

**Report of the CAFE Committee**

**Universalisation of  
Secondary Education**

**Committee of CAGE on “Universalisation of Secondary Education”  
(Set-up by the Ministry of Human Resource Development,  
Government of India)**

Ghanshyam Tiwari  
Chairman

27<sup>th</sup> June 2005

Dear Shri Arjun Singh ji,

I have great pleasure in submitting the interim report of the committee of CAGE set up by the MHRD, Government of India under my chairmanship on the subject of “Universalisation of Secondary Education” vide letter No. F.2-15/2004-PN-I dated September 06, 2004.

It is my pleasant duty to apprise you of the Commitment and devotion with which the members of the Committee have performed this task keeping in view to our terms of reference: to prepare a blueprint for the Universalisation of Secondary Education consequent upon the attainment of Universalisation of Elementary Education. We could not have wild ranging consultations all over the country due to lack of time. The educational visits to some of the Countries where Universalisation of Secondary Education has already been achieved would have been useful for preparing the guidelines for this important task. However, the members of the Committee put their mind to the best of their abilities and intentions in preparing this report.

I suggest that the report and its general recommendations should be discussed thoroughly all over the country. The experiences of Universalisation of Secondary Education should be gathered from those countries which have successfully achieved Universalisation of Secondary Education.

Finally, I would like to thank you for giving me this opportunity to Chair the CAGE Committee on the subject of the immediate need.

With kind regards.

Yours sincerely

(Ghanshyam Tiwari)

Shri Arjun Singh  
Hon’ble Minister for  
Human Resource Development  
Govt. of India, Shastri Bhavan  
New Delhi-110001.

**No. F.2-15/2004-PN-1**  
**Government of India**  
**Ministry of Human Resource Development**  
**Department of Secondary & Higher Education**

New Delhi, the 8<sup>th</sup> September, 2004

**ORDER**

The Government of India had re-constituted Central Advisory Board of Education (CABE) vide Resolution dated 06.07.2004. The first meeting of the re-constituted Central Advisory Board of Education was held on 10 & 11 August, 2004 during which some critical issues had emerged needing detailed deliberations. It was decided to set up Committees of CABE to examine in detail these critical issues. Accordingly it has been decided with the approval of the Minister of Human Resource Development, to set up a Committee of CABE on the subject of **“Universalisation of Secondary Education”** under the Chairmanship of Sh. **Ghanshyam Tiwari**, Education Minister, Rajasthan with the following composition:

S. No. Name & Address

- |     |   |                  |
|-----|---|------------------|
| 1.  | Shri Ghanshyam Tiwari,<br>Minister of Education,<br>Government of Rajasthan | Chairman         |
| 2   | Minister In-charge of Secondary Education,<br>Government of Tamil Nadu      | Member           |
| 3.  | Minister In-charge of Secondary Education,<br>Government of Tripura         | Member           |
| 4.  | Minister In-charge of Secondary Education,<br>Government of Manipur         | Member           |
| 5.  | Minister In-charge of Secondary Education,<br>Government of Maharashtra     | Member           |
| 6.  | Prof. Anil Sadgopal   | Member           |
| 7.  | Shri Javed Akhtar   | Member           |
| 8.  | Prof. Tapas Majumdar  | Member           |
| 9.  | Chairman, CBSE  | Member           |
| 10. | Prof. Krishna Kumar<br>Director, NCERT                                      | Member Secretary |

**The terms of reference of the Committee are:**

- (a) To prepare a blueprint for the universalisation of secondary education consequent upon the attainment of universalisation of elementary education.

The Committee shall be provided secretarial assistance by NCERT. The Member of the Committee shall be paid TA/DA at the rates that are payable to the Members of the High Powered Committees.

The Committee shall give its recommendations within six months from the date of its constitution.

(Anil Kapoor)  
Deputy Secretary to the Government of India

**Copy forwarded to:**

1. All Members of the Committee of CAGE.
2. All Ministers/Departments of the Govt. of India.
3. All Attached/Subordinate Offices and Autonomous Statutory Bodies under the Ministry of Human Resource Development.
4. All State Governments/Union Territories.
5. President's Secretariat.
6. Prime Minister's Office.
7. Cabinet Secretariat.

(Anil Kapoor)  
Deputy Secretary to the Government of India

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1. Prof. Puran Chand, Joint Director (CIET), NCERT was nominated by Prof. Krishna Kumar, Director, NCERT, the Member Secretary to act as Member Secretary on his behalf. This was ratified in the meeting of the CAGE Committee.
  2. Prof. M. Mukhopadhyay, Director, NIEPA was appointed as a special invitee in the CAGE Committee on USE vide letter No. F.2-12/2004-PN.I (Pt) dated March 10, 2005 and later on ratified as member in the meeting of the CAGE Committee.

## FOREWORD

The 21<sup>st</sup> century belongs to India. All indications arising out of serious research and academic study indicate that India will be at the forefront of developed countries very soon. Such a status implies a serious responsibility on all of us to take the fruits of development to every Indian in every corner of the country. This development must be sustained with equity and social justice as also quality of life for all. Further, we must move towards a globally competitive order that shall be long lasting and sustainable.

The surest instrument for attaining sustainable development of a high order in India is to invest heavily in education for all. It has been stated in Sanskrit ethics माता शत्रु पिता वैरी येन बालो न पाठितः (Parents who do not send their children to school are their enemies). The growing success of *Sarva Shiksha Abhiyan* (SSA) surely demonstrates that our country is learning the truth of that old adage. Indeed, SSA and its goal of Universal Elementary Education provides a sound basis for sustainable development. However, this is not enough. The growing number of children in the elementary school system is bringing pressure to bear on the need for further education. Universalisation of Secondary Education should now be our goal: this will generate creation of human capital and will provide sufficient conditions for accelerating growth and development and equity as also quality of life for everyone in India. It is, therefore, time to consider the issue of Universalisation of Secondary Education and the achievement of that goal by 2020.

This interim report is the outcome of a series of debates and discussions supported by serious research. We hope the report will provide a sound basis for large scale consultation and debate for formulation of a national policy on Secondary Education and would help the Government of India, in the interim, to initiate funding to the States to help achieve that goal within a specified time.

