and conducts short term employment oriented courses free of cost for youth. Yuva Parivartan has more than 35 LDCs in Maharashtra, Karnataka, Bihar, Chhatisgarh and Delhi. Yuva Parivartan has **Partnerships (PVTC)** with more than 25 Regional NGOs to help them implement the Yuva Parivartan model across the country. The **Yuva Parivartan Rural Mobile Camps** involves taking the vocational skills courses to the rural interiors and tribal belts thereby reaching out to areas where setting up the centre is not feasible. **Yuva Parivartan Institute of Skills Development (YPISD)** conducts skilling programs for the Government and the Corporate Sector. **Integrated Rural Development Programme (IRDP)** conducts training of farmers for improved agricultural practices, women empowerment through SHG formation, water resource management and animal husbandry to improve the livelihood of small and marginal farmers in 50 villages in Wada Taluka.

In view of the important role of the Social Development Sector, **Yuva Parivartan Academy for Livelihood** is harnessing the capacities of even tiny NGOs and envisages developing an ecosystem that supports small NGOs with a package comprising of Teachers Training, Life Skills Modules, Placement Training and Examination and Certification.

Yuva Parivartan:The Way Forward

Over the last 14 years, Yuva Parivartan has reached out to more than 150,000 youth through various formats. Of these, approximately 60% are gainfully employed either through wage or self employment. It targets to reach 10,00,000 youth by 2013-14.

Having created a scalable and replicable model, Yuva Parivartan is helping smaller and like minded NGOs build capacities and replicate the model so as to achieve exponential growth. Yuva Parivartan envisions an international footprint by establishing a presence in select Countries of Asia and Africa in 2013-14.

Model 5:   Model Schools at Secondary Level

The Ministry of Human Resource Development (MHRD), Government of India has been implementing several innovative schemes, mostly in collaboration with the provincial/state governments. Currently, some of the important schemes being implemented by the MHRD, GOI for improving access, retention, quality and equity in school education include setting up of Model

Schools at the community development block level, construction of Girls' Hostels in backward and remote areas, establishment of Kastruba Gandhi Balika Vidyalays (KGBVs), etc. with focus on Educationally Backward Blocks.[4] The Model School scheme was launched in November 2008 with the aims to provide quality education to talented rural children through setting up of 6,000 model schools as benchmark of excellence at block level.. These model schools are envisaged to function as block level resource centres for providing academic support to state government managed and aided schools in all bocks in the country.

The scheme has two modes of implementation, viz., (i) 3,500 schools are to be set up in as many educationally backward blocks (EBBs) in collaboration with State/UT Governments; and (ii) the remaining 2,500 schools are to be set up under the Public-Private Partnership (PPP) mode in blocks which are not educationally backward. At present, only the component for setting up of model schools in EBBs through State/UT Governments is being implemented. The PPP component of the Model School Scheme is being implemented in the 12th Five-Year Plan (2012-17).

Model 5.1:   Model Schools in Collaboration with State/UT Governments

The Government of India envisages to set up   3500 model schools   in educationally backward blocks (EBBs) through the State/UT Governments. Prior to launching the programme, the Government of India carried out several rounds of consultations with the state governments and national level resource organisations and also prepared a policy guidance note reflecting on its feasibility and various other dimensions of organisation, management, funding and possible development implications of the scheme. Out of 35 State/UT Governments, 27 States/UTs   have most of the blocks identified as EBBs. In these blocks, land for model schools are identified and provided free of cost by the State/UT Governments . While deciding the location of the schools, State/UT governments consult block Panchayats in an appropriate manner. The State/UT Governments are free to establish brand new schools or select existing schools for conversion as model schools. Priority is also given to Ashram Schools (i.e. residential schools in tribal areas) in case of upgradation/conversion of the existing schools. Construction of these schools is done through the State Societies specifically created to manage these schools, and therefore, the state share towards capital cost is credited to these Societies. States can also enter into PPP to get the buildings constructed and maintained for which annuity payment is to be made by the State Government. The State/UT governments also have the option to establish the school either with classes VI to XII or with classes IX to XII.

The decision on the medium of instructions is left to the State/UT Governments. However, special emphasis is given on English teaching & spoken English. These schools are run by State Government Societies similar to that of the KVS. So far, 565 models schools have been established in 565 EBBs in the country.

Box 6: The Model School Scheme

The Model School scheme, launched in November 2008, aims at providing quality education to talented rural children through setting up of 6,000 model schools as benchmark of excellence at block level. .

Objectives of the scheme:

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[4] Initially a list of 3073 educational backward blocks (EBBs) was drawn up on the basis of twin criteria of Female Literacy Rate being below the national average of 46.13% and Gender Gap in Literacy being above the national average of 21.59%. Both these criteria had been earmarked by the RGI. Subsequently this list was expanded to include 406 more blocks, out of which 404 blocks were having rural FLR of less than 45% irrespective of the Gender Gap. Besides, one SC concentration Block from West Bengal with SC Rural FLR on 19.81% and one ST concentration block in Orissa with ST rural FLR of 9.47% were also included, taking the total number of EBBs to 3479.

(1) To have at least one good quality senior secondary school in every block;
(2) To have a pace setting role;
(3) To try out innovative curriculum and pedagogy; and
(4) To be a model in infrastructure, curriculum, evaluation and school governance.

The Concept of the Model School

Basically, a model school has infrastructure and facilities of the same standard as in a Kendriya Vidyalaya (i.e. the Central Government managed school) and with stipulations on pupil-teacher ratio, ICT usage, holistic educational environment, appropriate curriculum and emphasis on output and outcome.

Salient Features

(i)   Education provided in a model school are holistic and integral touching upon physical, emotional and aesthetic development in addition to academics.

(ii)   Either brand new schools may be established or existing schools may be converted in to model schools.

(iii)   Necessary infrastructure to be provided in such schools not only for satisfying teaching needs, but also for sports and co-curricular activities.

(iv)   The curriculum should cast the local culture and environment and learning should be activity based.

(v)   These schools to have adequate ICT infrastructure, Internet connectivity and full time computer teachers.

(vi)   The Teacher-Pupil Ratio (PTR) should not exceed 1:25 and the classrooms to be spacious enough to accommodate at least 30 students. However, classroom-students ratio will not exceed 1:40.

(vii)   These schools to be provided with Arts and Music Teachers besides subject specific teachers as per the usual norms. These schools will also create   facility for activities emphasizing Indian heritage and art & craft.

(viii) Special emphasis are to be given on teaching of Science, Maths and English. If required, bridge-courses may be introduced for weak students.

(ix)   The school curricula includes the material/items that inculcate leadership qualities, team spirit, participation abilities, development of soft skills and ability to deal with real life situations.

(x)   Health Education and health check up has been introduced in these schools.

(xi)   A good library with books and magazines for students and teachers will be provided.

(xii)   Field trips and educational tours will be an integral part of the curriculum.

(xiii) Medium of instruction will be left to State Governments. However, special emphasis will be given on English teaching & spoken English.

(xiv) Affiliation of these schools to a particular examination board will be left to State Governments.

(xv)   Selection of students will be though independent selections test.

(xvi) Selection of Principals and Teachers will also be through an independent process to be developed in consultation with State Governments.

(xvii) Model schools will have appropriate pace setting activities so that schools in the neighbourhood can benefit.

Source: http://mhrd.gov.in/

Funding Pattern

For construction of the model school, 75% of the capital cost is borne by the Central Government and the balance 25% is provided by the State Government. During the 11th Five-Year Plan period (2007-2012), recurring cost has been provided by the Central Government on 75:25 sharing basis which has now become 50:50 during the 12th Plan period (2012-2017). The sharing pattern is 90:10

for special category states and for upgraded Ashram schools in all states. The scheme provides for 3% of total cost on Management, Monitoring, Evaluation and Research. By the end of the financial year 2011-12, MHRD, GOI had sanctioned 1587 model schools across 24 states and released Rs. 17907.6 million to these states.

Model 5.2: *Model Schools under the Public-Private Partnership (PPP) Mode*

A model school under the PPP mode as in case of state government mode would have infrastructure and facilities at least of the same standard as in a Kendriya Vidyalaya (KV) and with stipulations on pupil-teacher ratio, ICT usage, holistic educational environment, appropriate curriculum and emphasis on output and outcome. The standards of a model school would be at par with KVS and the target for performance in Board examinations should also be at par with the average performance of the Kendriya Vidyalaya Sangathan (KVS). It would also have the same features including the objectives as in case of model shools set up in collaboration with state governments. However, some of the reasons for adopting the PPP approach for setting up the model schools are as follows:

(i)   Possibility of setting up much larger number of schools than what the public   outlay   can support, through contribution to capital expenditure from private partners;

(ii)   Functional efficiency of private entities enabling early delivery of quality   education;

(iii)   Risk of project completion and delivery of agreed outputs would be borne by the private entity;

(iv)   Public funds would be expended only upon delivery of agreed outcomes; and

(v)   Private sector efficiency in the context of a long-term agreement is expected   to optimize on life-cycle costs and improve on quality of education, including   the school infrastructure.

As against the state government model schools, the location of the school under the PPP mode would be the headquarters of the blocks, which are not educationally backward. In blocks where a model school has already been set up or being planned to be set up under Corporate Social Responsibility (CSR), no other model school is set up. The school infrastructure are provided by the private entity which is legally competent to run an educational institution. This private entity could be a trust or a society or a not for profit company. The Government   contributes to recurring cost on per capita basis for the students sponsored by the Government. Besides, additional 25% support is to bee provided in respect of sponsored students towards the capital cost. The initial period of the contract for such provision of quality education would be 10 years for each school, which is extendable as per mutual agreement.

Land may be procured by the private entity on its own. However, the State Governments have been requested to assist the private entity in securing the required land. The state governments are also requested   to make available required land on lease basis to private entity wherever possible subject to the condition that the lease period should be for a minimum period of 25 years. The minimum requirement of land is 3 acres except for hilly and difficult areas.

Academic Framework

Like the model schools in EBBs, these non-EBB model schools would have classes from VI to XII and would be affiliated to Central Board of Secondary Education (CBSE). In exceptional circumstances, affiliation by other National Boards may also be considered. Irrespective of whatever Board the school is affiliated to, the school would have to adhere to all norms of CBSE with reference

to infrastructure, teaching resources and pedagogy. The medium of instruction would be as per the norms of the affiliating National Board.

The Government would sponsor 140 students in each class totalling 980 for the school. In case, any private partner is unable to get adequate number of sponsored students in a particular class, the ceiling per class may be relaxed within the overall limit of 980 sponsored students. In addition, the school management can take students directly on payment of fee as appropriate. Total number of students, however, would not exceed 2500 in the school. However, there is flexibility with regard to the number of students in each class subject to the limit prescribed.

As far as filling of Government quota is concerned, the model schools to be set up in PPP mode would follow the extant policy with regard to admission, i.e. the admission policy applicable to State sector model schools would also apply to PPP model schools. Students from the same block who have studied up to Class V are eligible for admission. The admission test to be conducted would be a holistic one which would test the intrinsic potential and capabilities of the child. The modalities of admission to the management seats are left to the management to decide. However, the process would have to be transparent. The students from the management quota and the government quota are to be mixed together in each class and should not form separate sections.

Within the Government quota, reservation for SCs, STs and OBCs should be as per the State norms. There would be a reservation of 33% for girls. There would also be reservation as per the state government norms for the disabled children. There would be no reservation for any category under the management quota. Ideally, the ratio of Government sponsored seats to management seats is envisaged to be 50:50 which implies that the private entity could directly admit 140 students in each class resulting in a total student's strength of 1960 in the school. However, to make the school financially more viable, the private sector can be allowed to fill up to 60% of the seats leaving 40% for Government sponsored quota. In this case, the private sector can add 210 students in each class under management quota implying a maximum class size of 350 and the total strength of the school would be 2450.

It is possible that in some areas, which are comparatively backward and where affordability of fee for management seats is limited, the private sector are asked to run the school with only government quota for the first three years and then bring it down to 60% in the next five years. In the opposite cases where the demand for management quota is very high, the private entity can be allowed to increase the management quota to 60% subject to the condition that the Government quota in absolute number remains at 140 in each class, i.e., a maximum of 980 for the school as a whole. It is desirable to have fee paying students in the interest of viability of the schools. However, there will be no mandatory provision in respect of any minimum percentage of such students.

No fees would be charged from the Government sponsored students up to class VIII. Students sponsored by the Government in classes IX to XII would pay a nominal fee, of Rs. 25/- for SC/ST/Girls/BPL students and Rs.50/- for other select students. The private-partner may charge appropriate fee from the students under the management quota. School premises may be used by the private partner for vocational education or any approved educational activity (excluding couching). However, the additional revenue generated by the private-partner would have to be ploughed back to the school since this would go towards improving the quality of schools. However, it would not reduce the financial support to be provided by the Central Government.

Financial Support from the Government

Recurring Support

Financial support is to be provided to each school management for every student under Government quota on a half yearly basis in advance against security to the extent of an equivalent amount valid

for a period of 2 years. The amount due every year would be equivalent to the comparable average recurring cost incurred by KVS for a student in the corresponding year *(*excluding expenditure on employees' pension, maintenance of teachers' quarters, KVS Headquarters, regional offices, Zonal Institute of Education & Training etc).

However, the figures for the current year are not be available and there would be a likely lag of 2 years. Because of this likely lag of two years in computing the accounts of KVS, the recurring support for a particular year (say n^{th} year) would be fixed provisionally on the actual admissible expenditure incurred in KV schools two years earlier {$(n-2)^{th}$ year} plus 10% thereof calculated at the rate of a provisionally increase of 5% per annum. Necessary adjustments would be made in future payments. In addition to the aforesaid, a sum equal to 25% of the monthly recurring support for each sponsored student would be disbursed by way of infrastructure grant which may be used for defraying rentals, interest, debt repayment, etc. The annual infrastructure grant must not exceed an amount equal to 10% of the capital investment in the school, as certified by an approved valuer. The *entire* support to be provided by the government would vary between locations having regard to the differential costs and the likely availability of students. The following graduated support would be provided for different locations:

- 75% in cities with population exceeding 30 lakh.
- 90% in cities with population exceeding 10 lakh
- 100% in towns with population exceeding 1 lakh
- 105% in towns with population exceeding 20000
- 115% in towns/villages with population less than 20000
- 125% in NE, J&K and Tribal areas.

Whereas incentives may be provided for excellence in any of these items, stiff penalties would be imposed for not meeting the standards of any of the parameters. The payment would be based on "no service no fee" principle. Whether the parameters have been achieved would be certified by an independent third party monitoring agency.

Phasing and duration of the Govt. Support:

In the first year, classes VI to VIII would be started together, and thereafter, one higher class would be added in each year till the school reaches class XII. State support would be provided in the first year for 420 students and this would increase every year by 140 till the 5th year when it would reach 980. Initially, the period of concession would be 10 years and the scheme would be extendable by mutual consent. However, the children who are already sponsored by the Government and are in the school at the end of 10-year period, would continue to receive government support till they complete their education in the same school.

Special Responsibilities of Model Schools

A model school would have the responsibility to have network with all the other secondary schools in the block. This is because the model school is expected to act as a resource centre for secondary education at the block level. Whereas quarterly meetings of all the school principals are envisaged, the school would also organize teachers' in-service training. Therefore, the school must have the training facilities. It may be stipulated that the training room should be made available for at least 75 working days in a year to organize in-service training of teachers. However, the school can charge a reasonable fee for the use of its campus and facilities. It is not envisaged that all other government schools would be like the model schools. What is more important is that these schools would function as resource centres for other government and aided schools to improve curriculum, pedagogy and management..

Special Teaching for Weaker Students

It is envisaged that the model schools would also work towards improving learning opportunities of students from weaker sections of population. In order to ensure the optimal level of learning achievement, intensive remedial teaching at the beginning of class VI would be arranged so as to enable students for smooth transition to class VII. Since many   students selected under the government quota may have studied in the regional medium up to class V, whereas the medium of instruction of the model school would be English, intensive coaching in English language would be made available by such schools for students in classes VI and VII so that they can fully integrated.

It is also envisaged that the school premises would be permitted to be used for vocational education and training and for other genuine educational purposes outside school hours. However, the private entity must indicate its desire to this effect in the bid document by elaborating on its strategy including how the additional revenue generated on this account would be ploughed back to the school for improving the overall quality. Ceiling of 20 model schools per state and 50 model schools overall in the country have been fixed for any single private entity to run model schools. However, if sufficient number of private entities does not come forward at the bidding process, this condition can be relaxed appropriately in the subsequent rounds of bidding. It is possible that several private firms would be ready to set up schools and run them as part of their Corporate Social Responsibility (CSR). In blocks where a model school has already been set up or being planned to be set up in collaboration with the state governments, no model school need be set up under PPP in that block. Thus, model schools established either in collaboration with the state governments or under the PPP would promote not only access to and quality of secondary education but also act as a lead school for creating networks at the block level to share best practices and facilitate capacity building activities, including in-service teacher training.

Model 6:   Ashram Schools and Eklavya Model Residential Schools

The National Policy on Education (1986) and its Programme of Action (1992), while strongly advocating equity in education have proposed various strategies to strengthen the educational base of the schedule castes and scheduled tribes. In pursuance of the directives of Indian Constitution and the special provisions made therein for the STs, the Government of India has been implementing special programmes for the socio-economic development of these tribal groups. One of the iinovative measures is to set up a good number of Ashram Schools for SC and ST children with the purpose to cover sparsely populated areas and not to allow the SC and ST students to feel diffident to compete as it happens in the normal schools. The major objectives of these of Ashram Schools have been to develop these aboriginals in the direction of modernity so as to enable them to secure for themselves an equitable and rightful place in the national system.

The broad policy guidelines for setting up of the Ashram schools as one of the tribal welfare programmes are:

(1)   Ashram schools should be inter-village schools;
(2)   Ashram schools should be opened in such areas where normal schools   cannot be opened; and
(3)   Most backward tribal groups should be covered under the scheme.

Ashram schools are being run in tribal sub-plan areas in states and UTs in India. The socio-economic profile of the Ashramites indicates that a vast majority of them belong to the poor socio-economic status group. Most of the parents of the inmates being illiterate, their occupational status reflects low earnings and the corresponding low economic standing. The poor conditions prevalent in their homes had made them utilize the Ashram school facility. The Ashram schools, thus, are catering to the needs of the poorest of the poor and are helping the inmates to remain in the school system without dropping from it.

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Box 7: Ashram Schools: Residential Schools for Tribal Children

The concept of Ashram School has been derived from the traditional Indian Gurukulas and the Gandhian philosophy of basic education in which the teacher and the taught live together and have close interaction with the purpose of helping the students in the development of complete personality and in sharpening their capacities. The educational philosophy of 'Ashram' is based on spiritualism, discipline and yoga.

The establishment of Ashram School was envisaged as a direct intervention to tackle the socio-economic and geographic inequalities of the tribal population, particularly sparsely populated areas by providing educational opportunities. The concept of Ashram Schools stemmed from the objective of providing an atmosphere in which the inmates are offered full opportunities to develop their personality and out-look marked with a high sense of responsibility towards their own community. In addition to formal schooling, these institutions aim at fostering qualities of leadership, communication of new ideas and decision-making ability among the inmates. The main objectives of Ashram sSchools are:

1.   To impart general formal education;

2.   To encourage tribal traditions like folk songs and dances so that the   schools are not only mere learning place but also centres of cultural   activities;

3.   To reduce the drop-out rate and to improve the retention capacity of the school;

4.   To wean the children away from an atmosphere which is generally not   conductive   for   the development of their personality and outlook;

5.   The impart socially useful crafts along with general education; and

6.   To provide close interaction between the teacher and the taught through the increased individual attention. Ashram Schools provide education with residential facilities in an environment conducive to learning. The scheme is in operation since 1990-91 under the Tribal Sub-Plan in States/UT Administrations. 100% funding is provided for establishment of Ashram Schools, i.e. school buildings, hostels, kitchen and staff quarters for girls in tribal sub-plan areas. All other Ashram Schools only for boys in tribal sub-plan areas in States, however, continue to be funded on 50:50 basis; whereas 100% funding is provided to UTs. Financial assistance on 50:50 basis are given for other non-recurring items of expenditure, i.e. purchase of equipment, furniture and furnishing, purchase of few sets of books for a small library for use of inmates of the hostels, etc.