I am indeed grateful to the CAGE, particularly the Chairman, Sri Arjun Singh, Hon'ble Minister for Human Resource Development, Government of India for asking me to chair this CAGE Committee. My thanks are also due to Prof. Krishna Kumar, Director, NCERT, Member Secretary and Dr. Puran Chand, Joint Director (CIET), NCERT for facilitating the deliberations of the Committee.

I am equally thankful to all members of the CAGE Committee for their contribution, especially Shri Francis Ngajokpa, Minister of Education, Manipur, Shri Keshab Majumdar, Minister of Education, Tripura, Thiru. C. Ve. Shanmugam, Minister of Education, Tamil Nadu and Shri. Vasant Purke, Minister of Education, Maharashtra, as also Prof. Tapas Majumdar, Shri Ashok Ganguli, Chairman, CBSE and Prof. Anil Sadgopal for their valuable insights. I am grateful to all the members of the Sub-Committee who worked hard in drafting the report on behalf of the Committee. A special word of thanks to Prof. Marmer Mukhopadhyay, Director, NIEPA for chairing the sub-committee and bringing the report to fruition within a short time by creating intellectual synergy of all members of the sub-committee including Shri C.K. Mathew, Principal Secretary, Education, Rajasthan, Dr. Furquan Qamar, Director, Center for Management Studies, Jamia Millia Islamia, Prof. Puran Chand, Joint Direct (CIET), NCERT, Dr C.L. Kaul, former Reader, Department of Educational

Survey and Data Processing, NCERT, Dr Geetha Rani and N.K. Mohanti, NIEPA and Dr Yogesh Kumar, Reader, NCERT.

I have great pleasure in submitting the report to the CABE and dedicating it to the future of India - the children of today and tomorrow.

GHANSHYAM TIWARI  
Education Minister, Govt. of Rajasthan  
Chairman, CABE Committee for  
Universalisation of Secondary Education

**Sub-Committee constituted by the CABE Committee on  
Universalisation of Secondary Education (USE) for drafting the  
Report**

**Terms of Reference**

1. To identify major concerns and issues relating to USE
2. To prepare conceptual framework for USE
3. To suggest infrastructural, curricular and financial parameters for working out financial requirements for USE
4. To prepare an outline of phase wise transition to achieve USE

**Members of the Sub-Committee**

- |  |          |
|--|----------|
| 1. Prof. Marmar Mukhopadhyay,<br>Director,<br>NIEPA, New Delhi.                            | Chairman |
| 2. Prof. Anil Sadgopal,<br>Delhi University, Delhi.  | Member   |
| 3. Prof. Furqan Qamar,<br>Director, CMS,<br>Jamia Millia Islamia,<br>New Delhi.            | Member   |
| 4. Mr. C.K. Mathew,<br>Principal Secretary, Education,<br>Government of Rajasthan, Jaipur. | Member   |
| 5. Dr. C.L. Kaul,<br>Former Reader,<br>NCERT, New Delhi.                                   | Member   |
| 6. Dr. Geetha Rani,<br>NIEPA, New Delhi.   | Member   |
| 7. Dr. Yogesh Kumar,<br>Reader, Curriculum Group,<br>NCERT, New Delhi.                     | Member   |
| 8. Dr. N.K. Mohanty,<br>NIEPA, New Delhi.  | Member   |
| 9. Prof. Puran Chand,<br>Joint Director<br>(CIET) NCERT, New Delhi.                        | Convener |

**Assistance**

Dr. Shankar Sharan, NCERT, New Delhi

**Meetings of the CABE Committee on  
Universalisation of Secondary Education**

<b>Date</b>	<b>Venue</b>
25.10.2004	NCERT, New Delhi.
03.12.2004	NCERT, New Delhi.
11.03.2005	NCERT, New Delhi.
05.05.2005	NCERT, New Delhi.
21.05.2005	NIEPA, New Delhi.
08.06.2005	NCERT, New Delhi.



# Contents

Preamble	1
Chapter 1 Introduction	3
Chapter 2 Secondary Education: Nature and Scope	9
Chapter 3 Secondary Education in India: Future Scenario	22
Chapter 4 Planning and Management Issues	35
Chapter 5 Recommendations	45
References	47

## **PREAMBLE**

The Central Advisory Board of Education (CABE) is the highest advisory body relating to policy making in education in India. It also provides a platform where the Centre and the States/UTs share their common concerns, review their experience and envision future policies and programmes. This gives meaning to the partnership implied in the concurrency of education in a federal structure. However, CABE did not function since 1994, resulting in weakening of the Centre-State dialogue on education policy. Fortunately, it was reconvened in August 2004 by the UPA Government and seven committees were constituted to deliberate upon various issues concerning different stages of education.

Reports have gathered in recent years from different parts of the country of rising pressure on the secondary and senior secondary education system for greater access and space for participation. The pressure has been particularly intense from the hitherto marginalised sections of population such as the *dalits*, tribals, OBCs, religious and linguistic minorities and girls in each of these sections. This has been viewed as evidence of not only rising levels of socio-economic aspirations but also of democratic consciousness. In the meantime, there have been two significant developments. First, the Central Government initiated *Sarva Shiksha Abhiyan* (SSA) in 2002 and set the targets of universal primary education in 2007 and Universal Elementary Education (UEE) by 2010 respectively. Second, impact of globalisation and rapid growth of new technologies have led to reassessment of India's preparedness to generate the required technical person power, develop new knowledge and skills and remain competitive at global level. The secondary and senior secondary education system has a key role to play in enabling India to move towards these objectives.

Given the high transition rate of about 85% from class VIII to IX and the anticipated progress in UEE, it is now widely acknowledged, even at the highest political level, that the time has arrived for taking proactive measures to plan and provide for universal access to secondary education in the first phase and senior secondary education in the second phase. In spite of cynicism in several quarters about India's capacity on this count, especially in view of the elusive goal of UEE, there is no denying that even this hesitant realisation may be a bit late in the day.