Source: Ashram Schools in India: Problems and Prospects (Book), by Dr. B.C. Mishra and Dr. Alhadini Dhar, Discovery Publishing House, New Delhi, 2002

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Generally, the Ashram schools provide education to tribal children up to class V, but in many cases, the classes are from I to VII or IV to VII or I to X. In some states such as Gujarat, Maharashtra and Orissa, the Ashram schools are of three levels, primary, middle and secondary, whereas in Rajasthan and Andhra Pradesh they only cover the primary level of education. However, vocational or crafts education strongly envisaged to be implemented in the Ashram schools, has not taken roots, except in a few schools in Mahatrashtra, Gujarat and Orissa. These Ashram schools function like general schools with free broading and lodging facilities within highly structured and systematic framework. The schools are enriched with different facilities and incentive programmes for the students.

Eklavya Model Residential Schools (EMRS)

Another innovative initiative to expand secondary schooling opportunities for the poor tribal children is the establishment of Eklavya Model Residential Schools (EMRS) in remote areas. These

schools modelled on the lines of Navodaya Vidyalayas but with state-centred management. With the basic objective of providing quality education to the tribal children, it was decided during 1997-98 to utilize a part of the grant under Article 275 (1) of the Constitution of India for setting up of 100 Model Residential Schools from Class VI to Class XII. Till the end of 10th Five-Year Plan, 100 schools were sanctioned to 22 States, of which 90 are reported to be functional. The schools are operated in each State through an autonomous society formed for this purpose. These schools promote uniform pattern of education and enable their students to compete effectively for higher education programmes (viz., medical, technical, etc.). These schools are mainly affiliated to State Boards.

Keeping in view the objective of providing quality middle and higher secondary level education to Scheduled Tribe (ST) students in remote areas, the guidelines for setting up of EMRS were further revised in June 2010. Now, it is expected that the ST students in the country would benefit substantially through the new effort for setting up of more EMRS. The salient features of the EMRS are as follows:

(1)   States have to apportion funds out of their grant under Article 275 (1) Constitution of India to construct and run these EMRS sanctioned by the Ministry of Tribal Welfare, GOI;

(2)   Recurring and non-recurring costs for EMRS have been increased substantially. The capital cost for the school complex, including hostels and staff quarters has been revised from Rs. 2.50 crore to Rs. 12.00 crore with a provision to go up to Rs.16.00 crore in hill areas deserts and island. Any escalation is to be met by State Government. Recurring Cost has been fixed at Rs. 42000/- per student per annum. This may be raised by 10% every second year to compensate for inflation, etc.

(3)   The State Governments may ask for new EMRS only after ensuring that all the existing EMRSs have been made functional;

(4)   The Ministry's support to the States for the EMRSs programme and its expansion would be subject to the States ensuring high quality of management; and

(5)   EMRSs may be affiliated either to the State or Central Boards of Secondary Education as deemed fit by the State Governments. Each State Government would be solely responsible for the management and effective functioning of the EMRS.

Model 7:   Public-Private Partnership in Secondary Education in India

In the development discourse, private sector's role in financing and provisioning in many sectors of a country's economy has seen an upsurge. Many developing countries have sought private involvement in two key social sectors – i.e. health and education, as a joint venture with the public sector in order to achieve significant social and economic goals. But, there are a number of ambiguities in how PPP must be defined, their types, roles, structural and financial arrangements so that the public aim is served, especially in social sectors.

With the launch of the Rashtriya Madhyamik Shiksha Abhiyan, the GOI has embarked on a massive programme of expanding and strengthening secondary education in India. Building on the success of SSA at the elementary level, the government aims to universalize the secondary level (Grades IX-X) under the Eleventh Five Year Plan, by opening additional schools, appointing more teachers and upgrading elementary schools.

The Public-Private Partnership represents an alternative to the traditional model of government delivering educational services. A PPP can be narrowly conceived in terms of providing basic to advanced infrastructure facilities by the private sector, or it can cover a wide range of services that are jointly shared by both the public and the private sectors. In India, PPP is considered as an important strategy for expanding secondary education, particularly in the educationally advanced blocks and urban areas. However, from the point of view of expanding equitable learning opportunities, PPP as development strategy is widely criticized as it might limit access to socio-

economically disadvantaged groups, even though the government subsidizes certain number of intakes in these schools.

Types of PPP Existing in the Education Sector in India

(1) Philanthropic Initiatives: this is the most common form of PPP existing in the education sector; an example of this form is the **Bharti Foundation**, which is operating 236 schools of which 187 schools are constructed by the foundation and the rest are public schools that it has adopted; in addition, it plans to set up 50 senior secondary schools in partnership with state governments (www.bhartifoundation.org)

(2) School Management Initiatives: this form of partnership involves private management of public schools, while the schools remain publicly owned and publicly funded. An example of this method is the Contract Schools that are independent legal entities, spend public funds and can also hire and fire staff. As part of the contract the management has to adhere to certain benchmarks set in areas such as school attendance and student performance. For instance, **Educomp in partnership with Government of Punjab (under the Adarsh scheme)** has started running 5 senior secondary schools. In this model of the PPP, the government provides land free of cost on a 99 year lease; both the parties share both the total capital and recurring operating expenditure on these schools and the responsibility of providing teaching and non-teaching staff lies with the private player.

Box 8: Educomp and the Government of Punjab's Adarsh Scheme

Educomp has entered into an agreement with the Government of Punjab in establishing and running five Senior Secondary schools in the state under the PPP model. While a school at Kalewal Village, Mohali District of Punjab is already functional the other four schools are at different stages of development of infrastructure and are going to be started by the beginning of the year 2012. Salient features of Adarsh Schools of Educomp include:

♦   The Punjab Government has provided land free of cost for establishing school to Educomp on a 99 years lease;

♦   Punjab Government and Educomp are sharing the total capital expenditure incurred on infrastructure development and the recurring operating expenditure on these schools;

♦   Management of Adarsh School is done by Educomp;

♦   Provision of teaching and non-teaching staff, their training and effective management of Adarsh schools are also the prime responsibility of Educomp; and

♦   The Punjab Education Development Board would periodically review the performance of Adarsh schools.

Souirce: http://educomp.com/

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(3) Purchase of Educational Services from private schools: in this form, the government sponsors the education of a disadvantaged student in a private institution – i.e. the government pays subsidy for each student enrolled in a private secondary school, especially in areas that are not served by the government or government-aided schools; and only such schools that charge less or equal to the per student cost of government managed schools.

(4) Capacity building initiatives: this form of PPP encompasses many variations in terms of provisions such as innovations in curriculum and pedagogical support, management and administrative training, textbook provision, teacher training and other professional partnerships.

(5) Provision of infrastructure: in this model, the private partner builds, owns and operates the infrastructure facilities. While the government agencies run such a school, the private partner is

paid a fee over the contract period which can run up to 20-30 years. An example this type of PPP is the **Everonn Education Limited (EEL),** which operates under a BOOT model to deliver services in the field of ICT education. The company at present is operating in 6628 schools across 16 states in India and provides computer education, computer literacy, computer-aided learning and teacher training projects.

Everonn ICT services are provided through: supplying IT hardware, software and other physical infrastructure. It helps in the maintenance of the infrastructure and teaches computer education in English and the local language if the contract stipulates so. The initiative also appoints its own employees as full-time faculty with the ratio of 2 employees per school. It trains teachers, headmasters in the use of computer and other multimedia content.

Following is a list of few PPP in the BOOT category being run by EEL for secondary schools in India:

Sl. No.	Government Department	BOOT contract	No. of Secondary Schools
1.	Govt. of Tamil Nadu	Imparting computer education to the students of Govt. Hr.Sec. Schools in Tamil Nadu	349
2.	Pondicherry Electronics Corporation	Imparting computer education to the students of Govt. Hr.Sec. Schools in Pondicherry	20
3.	Govt. of Andhra Pradesh	Imparting computer education to the students of Govt. Hr.Sec. Schools in Andhra Pradesh	183
4.	Govt. of Goa	Imparting computer education to the students of Govt. Hr.Sec. Schools in Goa	238
5.	Govt. of Andhra Pradesh	Imparting computer education services in Govt. Senior Secondary Schools	971

Source: Public Private Partnerships in Secondary School Education in India. International Conference on 'Public Private Partnerships in Secondary Education'. August 29-30, 2011, India. Background Paper prepared by the World Bank, India.

The rationale for venturing in PPP in the education sector have been put forward as cost sharing, speeding the implementation, accountability for performance, quality monitoring and greater flexibility. Broadly, there are 7 forms or combinations through which PPP can be organized: (1) Infrastructure facility services – design, building and maintenance of schools; (2) Non-educational services, e.g. catering; (3) Support services – usually IT facilities, library, playground, etc.; (4) Educational services – teachers' or headmasters' training; (5) Private management of public schools: (6) Private operation of public schools with private provision of teacher staff; and (7) School voucher system.

It is believed by many state governments that private providers can deliver the inputs and services that will enhance pedagogical skills that can be a limiting factor with the public providers. NIIT, another IT company, in collaboration with state governments of Tamil Nadu, Karnataka, West Bengal and Andhra Pradesh provides for infrastructure, facilities management, and teacher training giving quality computer- aided education to thousands of schools.

2.3.2 *Models for Improving Quality of Secondary Education (Role of ICT to Improve Learning and Acquisition of Global Knowledge-Economy Skills)*

It is generally believed that ICT can empower teachers and learners, promote change and foster the development of '21st century skills; however, data to support these beliefs are still limited. Proponents argue that ICT can and will transform teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased

learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills. However, there are currently very limited, unequivocally compelling data to support this belief.