Accordingly, in August 2004, the CABE constituted one of the seven committees on this issue, asking it to prepare "a blueprint for the universalisation of secondary education consequent upon the attainment of universalisation of elementary education." In this report, the Committee has attempted to document its collective vision in four chapters. The introductory chapter argues for the need for a paradigm shift in the conceptual design of secondary education and offers four guiding principles as pillars on which the future edifice of universal secondary education can be built. The second chapter elaborates on the nature and scope of secondary education, with emphasis on its conceptual parameters. The third chapter makes data-based futuristic projections until 2020 relating to progressive rise in enrolment, requirement of teachers, classrooms, laboratories, IT, playgrounds etc. and finally financial

requirements. The fourth and the final chapter reflects on policy options, planning and management issues, teacher education, regional imbalance and other issues related to disparity as well as diversity and the role of the State in mobilising adequate resources for USE. The report concludes with a set of recommendations.

The Committee is deeply conscious of the fact that Universalisation of Secondary Education has become a national agenda for the first time since independence. It is hoped that this preliminary exercise will at least establish the need for further studies and advance thinking for reprioritisation of national economy with a view to translate this formidable agenda on the ground before it is too late!

## CHAPTER 1

### INTRODUCTION

The Constitution of India, under the original Article 45, directed the State to “endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years.” This provision implicitly covered Early Childhood Care and Education (including pre-primary education) for children below six years of age and eight years of elementary education (Class I to VIII) for the 6-14 year age group. The priority given by the Constitution to this provision was clearly evident from the time-frame specified therein; no other clause in the Constitution carries this sense of urgency. Yet, the State managed to ignore the agenda of universal elementary education (UEE) for four long decades just because Article 45 was placed in Part IV of the Constitution i.e. Directive Principles of State Policy and, therefore, was seen as not being justiciable. It was only in 1993 that the situation changed dramatically when the Supreme Court, in the case of *Unnikrishnan J.P. vs. State of Andhra Pradesh and others*, gave all children a Fundamental Right to “free and compulsory education” until they “complete the age of fourteen years” and stated that this right “flows from Article 21” i.e. Right to Life. In the context of this Committee’s Terms of Reference, it may further be noted that the Supreme Court in the same judgment ruled that, after the age of fourteen years, the Fundamental Right to education continues to exist but is “subject to limits of economic capacity and development of the State”. It is this historic interpretation of the Constitution and similar judgments coming from the highest judiciary of the land that eventually persuaded the Government of India to constitute the Saikia Committee of State Education Ministers (1996) whose report in January 1997 recommended that the “Constitution of India should be amended to make the right to free elementary education up to the 14 years of age, a fundamental right.” This was followed by the introduction of the Constitutional 83<sup>rd</sup> Amendment Bill in the Parliament (1997) and eventually the passing of ‘The Constitution (Eighty-Sixth Amendment) Act, 2002’ – more than half a century after India’s independence! In the process, however, the intent of the 1993 Supreme Court judgment as well as the Saikia Committee recommendation, (1997) was diluted by exclusion of almost 17 crore children from their right to early childhood care and pre-primary education, the significance attached to this agenda in the National Policy on Education – 1986 notwithstanding. This backdrop provides the necessary insight into the contemporary educational scenario, policies and programmes relating to school education.

We take note of two other committees constituted by CABE whose Terms of Reference overlap the task of this Committee. One of these committees is drafting Free and Compulsory Education Bill in pursuance of the 86<sup>th</sup> Amendment to the Constitution and looking into other issues related to elementary education. The second of these committees is deliberating upon the subject of girls’ education and the Common School System. The recommendations of both of these committees shall have a direct bearing upon the blueprint of Universal Secondary Education that is engaging our attention.

The major changes in socio-economic conditions that have taken place since then have brought upon the education system new demands which did not exist half a century ago. Elementary education of eight years is no more adequate – it neither equips a child with the necessary knowledge and skills to face the world of work nor does it empower her to deal with the challenges of a globalising economy. What career avenues – professional or otherwise – are open to a child after merely 8 years of elementary education? The eligibility conditions of even low level certificate or diploma courses (para-medical, technical, or teacher education) all require a minimum of Class XII certificate. By not creating conditions or enabling a child to complete a minimum of 12 years of education, the children are denied opportunities for any career options or meaningful links with the contemporary ‘world of work’.

There is yet another persuasive logic to plead for Universal Secondary Education. This relates to the issue of equality and social justice as enshrined in the Constitution. From this notion has emerged the policy of reservations – the policy of Positive Discrimination – for Scheduled Castes and Scheduled Tribes. Such a crucial policy for benefiting the *dalits* and tribals cannot benefit the majority of these historically exploited sections of the society. This is because a large majority of children and youth belonging to SC and ST community do not have access to secondary education; less than 10% of the girls among SCs and STs have access to the + 2 stage. Without secondary or senior secondary education, benefits of reservation to SCs/STs will remain elusive.

In this context, it would be worthwhile recalling how the Secondary Education Commission (1952) articulated the aims of secondary education in the following words (Chapter III):

“Citizenship in a democracy . . . . involves many intellectual, social and moral qualities which cannot be expected to grow of their own accord . . . . an individual must form his own independent judgment on all kinds of complicated social, economic and political issues and, to a large extent, decide his own course of action. The Secondary Education, which would be the end of all formal education for the majority of the citizens, must assume the responsibility of providing the necessary training . . . . to develop the capacity for clear thinking and a receptivity to new ideas. . . . . A democracy of people who can think only confusedly can neither make progress, nor even maintain itself, because it will always be open to the risk of being misled by demagogues. . . . . a democratic citizen should have the understanding and the intellectual integrity to sift truth from falsehood, facts from propaganda and to reject the dangerous appeal of fanaticism and prejudice. He must develop a scientific attitude of mind to think objectively and base his conclusions on tested data. . . . . should neither reject the old because it is old nor accept the new because it is new, but dispassionately examine both and courageously reject whatever arrests the forces of justice and progress.”

How can education contribute to this objective? The Commission indicated the following path (Chapter III):

“A democracy is based on faith in the dignity and worth of every single individual as a human being. . . . . The object of a democratic education is, therefore, the full, all-round development of every individual’s

personality. . . . . The view of education that emerges from this basic concept transcends the narrow academic approach and broadens out into an *education for living*, i.e. an education to initiate the students into the many-sided art of living in a community. It is obvious, however, that an individual cannot live and develop alone. . . . . it is essential that he should learn to live with others and to appreciate the value of co-operation . . . . . No education is worth the name which does not inculcate the qualities necessary for living graciously, harmoniously and efficiently with one's fellow men."

The Commission was concerned with issues which continue to strain and distort our democracy even to date (Chapter III):

"Another important aim which the secondary school must foster is the development of a sense of *true patriotism*. . . . . The propriety of inculcating, through education, a deep love of one's own country, is too obvious to require any justification, but in doing so it is necessary to take care that this love does not degenerate into nationalistic jingoism. True patriotism involves *three* things – a sincere *appreciation* of the social and cultural achievements of one's own country, a readiness to *recognise its weaknesses* frankly and to work for their eradication and an earnest *resolve to serve* it to the best of one's ability, harmonising and subordinating individual interests to broader national interests. The school must address itself to building up this rich, threefold concept of patriotism."

The foregoing paragraphs would then provide the framework for arguing that universal secondary education is no more a luxury but a pre-condition for equitable social development, widening participation in India's democratic functioning, building up of an enlightened secular republic, and be globally competitive. The latest figures of 'Drop Out' rates reveal that almost half of the child population enrolled in schools does not complete even eight years of elementary education. This is despite the internationally funded DPEP from 1993-94 onwards and now almost three years of *Sarva Shiksha Abhiyan* (SSA). The Gender Parity Index has been improving rather slowly. UNESCO's Global Monitoring Report of 2002 has made detailed projections and concluded that India is unlikely to achieve UEE even by 2015! In this sense, India is categorised along with Pakistan, Nepal and some of the middle east and sub-Saharan countries; some of the South Asian neighbouring countries like Sri Lanka and Bangladesh have done better than India. These warnings are important since the ambition of the Indian State is to emerge as a developed nation by 2020.

A successful programme of Universal Elementary Education is the pre-condition for taking the first reliable step towards Universal Secondary Education. The success of UEE will lie in objectively reviewing the very premises on which the present policies and programmes are founded and reconstructing the policies on the basis of the outcome of such a review.

Universal Secondary Education cannot be merely quantitative expansion or an illuminated carbon copy of what exists today. The very concept of secondary education needs to be reconstructed in the context of today and tomorrow. We would profit here by quoting from the Report of the Education Commission (1964-66):

“The naïve belief that all education is necessarily good, both for the individual and for society, and that it will necessarily lead to progress, can be as harmful as it is misplaced. Quantitatively, education can be organised to promote social justice or to retard it. History shows numerous instances where small social groups and elites have used education as a prerogative of their rule and as a tool for maintaining their hegemony and perpetuating the values upon which it has rested. On the other hand, there are cases in which a social and cultural revolution has been brought about in a system where equality of educational opportunity is provided and education is deliberately used to develop more and more potential talent and to harness it to the solution of national problems. The same is even more true of the quality of education.”

- Report of Education Commission (1964-66), Section 1.16

Universalisation would then call for a paradigm shift in conceptualising secondary education in its structural as well as curricular dimensions. Only then one would expect it to become a powerful means of social transformation. Following four guiding principles may act as the pillars on which the edifice of Universal Secondary Education should be built in the years to come:

1. **Universal Access:** Access is to be envisaged in physical, social, cultural and economic terms – all interwoven in a common concept. This calls for a redefinition of some of the basic features of the Indian school. For instance, it is not sufficient to provide physical access to an orthopaedically disabled child. It is equally critical that the disability of such a child is not seen in medical terms alone. The moment a barrier-free physical access is provided, this child’s disability disappears and she becomes as capable as the rest of her peers. In this sense, the disability is a social construct and the matter does not end by solving the problem at the physical level alone but demands a change in the mindsets of her classmates, teachers and the curriculum planners or textbook writers. Similarly, in the case of a dalit child, access is as much a cultural question as it is one of a school being available in the neighbourhood. There are poignant accounts of how alienating and humiliating school experience can be for children of the deprived sections of society. This kind of alienation is equally visible in gender discrimination as it operates as a ‘hidden curriculum’ all the time as an extension of patriarchy embedded in society. In these circumstances, children don’t just ‘drop out’ voluntarily, but either they are ‘pushed out’ or even ‘walk out’ in protest. It is only when the school is able to create a new cultural ambience and a child-friendly curriculum that universal access would begin to mean more than just concrete, black boards or even computers.
2. **Equality and Social Justice:** These two fundamental principles as enshrined in the Constitution imply equality and social justice towards secondary education, inside secondary education and through secondary education. It is only when the school curriculum empowers the child adequately to initially understand, then question and finally deal with that inequality and injustice, the child would be in a position to continue to seek equality and social justice in her life after the school. This is not all. We must draw attention to at least six dimensions of equality and social justice for which the school system will have to strive for viz.

(a) gender; (b) economic disparity; (c) social i.e. SCs/STs; (d) Cultural (including the issues of religious and linguistic diversity); (e) disability (both physical and mental), and (f) rural-urban. All these dimensions need to be reflected with sensitivity in the curriculum such that the self-esteem of each child is built up. This is necessary for ensuring that all children are able to complete their secondary education.

The issue has a structural dimension too. Almost 25% of the secondary schools today are private unaided schools whose clientele comes only from the privileged sections of society. This means that the children studying in such schools are deprived of the experience of knowing children of different social classes and diverse cultural backgrounds. It is inconceivable that such schools can inculcate a sense of equality or social justice among their students or even build up an appreciation of the composite culture and plural character of India. This anomaly can be taken care of only by including the private unaided schools in a Common School System, as recommended by the Education Commission (1964-66).