Model 1:   Smart Schools

Smart School is a multiple technologies based content development initiative for making innovative and experiential learning in schools. It comprises of high definition 3D educational content along with host of e-learning applications to harness the latest in the technology. It was developed by David Perkins and his colleagues at Harvard Project Zero with guiding a belief that learning is a consequence of thinking, and good thinking is learnable by all students. Such schools are helpful for normal as well as special children for better learning experiences at ease. In India, very few schools have reportedly hired this digital initiative of Educomp. Reportedly there is a Smart School in Arakkonam, Tamil Nadu for the mentally retarded children. Doon Public School, New Delhi has got distinction to become first school in India to have computer aided teaching and learning through smart classes using plasma screens with Smart Assessment Systems. In recent years, an increasing number of secondary schools, particularly in the private un-aided sector, are resorting to computer-aided pedagogy.

Salient Features
Smart Schools are unique initiatives in making education and learning in schools a joy for students and teachers. With a vast digital content in every subjects of study in school, it will certainly revolutionize the teaching learning processes in schools. Last year, Indian government has proposed to establish 150 smart schools across the country the revised Information and Communication Technology (ICT) in school scheme. Proposals for 55 smart schools in 11 states and two union territories have been cleared so far. Some of the key features of smart schools are mentioned in its consultative relationship between Project Zero and school systems:

(a) Generating Knowledge: - Identifying and structuring content which has the greatest potential for students' development is an important starting point for the Smart Schools Model (also see Figure 2.1).

(b) Learnable Intelligence: - Contrary to the psychological tradition that ends to view intelligence as a fixed quantity, it indicates that students can and do learn ways of thinking that can boost performance.

(c) Focus on Understanding: - While there are many legitimate goals for students, often a focus on deep understanding gets lost in the day-to-day life of the school. In the Smart Schools model, it place emphasis on student work that builds and demonstrates deep understanding in contrast to rote or narrowly defined outcomes.

(d) Learning-Centered Assessment: - Assessment at its best functions as a reflective and evaluative tool for learning. It involves students as well as teachers and creates a dynamic in which students take on the ultimate responsibility for the quality of their work and their learning.

(e) School as Learning Organization: - Just as schools are places of growth for children, they should be places of growth for faculty and administrators. The successful learning organization institutes structures that enable all members off the school community to collaborate in the processes of direction setting and self-monitoring.

Effective performance of all activities under teaching-learning within classroom is very important for the proper functioning of the Smart School Software. Vigorous training is the essential exercise to implement such software under mission mode in schools. Various modules of the Smart School Software are more beneficial for the school management than the students. There is a need to exercise the guidelines to implement such software in schools. System doesn't detail the virtual

system if used for establishing communication between entities students, teachers and parents. However, the implementation of smart school initiative may be affected in the Indian setting due to following reasons:

- Teaching learning output within prescribed class duration;
- Without training interdependent functioning of modules;
- Absence of proper training of teachers and staff;
- Lack of additional exposure of technology to students;
- Additional burden on teachers and staff; and
- Absence of the required level of reading and writing skills.

Figure 2.1:   Smart School
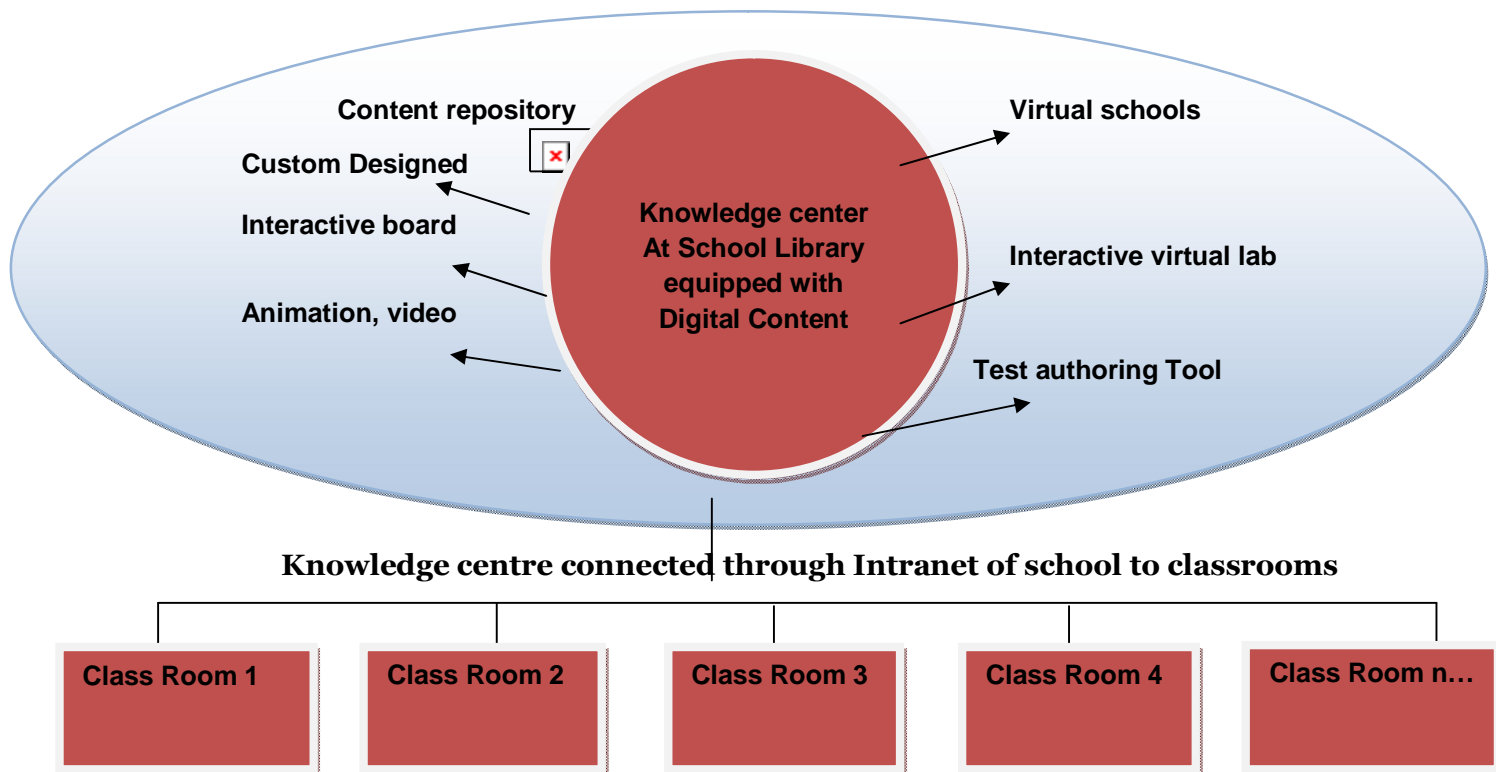
In the teaching-learning process within the classroom, teachers must continue with the conventional method of teaching as such a technology can only be effective and beneficial in few subjects like maths, science and general studies. The system is best suited to the school management needs than advancing the teaching-learning process within the classroom in the Indian setting.

Best Practices

The content delivery model of smart schools is unique in its nature and scope. In such schools a knowledge center is created inside the school equipped with the entire library of smart class digital content. The knowledge center is connected to the classrooms though internet. Teachers get the relevant digital resources such as animations and videos, interactive virtual labs and use them as a part of their lesson plans in every classroom period. The modules are embedded in a template that allows the teachers to teach a chosen lesson in class, frame by frame, with engaging and

instructionally sound animated set of visuals while retaining complete control on the place of delivery.

Initially, the smart class program was implemented in schools by Educomp (an enterprise) completely on a turnkey basis for a nominal fee paid by schools on per student, per month basis, for agreed contract duration. The exact cost of implementation is not out in market, even though the investment in school infrastructure, and digitization of classrooms and maintenance of knowledge centre would be large fixed investment for any school or organization in India.

Model 2: Intel Education Initiative

The Intel Corporation is dedicated to helping countries move toward the new educational initiatives of the 21st century. The mission of the Intel Education Initiative is to accelerate 21st century education for the knowledge economy as a trusted partner to governments and educators. In India, Intel's educational support programme is known as Intel Learn Programme. It was launched in November 2004, as part of the Akshaya Project in rural Mallapuram district in collaboration with Kerala IT Mission. The Intel Learn Program is a 60 hour, hands-on, after school project based curriculum built around two core modules for learners from communities that have no access to technology. It taps into children's interest in their own communities while developing their skills and nourishing their curiosity with creative, technology driven projects. This project has been implemented through 100 community technology centres in Kerala. The program has been expanded to other states and has benefited 48,000 youths across 14 States and Union Territories of India.

Salient Features

The program's impact is illustrated by students of the project in the Akshaya centre in Kerala. Students used technology to gather and analyse information from their community and identified that the lack of playgrounds was a high-priority problem in the *Technology and Community Module*. This program has helped many students, ages 8-16 years old by using computer skills such as; Using the internet, word, processing, multimedia, graphics, and spreadsheets; collaborating skills by working together on projects, sharing ideas, and solving community problems; critical thinking and problem solving skills by building projects that contribute to their community.

Besides, the Intel Education Initiative organizes other ICT based programs such asIntel Tech Program for improving teaching and learning, which is very different from traditional learning and Intel Computer Clubhouse Network Program along with Intel Higher Education Program. Intel organizes International Olympiads and promotes other educational activities. The Intel Teach program provides teachers with the knowledge and skills that they can use to create continuously innovative schools.

Model 3: Educational E-Governance Model

There are four parts of educational e-governance model proposed by one of the state Governments, i./e. Gujarat: (a) Computer literacy Education; (b) E-Learning centralized Teaching through BISAG and 'multimedia teaching'; (c) Online transactions by student, teacher and parents, employers; and (d) Better management of schools and colleges and Universities through IT. This proposal sought that all examinations, from Senior Secondary examination onwards would be taken online and objective type section's results made available as soon as exam ends. This proposal has also assessed IT infrastructure for schools as; total number of schools 9827, total number of schools with computer labs 5970, 3650 schools having internet facilities and 8000 secondary schools having computer facilities. Similarly, it also accounts manpower used to implement this project such as 95780 teachers would be required at the rate of three teachers per school.