3. **Relevance and Development:** No education today can be accepted as being relevant unless it (a) helps in unfolding the full potential of the child; and (b) plays the role of linking the development of the child with the society and its political, productive and socio-cultural dimensions. We would like to list five domains in which the developmental role of education can be envisaged: (a) building up citizenship for a country that is striving to become a democratic, egalitarian and secular society; (b) interdisciplinary approach to knowledge, concept formation (not just piling up information) and its application in daily life and attributes such as critical thought and creativity; (c) evolving values in a plural society that is, at the same time, stratified and hierarchical; (d) generic competencies that cut across various domains of knowledge as well as skills; and (e) skill formation in the context of rapidly changing technology which demands formation of multiple skills, transfer of learning and ability to continue to unlearn and learn. A substantial proportion of parents send their children to schools with expectation that education will enable their children to face the 'world of work' with confidence and carve out a meaningful livelihood for themselves. For this purpose, it is essential that learning emerges from the child's social ethos and her productive experience, and at the same time ensures that the child will have access to global knowledge and challenges.
4. **Structural and Curricular Aspects:** Curricular reforms cannot be delinked from structural reforms. There is a consensus today throughout the country with respect to the 10+2 pattern of school education, as recommended by the Education Commission (1964-66). The Education Commission had also advocated that a minimum of 10 years of common curriculum is required for building citizenship in a democracy and for linking the 'world of knowledge' with the 'world of work'. In this concept, diversified courses will be introduced only at the +2 stage. These recommendations related to curriculum could be implemented by all States/ UTs only because the Central Government enabled a nation-wide switchover to the 10+2 pattern. In contrast, the policy on vocational education of "diverting" at least 25% of the children enrolled at the + 2 stage to the vocational stream by the year 2000 has not found favour with



students. According to the Ministry's Annual Reports, less than 5% of the enrolment at the + 2 stage in the year 2003 was in vocational stream. One can infer that the children refused to be "diverted" and preferred the academic stream. The issue has been recently addressed by the National Focus Group on 'Work and Education', as constituted by NCERT, as part of the exercise of reviewing and revising the curriculum framework. The above report (April 2005) recommends a two-pronged strategy with radical structural and curricular implications for the entire school education, including secondary education, viz. (a) Productive work must be introduced in the curriculum as a pedagogic medium for acquisition of knowledge, building values and skill formation from pre-primary stage to the + 2 stage; (b) A nation-wide programme of Vocational Education and Training (VET) must be built up in mission mode and be structurally and administratively placed outside the school system incorporating modular courses with lateral and vertical linkages. As long as the proposed two-pronged strategy of simultaneous structural and curricular reforms is not institutionalised, it is inconceivable that the "world of work" can be meaningfully integrated with the "world of knowledge" and vocational education can become a significant and effective programme.

The four guiding principles, namely universal access, equality and social justice, relevance and development, and structural and curricular aspects as guiding principles together imply a paradigm shift necessary for moving towards the goal of Universalisation of Secondary Education. This shift is expected to simultaneously impact at the level of access, socio-cultural character, developmental objectives and structural-cum-curricular provisions of secondary education - all at the same time and throughout the nation. We do not, however, envisage a change overnight but what is required is an unambiguous commitment to a policy framework that will be necessary for translating this vision on the ground.

## CHAPTER 2

# SECONDARY EDUCATION: NATURE AND SCOPE

### **Vision**

Provide high quality secondary education to all Indian adolescent girls and boys upto the age of 16 by 2015, and upto the age of 18 by 2020.

### **Introduction**

It is time that we recognise the rising levels of democratic consciousness and social aspirations among the young people in the age group of 14-18 years, particularly from the deprived sections of society including girls and the disabled, for a greater share in nation's political, social and techno-economic life. This pressure is expected to take a quantum jump consequent upon the anticipated progress in the UEE by 2010. In view of this, the Central and the State/UT governments must jointly initiate planning to implement the agenda of universal and free secondary education in the first phase by the year 2015 and then extend it to senior secondary education in the second phase by the year 2020. The conventional expectation from secondary/senior secondary education lies in its role in creating the necessary base for generating technical person power, raising the potential of a society in contributing to the growth of knowledge and skills and thereby enhancing the nation's capacity to face the challenge of global competitiveness. That in itself constitutes a significant part of the vision. However, this is not all. The contemporary and additional expectation from secondary education is to build a democratic citizenship that is committed to the Constitutional goal of enabling India to move towards an egalitarian, secular and enlightened society while also being sensitive to India's rich cultural and linguistic diversity and its composite culture.

There is yet another dimension. In order to extend the access of secondary education to the hitherto marginalised sections of society, comprising almost two-thirds of the 14-18 year age group population, and make their participation at this level genuinely inclusive, it would become imperative that the long-overdue changes in the social, cultural and pedagogic character of the secondary/senior secondary school are not delayed any further. Indeed, such changes are expected to benefit even those sections that manage at present to participate in and survive through secondary education, inspite of its exclusionary character. This implies that universalisation of secondary education can not be envisaged merely in terms of quantitative expansion of what we have today. As argued in the introductory chapter, universalisation calls for a paradigm shift founded on four guiding principles that involve reconceptualisation of access itself, socio-cultural ambience of the classroom, notion of knowledge, values and skills and the relationship between what is learnt inside the school and what is available outside. Without such a paradigm shift, the goal of Universalisation of Secondary Education is as likely to elude the policy makers as has been the case with the UEE agenda for more than half a century. What follows, therefore, in this chapter is an attempt to elaborate on the vision emerging out of this concern.

The relevant questions in this context are:

1. What kind of future citizens does India want to build up?
2. What is the nature of secondary education that can lead to the development of the defined citizenship attributes?

Echoing the Indian wisdom, the International Commission on Education for the 21<sup>st</sup> Century also mentioned human beings live in four planes namely physical, intellectual, mental and spiritual. Accordingly, future citizens of India should be physically strong and sound, intellectually competent, mentally/emotionally matured and intelligent, and spiritually intelligent and enriched to be creative, innovative and exploring.

To support education at four planes, the Commission identified four pillars of learning, namely, learning to know, learning to do, learning to live together and learning to be.

- Physical qualities will include internally sound and disease free long life, physical skills at work and play, etc. reflecting learning to know as well as learning to do.
- Intellectual skills should display multiple intelligence at the best of the potentials; and also transcending from lower to higher order cognition nurturing creativity with emphasis on learning to know.
- Emotional qualities are the emotional intelligence that makes significant contribution to corporate and social life and '*learning to live together*'.
- Spiritual skills would be woven around the concept of '*learning to be*', particularly, linking oneself to larger social, national, global and cosmic goals.

Future education, then, would be a holistic responsive education facilitating *manifestation of perfection already in man and woman*. It also implies the cognitive, emotive and physical attributes of future citizens to be founded on a sound value paradigm. This will require re-conceptualising secondary education and a building a fresh new concept. Emphasis in secondary education has to be shifted from 'mugging up' a few content items for writing examination to school as holistic living experience. This implies a paradigm shift in the conceptualisation of secondary education itself.

This would also mean that secondary education cannot be treated only as a production function of the economy, nor can it be justified only on the ground that it contributes to human capital formation and large majority of school graduates will enter the work force. Conceptually, it has to be more inclusive – justifying on the ground that every child has right to exercise her/his full potential and achieve excellence; education has the potentiality and 'state' has the responsibility in facilitating unfolding that potential and achieving the excellence hidden in every individual.

### **Education for Multiple Intelligences**

Contemporary secondary education concentrates primarily on learning a few subjects challenging the 'cognitive intelligence', that too largely the lower order cognition. This very approach to secondary education disables a large number of students because students with differential intelligence are unable to cope with the demands of the kind of education offered in secondary education; on the other hand, secondary education do not contribute and nurture the.

differential intelligence that children bring with them to the school. For example, a talented sports genius is ridiculed for low scores in mathematics or geography. The future secondary education must be designed to nurture multiple intelligence like linguistic or verbal intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic or sports intelligence, musical intelligence, inter-personal intelligence, intra-personal intelligence and naturalist or environmental intelligence.

The Committee does not necessarily propose and recommend adoption or adaptation of Howard Gardener's model of multiple intelligence lock stock and barrel. The primary intention of designing secondary education with a multiple intelligence framework is to ensure that a young person with musical ability can emerge a musician, one with bodily and kinesthetic intelligence is able to emerge as a sportsperson, as much as the person with linguistic intelligence can unfold himself or herself as an orator, a writer, etc. Equally important is nurturing the logical-mathematical intelligence that can produce a scholar in mathematics and science and other such scholastic subjects. In absence of education designed to facilitate multiple intelligence, children with intelligence other than mathematical-logical intelligence are dubbed as non-intelligent or less intelligent. This not only makes them underachievers but also demolishes their self-concept and self esteem. In essence, for universalisation, secondary education must offer adequate opportunity for exercising all varieties of intelligence and unfolding the full potential in each student.

### **Education of the Adolescence**

Secondary education spreads over the ages of 15 and 16, and then to 17 and 18 in the senior secondary grades. These are the years of adolescence, and late adolescence. These are the years of transition; indeed, most crucial years of life. There are steady and fast changes in the body structure transforming to adult form and image of life. At this age, the bodily changes take final shape and stabilise. Established theories of intelligence also indicate that growth of intelligence stabilise at this age, although the new generation brain research indicates that because of continuous reorganisation of brain neurons, intelligence may continue to grow beyond this age. From the angle of multiple intelligence, this age is the most significant since the potentialities unfold faster and stabilise. The childhood voice cracks and takes the final shape (important for budding musicians); majority of the players show their final promise at this stage, and so on. This is also the stage of emotional transformation and maturity that swings between joy and trauma. Secondary education essentially has to be the education of the adolescence. Experiences in schooling have to be designed to be responsive to the needs of transition and stabilisation. Since large number of students are likely to transit from education to the world of work, it is also the stage of transition to work. Secondary education must foster skills of transition.

Though both boys and girls experience transition, there is a special case for girls and it needs special attention. Because of prejudices, taboos and social stigma, phase of transition for girls is more difficult. Child marriage, still prevalent in many parts of the country is a stumbling block for girls education. Also, it will be necessary to develop a gender friendly curriculum.

### **Universal, Free, Compulsory, Age ...**

In the context of education, 'universal', 'free', and 'compulsory' can be used simultaneously although three have altogether different meanings. There are countries where education is free but not universal, there are others where certain levels of education are universal but not free; there are yet others where education is free and also compulsory. For example, with the amendment of the Constitution, elementary education for the children in the age group 6 to 14 must be universal, free and compulsory. Education at the preschool level, however, can be universal and free, but not compulsory.

Committee is of the view that secondary education should be universal and free but not compulsory. By universal it means, then creating universal access and opportunity for all children to receive secondary education. It is important and meaningful. It is evident from the international experience that secondary education becomes naturally universal once universal elementary education has been achieved. The transition rate from eighth to the ninth grades in India is almost 85 per cent and this transition rate is further improving. With the universalisation of elementary education through SSA, there will be universal demand for secondary education. What is important is to create access for universal secondary education which need not be free and should not be compulsory. Universal secondary education had to be differentially subsidised, almost total state responsibility for providing secondary education to economically weaker sections of the society, and moderately subsidised for those who can afford.

On age, the Committee recommends universal secondary education by 2015; the projection of enrolment, transition rate indicates full possibility of universal enrolment in secondary education by 2015. By 2020, the target should be universal enrolment, full retention and mastery learning in all kinds of learning tasks by more than 60% learners. Also, by 2020, there will be provision for universal senior secondary education and universal retention. This will be possible because of high transition rate from 10<sup>th</sup> to 11<sup>th</sup> standard and high retention rate in the senior secondary grades even now.

### **Curricular Structure and Course Offerings**

Examining the situation prevailing in mid-1960's with respect to curricular structure at the secondary level, the Education Commission (1964-66) recommended its reorganization in the following words: "The first step in this direction would be the abandoning of the present higher secondary pattern in which specialization begins in class IX, and the institution of a new higher secondary course beginning in class XI." While recommending a nation-wide shift to 10+2+3 pattern, the Commission visualized that "the first ten years of schooling . . . . will provide a course of general education *without any specialization.*(emphasis given)" The Commission further clarified that "the system of 'streaming' in schools of general education, which now [i.e. in mid-1960s] begins in class IX, should be given up and *no attempt at specialization should be made till after class X.* (emphasis given)" This recommendation for a common curriculum until class X within the 10+2+3 framework was accepted in NPE-1968 and a major programme of shift with additional outlays was undertaken throughout the country. NPE-1986 reiterated this pattern of education as part of the National System of Education. The