Salient Features

The proposal aims at digitization of education system of Gujarat from primary education to college and university education. It proposes complete transparency in educational provisions and arrangements. It has planned the physical and human resources for the implementation for the proposal. Nirmal Gujarat Technoseva Program for Online students' Registration, Online updates of Technosaathi's works online students monitoring, Online database of types of activities e-examination by GTU digital question paper with 3-layer security e-mails are some of the initiatives in this direction. It proposes complete overhauling of the system of education on the principles of e-commerce, e-governance and integration of digital databases from schools to university. All admission, completion, transition, recruitment examination are planned to be collated for maintaining quality and checking malfunctioning of the educational institutions.

It also suggests to carry forward some of the important initiative started by the government for the promotion of education at various level of enrolment in education system. *Gunotsav* program was started in 2009 to improve quality of education in primary schools, training of *Vidya Sahayak* and teaching though EDUSAT should be continued further. Existing position of Broadcast of Study Lessons through BISAG is also felt to be continued in this proposal.

Model 4:   Youth for Development Empowered with Basic Rural Agro-Biogenics Technologies

This model offers an education program which is based on rural secondary education reform initiative named as Youth for Development Empowered with Basic Rural Agro-Biogenics Technologies (Y4DEBRAT). The model assumes that earlier education models of secondary education in India have not occupied successfully in controlling high dropout rates, migration of unskilled rural youth and ensuring educational aspirations of rural students for completing secondary education. It further assess that most of the current secondary education programs are not based on true spirit of education designed to provoke and catalyse independent thinking to cultivate indigenous ideas for wealth generation through rural development. It also evaluated that the secondary education is not empowering rural youth with applied science and technical skills. This model seems to be inspired by indigenous innovative efforts of slum-entrepreneurs as it mentions that Dharavi (Mumbai) is a hub for 15,000 single room factories with an annual output of more than Rs. 70 billion. This model found that innovative thinking is needed to reform secondary education for a personal goal oriented rural youth.

Salient Features

With a desirable change in the rural economy this model aims for rural industrialization in a premise that rural youth are potential agents of change. The best way to escape poverty trap is to invent a new product in the form of innovative reformed secondary education program. Three import elements of this model are;

(1) Youth for Development: The youth for development program is offered by V-LEAD (Vivekananda Institute for Leadership Development), a unit of Swami Vivekananda Youth Movement at Mysore, Karnataka. It empowers youth from rural and slum areas with life and social skills to conduct community need assessment to identify areas needing development and a personal SWOT analysis.

(2) Introduction to Basic Rural Technology: - This program is offered by Vigyan Ashram, Pabal, Pune, Maharashtra, is basically "learning by doing" training at a farm based workshop to introduce youth to applied science and technology for farming and establishing farming related businesses. This well established program is being promoted as the plan 100 by Lend-a-Hand India to educate 20,000 rural youths in five years.

(3) Agro-Biogenic: - This project is related with generation of energy and materials from wastes. It educates rural youths for generating energy not only from bio-gas but also from many plan systems and various unused Agro-wastes.

This model is in practice in some rural locations of India as indicated above in three different programs. It also uses ICT based learning and training for soft skills to rural youth for getting sustaining livelihood. Though the model talks about secondary education in its introduction nevertheless it could not integrate formal secondary education with training for employable and entrepreneurial skills.

One of the enduring difficulties of technology use in education is that educational planners and technology advocates think of the technology first and then investigate the educational applications of this technology only later. ICTs are seen to be less effective (or ineffective) when the goals for their use are not clear. While such a statement would appear to be self-evident, the specific goals for ICT use in education are often, in practice, only very broadly or rather loosely defined. The positive impact of ICTs is more likely when linked to changes in teachers' pedagogy, which in turn requires focused, iterative teacher professional development to realize changes in classroom practices. In other words, the "humanware" is much more important than the hardware or the software, and this aspect is all too often neglected. ICTs are most effective with student-directed, constructivist pedagogical styles. On the other hand, traditional, lecture-based pedagogy is often more effective than constructivist teaching in preparation for standardized testing, which typically measures ability to recall facts and make calculations. If the objective is success on traditional standardized tests, then ICTs may not be the best strategy. However, uses of ICTs for simulations and modelling in science and math have been shown to be effective, as have word processing and communication software (e-mail) in the development of student language and communication skills.

In many studies of ICTs there may be a mismatch between the methods used to measure effects and the nature of the learning promoted by the specific uses of ICT. For example, some studies have looked only for improvements in traditional teaching and learning processes and knowledge mastery, instead of looking for new processes and knowledge related to the use of ICTs (Bhatia, 2009) . It may be that more useful analyses of the impact of ICT can only emerge when the methods used to measure achievements and outcomes are more closely related to the learning activities and processes promoted by the use of ICTs.

Despite the lack of independent impact assessment data which researchers and policymakers would like to have, in studies that rely largely on self-reporting, most users feel that using ICTs make them more effective and self-directed learners. In addition, there appears to be general consensus that both teachers and students feel ICT use greatly contributes to student motivation for learning. Few would dispute the importance of student motivation to improve learning outcomes. In the changing school setting, where to locate ICTs in the school is an important issue. Placing computers in classrooms enables integration with core curricular subjects and greater use of ICTs for 'higher order' skills than placing computers in separate computer laboratories (indeed, fewer computers in classrooms may enable even more use than greater numbers of computers located in separate computer labs). This can be facilitated by use of portable laptops and even "computer labs on wheels" which can move from classroom to classroom as needed. Classroom placement requires appropriate infrastructure investments in electrification, wiring, security, dust-proofing, etc. (*Trucano, Michael. Knowledge Maps: ICT in Education. InfoDEV/World Bank, 2005).*

Model 5: Innovative Measures in the RMSA

It may be mentioned that the policy context of secondary education in India is largely influenced by its inclusion in the Concurrent List of the Constitution since 1976, making it the responsibility of both the Central and State governments. Unlike elementary and higher education, the respective responsibilities of State and Center are not as clearly defined for secondary education. However, the development of secondary education in the country has been mostly influenced by the state level policies, programmes and funding patterns. The role of the Central Government has been largely contained in in terms of implementation of certain centrally sponsored schemes relating to specific functions of the secondary education sub-sector. However, since the the 11th Five Year-Plan, secondary education has been accorded relatively high priority in the development agenda of the

Government of India with the vision to move towards its universalization. Accordingly, the Government of India has implemented a country-wide secondary education development programme called the *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) in partnership with States and Uts, The programme aims at making secondary education of good quality available, accessible and affordable to all young persons in the age group 15-16 years, removing gender, socio- economic and other barriers by 2017. It also aims at making all secondary schools conform to the prescribed norms relating to infrastructure, teaching and non-teaching staff and the teaching-learning environment.

The RMSA adopts a sector-wide approach and is being implemented with a fund-sharing arrangement of 75:25 between the Centre and the States.. For the North-East States, the funding ratio is 90:10. The major targets of the RMSA, among others, include: (a) strengthening of 44,000 existing secondary schools; (b) opening of 11,188 secondary schools, mostly through up-gradation of upper primary schools; (c) appointment of 1.79 lakh additional teachers; and (d) construction of 80,500 additional classrooms. So far, the RMSA has sanctioned 9216 new schools, supported strengthening of 35062 existing secondary schools, and sanctioned 1.18 lakh additional teachers with an anticipated central investment of Rs.4804 crore (INR 48.04 million) up to 2011-12. In the 11th Five-Year Plan period, the programme was fully funded by both the Central and State Governments (in the sharing arrangement of 75:25). In the 12th Five-Year Plan period, it is expected that the Government of India may go for external funding support from the World Bank, DFID and EC. Since the current coverage of the scheme includes only the existing government managed schools, states relatively large share of aided and the un-aided institutions in the secondary education sub-sector (viz., West Bengal and Uttar Pradesh) have not been able gain much from the RMSA. Keeping this in view, the coverage of the RMSA is being expanded to include aided institutions during the 12th Five-Year Plan period.

The RMSA, therefore, offers a strategic opportunity to improve access and equity, enhance quality, accountability and ability to measure learning outcomes, and promote standardization of curriculum and examinations across states. It aims at targeted expansion that supports equity, particularly with regard to girls, and children from Schedule Caste and Schedule Tribe communities. Redirecting the vision of secondary education to prepare students for the fast paced and changing work environment and improving the quality of education provided are also seen as critical to the development of this sub-sector. One of the important aspects of the programme is that, unlike other reform programmes, the RMSA is a single comprehensive scheme which adopts a 'whole-school approach" with emphasis to ensure that all secondary schools have physical facilities, staff and supplies at least according to the prescribed standards through financial support to Government/ Local Body and Government aided schools, and appropriate regulatory mechanisms in the case of other schools. The important physical facilities provided in schools include: additional classrooms, laboratories, libraries, art and crafts room, toilet blocks, drinking water provisions, residential accommodation for teachers in remote areas.. Demand side financing strategies such as scholarships, transport allowances, provision of basic learning materials, etc. particularly for girls, SCs, STs and other disadvantaged groups are being adopted in the scheme to promote gender, social and regional equity. The improvement in quality of secondary education is expected to be achieved through: (i) appointment of additional teachers to reduce PTR to 30:1; (ii) focus on Science, Maths and English; (iii) in-service training of teachers; (iv) provision of science laboratories; (v) ICT enabled education; (vi) curriculum reforms; and (vii) reforms in the pedagogy and examinations. Similarly, equity aspects are addressed through: (i) special focus on micro planning; (ii) preference to up-gradation of and strengthening of Ashram schools; (iii) preference to areas with concentration of SCs/STs/ Minorities for opening of schools; (iv) special enrolment drives for the weaker sections; (v) appointment of more female teachers in schools; and (vi) provision of separate toilet blocks for girls. Besides, to address the gender equity, other specific schemes are being implemented at the secondary level, which includes: (i) the National Scheme for Incentive to Girls for Secondary Education; and (ii) establishment of Girls' Hostels. The National Scheme for Incentive to Girls for

Secondary Education   is applicable to all girls from SC/ST communities joining class IX in state government schools, schools run by local bodies, and Government-aided schools. A sum of Rs.3000 is deposited in a bank in favour of every SC/ST girl joining class IX in such a school, and this sum is payable with interest to them on attaining 18 years of age provided they clear the   class X examination. During the three year period from 2008 to 2011, the scheme has covered 6.32 lakh (0.632 million) girls. Under Girls' Hostel scheme, 1505 girls' hostels has been sanctioned in 19 States with an anticipated central investment of Rs.397 crore (NR 3970 million up to 2011-12). The scheme is under revision with enhancement of unit cost and provision of higher honorarium to Hostel Wardens. This scheme would be be merged with RMSA in the 12th Plan period.