National Curriculum Framework (1975) proposed a common curriculum for the ten-year school, to be followed by diversification beginning at class XI for the +2 stage. This basic principle is now practiced nation-wide. The National Curriculum Frameworks prepared successively in 1988, 2000 and 2005 have continued to follow this imperative of NPE-1986. It is in this background that the Committee examined the proposal from certain quarters that diversification should be pre-poned to class IX. The proponents of this view contend that “the most significant reason for mass scale failure in the tenth board examination is the common curriculum and course offerings . . . . nearly 80 per cent of the candidates who fail in the board examination fail in mathematics, English and science . . . . besides significant wastage of the educational resources, it affects self-esteem and self-concept of the students.” The solution offered by these proponents to the problem of “mass scale failure in the tenth board examination” and its adverse impact on the “self-esteem” of students consisted in “diversification of students into several streams of education beyond eighth standard” and offering them a “cafeteria approach” from class IX onwards. This view was debated by the Committee at length. In the view of the Committee, however, the root cause of “mass scale failure” is not the common curriculum offered until class X as per NPE-1986. Instead, the cause of the failure lies in the framework in which subject knowledge is conceived, the manner in which knowledge is transacted and the evaluation parameters and the assessment procedures adopted for examining students. The right to study and succeed in basic mathematics, science, social science and languages, including English, and other mainstream subjects is as much a fundamental right of a child as to have access to and complete secondary/ senior secondary education. Keeping this in mind, the National Curriculum Framework – 2005 has made several radical proposals to revisit the very character of knowledge, shift to a new pedagogic approach and change the entire examination system. Such changes are urgently required in order to make sure that the nation is freed of this phenomenon of “mass scale failure” and widespread but apparent “under-achievement”. Without such a paradigm shift, it would not be possible to universalize secondary education either. We need to be especially concerned about the prevailing practice of not offering science or mathematics at Plus Two stage in many rural schools/ urban slums or to SCs, STs, girls or the disabled (or not providing science labs at class IX-X level in backward areas), thereby forcing these children to go in for the so-called “softer” options. This practice has a significant negative impact on the aspirations of the masses for upward social mobility for their children.

### **Work and Education**

“Based upon the report (April, 2005) of the National Focus Group on Work and Education constituted by NCERT as part of its exercise of revising the existing National Curriculum Framework, the Committee expresses its deep concern with respect to the exclusionary character of education in general and secondary education in particular. This is founded on the artificially instituted dichotomy between work and knowledge (also reflected in the widening gap between school and society). Those who work with their hands and produce significant wealth are denied access to formal education while those who have access to formal education not only denigrate productive manual work but also lack the necessary skills for the same. The socio-cultural, gender and disability-related dimensions of this dichotomy have serious implications. Such education

has come to be embedded in the knowledge system, representing the dominant classes/castes/cultures/languages with gender in each of these categories. The education system has tended to 'certify' this form of knowledge as being the only 'valid' form. In the process, the knowledge inherent among the vast productive forces along with the related values and skills has been excluded from the school curriculum."

"The Committee also takes note of how the pedagogic role of productive work was time and again either marginalised or trivialized in the school curriculum by equating it with either 'work experience' or Socially Useful Productive Work (SUPW). Accordingly, the Committee recommends the following two-fold strategy for a major curricular reform:

- (1) Productive work (and other forms of work as well, including social action and engagement) may be introduced as a pedagogic medium for *knowledge acquisition, developing values and multiple-skill formation*. A *common core curriculum* incorporating work-centred pedagogy initially until Class X and, within the foreseeable future, up to Class XII for all children, should be the objective. A set of work-related generic competencies (Basic, Inter-personal and Systemic) may be pursued and also inform the redesigning of evaluation parameters as well as the assessment system, including the public examinations. Generic competencies will include, among others, critical thinking, transfer of learning, creativity, communication skills, aesthetics, work motivation, work ethic of collaborative functioning and entrepreneurship-cum-social accountability. This will provide a firm foundation for building up a programme of 'Vocationalised Education' (to be distinguished from 'Vocational Education') at the secondary/ senior secondary stages.
- (2) Vocational Education and Training (VET) may be conceived as a *major national programme in the mission mode* and be structurally and administratively placed *outside* the school system. VET in this new perspective will be built upon the *bedrock of 10-12 years of work-centred education in the school system*, unlike the prevailing notion of vocational education 'hanging' in vacuum. VET will include (a) flexible and modular certificate/ diploma courses of varying durations; (b) multiple entry and exit points with in-built credit accumulation facility; (c) vertical and horizontal linkages with the academic, vocational and technical programmes; (d) accessibility all the way from the level of village clusters to the Block and District levels, and also in urban areas; (e) provision for carving out 'work benches' in the neighbourhood out of the existing economic activities, production and technical centres; (f) scope for engaging local farmers, artisans, mechanics, technicians, musicians, artists and other service providers as Resource Persons or invited faculty; and (g) a decentralised accreditation and equivalence programme which will also recognise 'work benches' for the purpose of evaluating and certifying students."

The Committee wishes to emphasise that the above proposal to institutionalise work-centred pedagogy in the school curriculum and building Vocational Education and Training as a programme of national significance for the adolescents and youth can be translated on the ground only if the

necessary systemic changes are made. Let us not hesitate in fulfilling this historical expectation.

### **Common School System**

The Education Commission (1964-66) had recommended a Common School System of Public Education (CSS) as the basis of building up the National System of Education with a view to “bring the different social classes and groups together and thus promote the emergence of an egalitarian and integrated society.” The Commission warned that “instead of doing so, education itself is tending to increase social segregation and to perpetuate and widen class distinctions.” It further noted that “this is bad not only for the children of the poor but also for the children of the rich and the privileged groups” since “by segregating their children, such privileged parents prevent them from sharing the life and experiences of the children of the poor and coming into contact with the realities of life. . . . also render the education of their own children *anaemic and incomplete*. (emphasis ours)” The Commission contended that “if these evils are to be eliminated and the education system is to become a powerful instrument of national development in general, and social and national integration in particular, we must move towards the goal of a common school system of public education.” The Commission also pointed out that such a system exists “in different forms and to varying degrees” in other nations like the USA, France and the Scandinavian countries. The British system, however, was based upon privileges and discrimination but, in recent decades, under democratic pressure, it has moved towards a comprehensive school system which is akin to the Common School System recommended by the Commission. There are other developed countries as well like Canada and Japan that have also developed similar systems.