The second key innovative element of RMSA is that it is an umbrella programme with untied funding for innovation. The programme gives relatively more emphasis on design and implementation of school level innovative interventions, and accordingly, places a lot of emphasis on the formulation of the school improvement plan with a whole school approach. School autonomy and accountability, therefore, assumes greater importance for promoting innovations at the school level. This is evident in the the RMSA Framework for Implementation, where States are encouraged to develop innovative ideas in all their activities within the existing framework. However, such innovations are only possible at present within the norms specified in the framework.   The RMSA is also very supportive to innovative activities in secondary education by encouraging states to define their own norms for undertaking such activities that aim to enhance access, equity, quality, and governance in manners that are innovative and new in approach, methodology and/or implementation strategies. It is expected that, over time, successful innovations having visible impact on the ground and with potential for up-scaling in wider geographies and informing larger target groups would be adapted, scaled up and institutionalised under the RMSA.   But, the critical role of the States and UTs   in promoting innovation in secondary education under the RMSA can not be undermined. Besides, to facilitate a greater role of States/UTs, NGOS and private education providers, creation of a separate Innovation Fund is being envisaged during the 12th Plan period with funding support from donors, i.e. the World Bank, DFID and European Commission. Under this initiative, the state driven innovative component supplements the holistic implementation approach of the RMSA as it provides for those interventions that do not strictly adhere to the RMSA Framework in its current form.   This component also support activities which help link other Centrally Sponsored Schemes in secondary education with the RMSA. As such, innovation under the RMSA has been envisaged as a demand-driven initiative to support the development of secondary education in India. This innovation component not only extends to government education agencies at the both at the national and State level but also to non-governmental organizations (NGOs), foundations, and education societies. Under the Innovation Fund, Rastriya Madhyamika Shiksha Abhiyanthe RMSA calls for out-of-the-box proposals that can be implemented in classrooms. The proposed innovation guidelines have asked government, semi-government and NGOs working in the field of education to suggest unique ideas for improving access, quality, equity and governance in secondary education. The State Governments, it is proposed, would be responsible for collecting and sending the innovative proposals/ interventions to the Project Approval Board (PAB) of the MHRD, Government of India. The ideas, however, should be tested before implementation.

However, all proposals under innovation would be the part of the State RMSA Annual Plan proposal and funds would be channelized only through the State Implementation Society for the RMSA. The main rationale for the proposed component is to support initiatives that are in-line with the RMSA's goals, but are not currently approved and/or "ready" to be included in the RMSA Framework in the form of national norms. This component would support two broad types of activities: (i) ideas and approaches that may be at an early concept stage, but show promise and are feasible to implement; and (ii) successful ideas and approaches that would have been piloted on a small scale at the block or district level in the State or elsewhere in India and are now ready to be expanded, with potential for being replicated, scalability and impact. It is expected that lessons learnt   from the innovative activities would feed into the future design of the RMSA Framework.

Box 9: The Innovation Fund under the RMSA

Promoting innovation -- i.e. trying out of new ideas to enhance access, equity, quality and management of secondary education, especially in the deprived parts of the country and in areas with large underprivileged populations is one of the major objectives of the secondary education development programme in India. While under the current RMSA Framework, States are able to develop innovative ideas in all their activities, it was felt that there should also be the option for States (in the form of an innovation fund) to be creative without the constraint of norms and for non-State agencies to be involved in designing new ideas. The Government of India has, therefore, decided to make available some funding for innovative activities within the RMSA Framework which would be allocated according to the criteria and procedures laid out in the related guidelines.

The innovation component is designed in a way that would promote genuine innovation simultaneously within the implementation framework of the RMSA. Overtime, successful innovations having significant impact on the ground and with potential for up-scaling in wider geographies and informing larger target groups would be adapted and scaled up under the RMSA framework and possibly institutionalized. Innovations could also help improve institutional reform, scale up deserving alternative approaches piloted by non-governmental organizations, and encourage creative ways of enhancing capacities of educational functionaries.

Scope and Objective

(i)   Innovation is envisaged as a demand-driven initiative to support the development of secondary education in India.

(ii) This innovations component will extend to government education agencies at the both at the national and State level as well as to non-governmental organizations (NGOs), foundations, and education societies, but all proposals under innovation shall be part of the State RMSA Annual Plan proposal and funds shall be channelized only through the State Implementation Society for RMSA. As with other elements of RMSA, it will support activities in secondary schools eligible for support under RMSA that aim to enhance access, equity, quality, and management at the secondary education level, in manners that are innovative and new in approach, methodology and/or implementation strategies.

(iii) The main rationale for the proposed component is to support initiatives that are in-line with the RMSA's goals, but are not currently approved and/or "ready" to be included in the RMSA Framework in the form of national norms. This component would support two broad types of activities: (a) ideas and approaches that may be at an early concept stage, but show promise and are feasible to implement; and (b) successful ideas and approaches that would have been piloted on a small scale at the block or district level in the State or elsewhere in India and are now ready to be expanded, with potential for being replicated, scalability and impact. It is expected that lessons of experience from innovation activities will feed into the future design of the RMSA Framework.

Guiding Principles of Innovation

In addition to the broad principles of the overall RMSA Framework, support to innovations will be governed by the following guiding principles:

(i)   The innovation will support projects that can be scaled up, replicated and sustained over the longer term.

(ii) It will encourage collaboration at all levels.

(iii) It will be result-based with a robust M&E system.

(iv) It will help nurture partnerships and encourage the sharing of knowledge.

All government and semi-government agencies at the national and, State level involved in education are eligible to submit grant proposals under this component. Non-governmental organizations, registered as Society or Trust or Section 25 Company are als eligible to apply in partnership with national or State level government/semi-government agencies. In keeping with the Sector wide approach adopted under RMSA, proposals for innovative activities need not necessarily be submitted separately as an 'Innovation Proposal'. They may be proposed under equity or quality components of RMSA. Since innovative activities happen across various activities and sectors, for example, ICT, Curriculum development, teacher training, teaching methodologies, classroom behaviour, inclusive education, Continuous and Comprehensive Evaluation (CCE), child tracking, civil works, community mobilization, etc., compartmentalizing the innovation component is sought to be avoided. MHRD will put in place a panel of external subject experts for the purposes of reviewing and recommending proposals (referred by TSG) for funding under this component. The criteria to be used to evaluate proposals under the Innovations component include: (a) Innovativeness; (b) Clarity and Quality of Project Design; (c) Relevance/ alignment with State Priorities; (d) Clarity and Quality of Results Matrix; (e) Feasibility; (f) Scalability & Replicability; and (g) Financial Viability and Sustainability. Proposals under this component will be funded as part of the overall annual allocation to the national agency/State Govt. under RMSA and will be subject to a limit of 5% of the total annual allocation to the State.

Source: http://mhrd.gov.in/sites/upload_files/mhrd/files/RMSA_INNOVATONS_GUIDELINES.pdf

Apart from this, the innovative approaches to develop secondary education during the 12th Five-Year Plan (2012-2017) are: (i) taping the private sector capabilities fruitfully with design of the appropriate PPP models; (ii) making sports and physical education an integral part of curriculum in schools; (iii) expand the KVs/NVs; (iv) introducing vocational/pre-vocational courses in Class IX & X either as an add-on or as an alternative to work education or third language, where applicable; (v)providing vertical mobility options for VE students to pursue UG/PG level courses; (vi) providing training and equipping teachers on a continuous basis with latest skills and the vocational pedagogy itself for a high quality vocational education; (vii) evolving an integrated Vocational curriculum closely aligned with academic curriculum containing modules on various generic and specific vocational skills in consultation and active involvement of industry; and (viii) giving special focus on training of trainers/teachers in skill impartation, wherever possible using the PPP model.

SECTION 3:   CONCLUDING REMARKS

In the 21st century, education policy-makers around the globe are concerned as to whether traditional methods and systems of education would help preparing students for the more knowledge intensive, entrepreneurial, and creative global economy. Planned change in the delivery of education, including secondary education, is seen as the pre-requisite in all countries to keep pace with the changing skills for development. In other words, countries need to prepare themselves for creating innovation societies requiring a different set of skills. In the education sector, memorization of facts and figures and their regurgitation on examinations does not help equip students for the knowledge intensive society. New kinds of delivery of education and assessments are required to ensure analytical, higher-order thinking and cross-cultural communication skills that students need to succeed in the changing world. Besides, education is being increasingly seen as an initiator of change and innovation rather than merely accommodating the changes in the outside world.

Further, while the potential of technology, for example, open source curriculum materials, online instruction, teacher training, digital textbooks, etc. provide imense opportunities to improve access and quality of education, the major challenge lies in creating the right kind of the institutional environment to adopt and measure the outcomes of the available technology, including ICT, in transforming education to meet the skills requirements of innovative societies and making schools 'change agents'. Moreover, most countries are also engaged in striking a balance between school autonomy and accountability for ensuring cost-effective delivery of relevant quality education. New methods of delivering education, therefore, assume critical importance in policy planning and education development programme designs in all countries in South Asia.

The discussions in the section make it clear that all countries in South Asia are engaged at varying levels in adopting innovative methods of delivering secondary education. Enormous amounts have been invested in these countries towards generic reforms in areas such as expansion of school networks, teacher education, infrastructure improvement, curriculum revision, promoting gender and social equity, bridging regional disparities and so on. However, the socio-political and the institutional context characterizing the process of knowledge generation and control of educational initiatives both at the macro and the institutional levels have hardly undergone any change in order to enable ensure an environment for innovation to happen, particularly at the institutional level.

Countries in the sub-region have also gone for several programmes, often externally funded projects, to improve access and quality of secondary education. These efforts invariably have been at the national and/or provincial levels often with narrow functional coverage of the sub-sector. In other words, countries in the sub-region have emphasized relatively more on systems level reforms leaving little scope for secondary schools to be able to absorb and implement the planned changes/innovations envisaged at national and/or provincial levels. But, it is a fact that sustainable change and innovation can only be anchored at the institutional level as is evident from several innovative models, including the practices of the Rishi Valley Schools, discussed in this section. It, therefore, requires a change of mindset of the policy planners in these countries not only to facilitate

school improvement through innovative initiatives but also to create the right kind of institutional environment for participation of other stakeholders such as the private providers, corporate sector, NGOs, etc. to contribute towards innovative methods of delivering secondary education.

However, if one examines the underlying principles of the successful models of secondary education discussed in this section, some important trends emerge in promoting access, equity, quality and relevence of secondary education in the sub-region. For example, most countries in the sub-region are going for demand-side financing as a basic principle for increasing access to and equity in secondary education. This is evident from the major sector-wide reform programmes in Bangladesh, Pakistan and India. This strategy has been accompanied by models that focus on women's empowerment and skills training for poverty alleviation. Models such as the Secondary Education Stipend Programme and Ganokendra of Bangladesh, the Rashtriya Madyamik Shiksha Abhiyan (RMSA) of India emphasize a lot on demand side financing and interventions for women's empowerment for improving equal learning opportunities for girls and the disadvantaged in secondary education. In Pakistan, public-private partnership (PPP) seems to be the underlying principle of several successful models of secondary education such as the Punjab Education Foundation Programme and Adopt-a-School Programme of Sindh Education Foundation. While the voucher system is adopted to increase access to secondary education by the slum dwellers and other disadvantaged groups, Adopt-a-School Programme emphasizes on the role of non-state actors and NGOs in improving the standards in provisions and internal efficiency of secondary education. PPP is also increasingly seen as a major strategy in India and Bangladesh to expand quality secondary education. In other models like Usha Gram Trust, the provision of ECCE for the children of illiterate parents and supports to the disadvantaged Bangladeshi migrants seems to be the underlying principles for promoting equitable distribution of learning opportunities at the secondary level.

Creating enabling environment for the talented in disadvantaged rural areas, institutional autonomy and acccountability and emphasis on wholistic development of children are the underlying principles of seversl secondary education models in India discussed in this section that focus on improving quality and relevance of secondary education. For example, while the Jawahar Navodaya Vidyalay (JNV) model focuses on harnessing rural talent through provision of residential schools and school effectioveness interventions, the Rishi Valley Education Project is based on the principle of creating the educational environment that enables young persons to grow not only in intellectual capacities but also in other dimenstions giving space for asthetic, moral and emotionl dimenstions. The use of ICT in promoting school effectiveness is also the basic priciple of some of the models discussed in the Indian setting. For example, while the Smart Schools Project emphasizes on technology based content development intiatives in secondary education, the Intel Education Initiative focuses on after-school learning modules that aim at improving the IT skills of both communities and students of secondary schools. The Y4DEBRAT also makes use of ICT as the major driver of change for improving quality and internal efficiency of secondary education in India.

Empwerment through education, skills training and creating sustainable support systems for improving employment opportunities for youth and the disadvantaged happen to be the underlying priciples of other models discussed in the section. While the Passport to Success Programme focuses on interventions that promote education, skill development and emplyability traits of the disadvantaged youth, the Yuva Parivartan gives a lot of emphasis on providing the sopcio-economically disadvantaged with employability linked vocational skills through community engagement, livelihood training, industry partnership and placement support. Empowering and mainstreaming the disadvanted seem to be the basic principles of various interventions undertaken by the Yuva Parivartan. Moreover, among others, promoting institutional/school level innovative practices and creating space for engagement of the non-state actors and NGOs for school effectiveness (under the RMSA) happen to be the major underlying principles for promoting school effectiveness and relevance of secondary education in India.

However, as evident from the discussions of various innovative models of secondary education and their underlying priciples in this section, most of the innovative models either sit in isolation or are confined to addressing only certain specific aspects/functions of secondary education. Besides, in

the absence of any impact evaluation and appropriate sharing mechanisms of the best practices/innovations in secondary education in these countries, one is not very sure of the scalability of most of the innovations being carried out at the sub-national and/or institutional levels. In the absence of documentation of innovative practices in secondary education in countries in South Asia, including India, it is, in fact, difficult to address questions like do innovations in secondary education sit in isolation? Is there any effort to institutionalize and expand innovations in secondary education? If so, at what levels/functions of secondary education? What is the likely direction of innovation in the coming years? Although, countries in the sub-region are increasingly recognizing the critical role of secondary education in socio-economic development, and accordingly, making efforts to increase investments at this level of education, recognition of the critical role of schools and the enabling institutional framework for encouraging and supporting innovations in secondary education is yet to happen.

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Annexure

Table 1:   Growth of Enrolment at Secondary Level from 1999 to 2009 in South Asia

Country	Age-group	School-age Population	Total Enrolment in the School Year Ending in									
			1999		**2006**		**2007**		**2008**		**2009**	
			Total	% of Female	Total (000)	% of Female	Total (000)	% of Female	Total (000)	% of Female	Total (000)	% of Female
Bangladesh	11-17	24010	9912	49.0	10355	50.0	10445	50.0	10445	50.0	10037	52.0
Bhutan	13-18	92	20	44.0	45	48.0	52	48.0	57	49.0	57	49.0
India	11-17	167545	67090	39.0	89462	43.0	91529	43.0	96049	44.0	101784	45.0
Maldives	13-17	39	15	51.0	33	50.0	33	50.0	33	50.0	N.A.	N.A.
Nepal	10-16	4596	1265	40.0	1984	45.0	2305	47.0	2305	47.0	2305	47.0
Pakistan	10-16	28057	N.A.	N.A.	8421	42.0	9145	42.0	9340	42.0	9433	43.0
Sri Lanka	10-17	2602	N.A.	N.A.	2332	49.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France.

Table 2:   Percentage Share of Enrolment in TVET to Total Enrolment at Secondary Level

Country	2006		2007		2008		2009	
	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET	Enrolment in TVET Programmes as a % of Total Enrolment in Secondary Education	Female Enrolment in TVET Programmes as a % of Total Enrolment in TVET
Bangladesh	1.6	27.0	2.4	30.0	2.4	30.0	3.0	30.0
Bhutan	1.6	36.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
India	0.8	15.0	0.8	7.0	0.8	N.A.	1.0	25.0
Maldives	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nepal	1.1	22.0	0.7	N.A.	0.7	N.A.	1.0	N.A.
Pakistan	3.4	39.0	3.6	35.0	3.7	35.0	4.0	41.0
Sri Lanka	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France.

Table 3: Gross Enrolment Ratio (GER) in Total Secondary Education from 1999 to 2009 in South Asia

| Country | School Year Ending in | | | | | | | | | | | | | | |
| | 1999 | | | 2006 | | | 2007 | | | 2008 | | | 2009 | | |
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bangladesh	45.0	45.0	45.0	44.0	43.0	45.0	43.0	42.0	45.0	44.0	43.0	45.0	42.0	40.0	45.0
Bhutan	37.0	41.0	33.0	49.0	51.0	46.0	56.0	58.0	54.0	62.0	62.0	61.0	62.0	62.0	61.0
India	44.0	52.0	36.0	54.0	59.0	49.0	55.0	59.0	49.0	57.0	61.0	52.0	60.0	64.0	56.0
Maldives	43.0	42.0	44.0	83.0	80.0	86.0	83.0	80.0	86.0	84.0	81.0	86.0	N.A.	N.A.	N.A.
Nepal	34.0	40.0	28.0	43.0	46.0	40.0	48.0	50.0	47.0	N.A.	N.A.	N.A.	N.A.	37.0	29.0
Pakistan	N.A.	N.A.	N.A.	30.0	34.0	26.0	33.0	37.0	28.0	33.0	37.0	28.0	33.0	N.A.	N.A.
Sri Lanka	N.A.	N.A.	N.A.	87.0	86.0	88.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France.

Table 4:   Gross Enrolment Ratio (GER) in Lower Secondary Education from 2006 to 2009 in South Asia

| Country | 2006 | | | 2007 | | | 2008 | | | 2009 | | |
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bangladesh	60.0	57.0	63.0	60.0	56.0	64.0	62.0	58.0	65.0	56.0	51.0	62.0
Bhutan	59.0	60.0	58.0	69.0	70.0	67.0	74.0	73.0	75.0	74.0	73.0	75.0
India	71.0	75.0	66.0	71.0	75.0	66.0	76.0	79.0	72.0	77.0	79.0	74.0
Maldives	124.0	117.0	132.0	124.0	117.0	132.0	124.0	118.0	131.0	122.0	120.0	125.0
Nepal	66.0	70.0	63.0	68.0	70.0	66.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Pakistan	42.0	47.0	36.0	45.0	52.0	39.0	44.0	50.0	38.0	44.0	49.0	38.0
Sri Lanka	103.0	100.0	106.0	N.A.	N.A.	N.A.	108.0	106.0	109.0	104.0	103.0	105.0

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France.

Table 5: **Gross Enrolment Ratio (GER) in Upper Secondary Education from 2006 to 2009 in South Asia**

Country	2006			2007			2008			2009		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bangladesh	31.0	32.0	30.0	30.0	31.0	30.0	31.0	32.0	30.0	31.0	31.0	32.0
Bhutan	29.0	34.0	24.0	32.0	36.0	29.0	38.0	43.0	35.0	38.0	42.0	35.0
India	41.0	46.0	35.0	42.0	47.0	36.0	43.0	47.0	37.0	47.0	51.0	42.0
Maldives	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Nepal	24.0	26.0	22.0	32.0	34.0	31.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Pakistan	21.0	24.0	19.0	23.0	26.0	20.0	24.0	28.0	21.0	25.0	28.0	22.0
Sri Lanka	73.0	74.0	72.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House, Oxford University Press, Paris, France.

Table 6:   **Gender Parity Index (GPI) of GER at Secondary Level (Total) from 2006 to 2009 in South Asia**

Country	1999	2006	2007	2008	2009
Bangladesh	1.01	1.03	1.06	1.05	1.12
Bhutan	0.81	0.91	0.93	0.99	0.99
India	0.71	0.82	0.83	0.86	0.88
Maldives	1.07	1.07	1.07	1.05	N.A.
Nepal	0.7	0.89	0.93	N.A.	N.A.
Pakistan	N.A.	0.78	0.76	0.76	0.79
Sri Lanka	N.A.	1.02	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO
Publishing House, Oxford University Press, Paris, France.

Table 7:   **Gender Parity Index (GPI) of GER at Lower and Upper Secondary Level from 2006 to 2009 in South Asia**

Country	GPI of GER in Lower Secondary				GPI of GER in Upper Secondary			
	2006	2007	2008	2009	2006	2007	2008	2009
Bangladesh	1.11	1.14	1.12	1.22	0.94	0.97	0.94	1.03
Bhutan	0.97	0.96	1.03	1.03	0.71	0.81	0.81	0.83
India	0.88	0.88	0.91	0.94	0.76	0.77	0.79	0.82
Maldives	1.13	1.13	1.11	1.04	N.A.	N.A.	N.A.	N.A.
Nepal	0.90	0.94	N.A.	N.A.	0.85	0.91	N.A.	N.A.
Pakistan	0.77	0.75	0.76	0.78	0.79	0.77	0.75	0.79
Sri Lanka	1.06	N.A.	1.03	1.02	0.97	N.A.	N.A.	N.A.

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO
Publishing House, Oxford University Press, Paris, France.

Table 8: Transition Rate from Primary to Secondary by Gender and Country from 2005 to 2007 in South Asia

Country	School year ending in 2005			School year ending in 2006			School year ending in 2007		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Bangladesh	89.0	86.0	92.0	97.0	95.0	100.0	97.0	95.0	100.0
Bhutan	93.0	92.0	94.0	93.0	92.0	94.0	98.0	95.0	100.0
India	85.0	87.0	83.0	84.0	86.0	82.0	85.0	86.0	84.0
Maldives	81.0	76.0	85.0	81.0	76.0	85.0	87.0	83.0	92.0
Nepal	77.0	79.0	74.0	81.0	81.0	81.0	81.0	81.0	81.0
Pakistan	72.0	69.0	75.0	76.0	75.0	76.0	73.0	73.0	71.0
Sri Lanka	98.0	N.A.	N.A.	97.0	96.0	97.0	98.0	97.0	99.0

Source: EFA Global Monitoring Report, various years, UNESCO, UNESCO Publishing House,

Oxford University Press, Paris, France.

Table 9: **No. of Secondary Schools, Teachers and Enrolment by Sex from 1995 to 2010 in Bangladesh**

Year	No. of Schools	No. of Teachers			Enrolment		
		Total	Female	% of Female	Total	Female	% of Female
1995	12012	140059	19436	13.88	5115461	2402784	46.91
1996	12978	145188	20198	13.91	5585806	2627073	47.03
1997	13778	157077	22334	14.22	6124325	2921560	47.70
1998	14518	165213	24106	14.59	6769078	3464742	51.18
1999	15460	173897	25867	14.87	7236939	3758823	51.94
2000	15720	174146	26290	15.10	7646885	4020237	52.57
2001	16166	183277	30196	16.48	7887010	4196097	53.20
2002	16562	186949	31311	16.75	8162134	4360778	53.43
2003	17386	206557	39580	19.16	8126362	4322568	53.19
2004	18267	214673	47255	22.01	7503247	3925110	52.31
2005	18500	238158	48290	20.28	7398552	3868014	52.28
2006	18700	239431	48615	20.30	7419179	3876914	52.26
2008	18756	209496	46788	22.33	6819748	3661457	53.69
2009	19083	213482	53363	25.00	7356793	3796538	51.61
2010	19040	218011	50334	23.09	7465774	3979676	53.31

Source: Bangladesh Bureau of Educational Information and Statistics (2010). Dhaka, BANBEIS

Table 10: **No. of Teachers and Enrolment in High Schools by Sex from 1992-93 to 2009-10 in Pakistan**

Year	Enrolment in High schools (in 000)		No. of Teachers in High schools (in 000)		Enrolment in Secondary Vocational (in 000)		No. of Teachers in Secondary Vocational	
	Total	Female	Total	Female	Total	Female	Total	Female
1992-93	1168	357	165.6	68.1	93	24	9153	2605
1993-94	1315	421	217.4	88.5	84	18	7965	1603
1994-95	1525	514	227.6	102.6	86	15	6949	1708
1995-96	1447	480	217.6	89.8	86	14	7291	1799
s1996-97	1521	520	224.7	98.8	92	15	7422	1845
1997-98	1658	605	252.9	112.9	90	18	6923	1870
1998-99	1703	639	231.6	107.5	75	17	7133	1858
1999-2000	1726	653	247.8	115.8	91	17	9253	1959
2000-01	1565	675	260.3	125.3	83	14	9441	1959
2001-02	1574	644	270.2	126.1	83	15	7192	1863
2002-03	1589	658	278.0	131.9	94	19	7273	1623
2003-04	1800	709	276.9	134.2	105	14	7042	1325
2004-05	1936	780	282.1	138.6	114	21	7356	1450
2005-06	2188	905	417.1	209.9	239	90	14565	4658
2006-07	2373	974	421.7	213.0	251	94	14622	4676
2007-08	2484	1022	429.9	219.6	256	96	14914	4770
2008-09	2556	1071	439.3	225.5	265	99	15264	5061
2009-10	2700	1136	447.1	231.1	274	103	15508	5207

Source: Pakistan Education Statistics Reports, AEPAM, Islamabad, Pakistan.

Table 11: GER by Gender in Grades (IX-X) in 2008-09 and 2009-10 in Major States in India

States/UTs	GER in Grades IX-X in 2008-09			GER in Grades IX-X in 2009-10		
	Boys	Girls	Total	Boys	Girls	Total
Andhra Pradesh	59.5	58.9	59.2	63.7	65.0	64.3
Assam	44.2	48.2	46.2	50.2	52.5	51.3
Bihar	35.0	26.8	31.1	38.0	31.7	35.0
Chhattisgarh	65.2	58.1	61.7	63.9	69.8	66.8
Delhi	67.3	69.2	68.2	75.0	77.1	76.0
Gujarat	67.4	51.0	59.7	72.1	56.3	64.7
Haryana	50.0	49.0	49.5	53.3	53.3	53.3
Himachal Pradesh	83.3	83.9	83.6	88.2	92.4	90.2
Jammu & Kashmir	58.2	49.8	54.1	62.5	60.1	61.3
Jharkhand	37.7	30.2	34.1	46.5	42.1	44.4
Karnataka	74.5	71.9	73.2	80.0	78.6	79.3
Kerala	78.2	80.8	79.4	81.4	84.0	82.7
Madhya Pradesh	54.8	44.0	49.6	53.9	50.4	52.2
Maharashtra	76.1	71.7	74.0	77.5	75.3	76.5
Orissa	53.8	51.8	52.8	59.4	60.5	59.9
Punjab	52.0	54.3	53.1	58.7	62.0	60.2
Rajasthan	68.1	43.2	56.3	65.2	49.9	58.0
Tamil Nadu	93.6	94.6	94.1	98.7	99.7	99.2
Uttar Pradesh	42.7	35.1	39.1	44.7	37.6	41.3
Uttaranchal	83.7	76.3	80.1	85.8	80.9	83.5
West Bengal	51.2	53.5	52.3	54.7	61.1	57.8
NE States	57.0	58.7	57.8	60.9	63.5	62.2
All India	**57.1**	**51.5**	**54.4**	**60.0**	**56.8**	**58.5**

Table 12:   GER by Gender in Grades XI-XII in 2008-09 and 2009-10 in Major

States/UTs	GER in Grades XI-XII in 2008-09			GER in Grades XI-XII in 200	
	Boys	Girls	Total	Boys	Girls
Andhra Pradesh	21.36	18.10	19.77	23.39	19.76
Assam	19.50	19.11	19.31	20.66	20.51
Bihar	1.39	0.99	1.20	1.66	1.26
Chhattisgarh	34.12	26.40	30.34	35.82	29.72
Delhi	49.42	50.59	49.96	54.18	56.14
Gujarat	31.48	27.25	29.50	32.19	27.50
Haryana	33.52	30.87	32.31	37.46	34.81
Himachal Pradesh	69.48	67.53	68.54	70.14	69.72
Jammu & Kashmir	34.54	27.76	31.26	38.00	32.24
Jharkhand	20.76	13.91	17.47	23.63	16.30
Karnataka	40.17	39.63	39.91	41.90	41.65
Kerala	40.67	50.69	45.59	43.26	54.03
Madhya Pradesh	22.91	16.47	19.86	24.82	18.31
Maharashtra	45.75	41.57	43.77	48.70	44.28
Orissa	0.02	0.01	0.02	0.03	0.02
Punjab	38.56	39.79	39.11	41.18	42.53
Rajasthan	32.03	18.04	25.45	41.39	24.95
Tamil Nadu	52.36	62.17	57.13	56.04	67.34
Uttar Pradesh	18.14	16.25	17.26	17.17	17.73
Uttaranchal	47.58	47.30	47.45	55.70	53.30
West Bengal	26.91	21.31	24.20	32.15	26.15
NE States	30.81	28.91	29.89	32.32	30.91
All India	**26.87**	**24.30**	**25.65**	**28.94**	**26.66**