The 1986 policy, while advocating a National System of Education, resolved that “effective measures will be taken in the direction of the Common School System recommended in the 1968 policy.” Taking into consideration these policy imperatives and the contemporary emphasis on decentralisation along with the necessary flexibility in the school system to be able to respond to the contextual curricular demands, the concept of the Common School System (CSS) has itself been evolving. There are two widespread misconceptions about CSS, often promoted by its detractors, which we must deal with before going ahead. First, **CSS is misperceived as a uniform school system**. On the contrary, the Education Commission itself advocated that each institution should be “intimately involved with the local community . . . . be regarded as an individuality and given academic freedom.” This guiding principle has assumed even greater significance in recent times in view of the expectation from each school or a cluster of schools to be able to respond to the local contexts and reflect the rich diversity across the country. Second, it is wrongly claimed that **CSS will not permit a privately managed school to retain its non-government and unaided (or aided) character**. Again, on the contrary, CSS implies that all schools – irrespective of the type of their management, sources of income or affiliating Boards of examinations – will participate and fulfill their responsibility as part of the National System of Education. Based upon the evolving public discourse on CSS, the following definition of CSS can be constructed:

Common school system essentially means a national system of education which is based on the values and principles of the Constitution of India and which provides



education as a comparable quality to all children irrespective of their caste, creed, language, economic or cultural background, geographic location or gender. This is the perspective articulated by the National Policy on Education- 1986 and further elaborated by the National Curriculum Framework-2005. Such a national system of education will be governed by certain minimum infrastructural, financial and curricular norms. For instance, in the context of the recruitment and working conditions of teachers, provision for basic resources, and structural flexibility and academic autonomy necessary for innovation are concerned with the spirit of National Policy on Education and the National Curriculum Framework 2005.

What we have discussed so far in this report as the guiding principles and basic characteristics of a successful programme of Universalisation of Secondary Education is fully consistent with the Common School System as defined above. We might as well add that the kind of paradigm shift we have recommended here can become sustainable only when it is implemented in all categories of schools, including the privately managed unaided schools, in the whole of the country within a declared timeframe, though a properly phased programme will be necessary. This essential linkage between curricular reforms and systemic reforms must be understood, before it is too late. And such reforms would be feasible only within the framework of a Common School System. The Committee would further like to assert that no developed or developing country has ever achieved UEE or, for that matter, Universal Secondary Education, without a strong state-funded Common School System. India is unlikely to be an exception to this historical and global experience.

### **Three-Language Formula**

The three-language formula evolved out of a major political exercise and negotiations in the critical decade of 1950s and the early years of 1960s in response to the rising tensions with respect to different language regions of the country and the question of related cultural identities. In essence, this outcome reflected the federal spirit of our Constitution and the commitment to sustain and promote India's plural character. It is in this background that the 1986 policy made a commitment to implement the three-language formula "more energetically and purposefully." NCFSE-2005 also reiterates this position and proposes to make a renewed bid to fulfill the commitment. While, as part of this formula, a crucial responsibility befalls upon the elementary stage of education to promote the mother tongue as a medium of education, it is the secondary/senior secondary stage of education that becomes the real testing ground of the more challenging aspects of the formula. The 1986 policy also acknowledged the "uneven" implementation of the formula. The Hindi-speaking states, with their substantial demographic spread, have a special responsibility in responding to this challenge, especially with respect to the concept of the third language as a modern Indian language from a non-Hindi speaking region. Concrete steps in this direction will provide a new thrust for the non-Hindi speaking states to make a fresh commitment to implement the language policy in letter and spirit. It is here that the political commitment made by the nation's leadership soon after independence to strengthen India's unity and integrity, promote inter-cultural dialogue and build an enlightened and articulate citizenship, will be redeemed.

In this context, the Committee would like to urge upon the Central Government to take the initiative of setting up an effective and adequately funded structure and process for promoting inter-language translation of the highest quality material available in different languages of India. An active role of the States/UTs will be critical to the success of this central initiative. This process must also cover the word class material available globally in the languages of different countries and make it available widely in all major Indian languages. India's capacity in the field of IT should prove to be of special asset in this respect, provided urgent political attention is paid to this issue. It would be only appropriate if this inter-language endeavour would include Braille and computer-aided facilities for making quality material available to the disabled children also. Apart from enriching communication and understanding among different language regions of the country, the availability of such material in Indian languages will go a long way in enriching the quality of education not just at the secondary/ senior secondary education level but at the higher education level as well.

### **Instructional Processes**

Curricular structure and course offerings are the necessary condition for quality secondary education. Instructional processes provide the sufficient condition for quality secondary education. Contemporary instructional processes and practices are characterised largely by lectures where students are passive listeners. Such instructional processes contribute at best to lower order cognition, memorization and fragile learning; together, they make a grand nexus for large-scale failing in examination. Students lack problem-solving ability, higher order thinking and cognition, and creativity. Most importantly, they miss out on 'learning to know' or learning to learn. If the new generation secondary education sets its targets for students to be able to think critically, solve problems individually and collectively, be creative, instructional processes must undergo a paradigm shift. Instructional processes must bring students at the centre of stage where they primarily learn to learn through peer interaction, problem-solving, experiential learning, etc. In this new instructional scenario, teachers will be facilitators of learning. Research as a tool for learning is quite common all over the world; introduced even at the pre-primary stage. Indeed, by the time students are in the 9<sup>th</sup> and 10<sup>th</sup> standards they should become researchers to be able to crack problems, contemplate solutions, explore and experiments alternative and creative ways of problem-solving. In other words, instructional processes must be constructivist in its approach. Through constructivism, students will learn to construct their learning according to their own worldview that unfolds over the years of schooling. It is this learning to construct learning that will hold them in stead into the adult life at work and later.

### **Student Assessment and Evaluation**

Secondary education is the turning point for a large majority of students. Not only the certificate one earns after schooling but also the actual learning during schooling is the lifelong resource. Along with building dynamism in curricular framework as well as instructional processes, evaluation must undergo major changes. Conventionally, education system, particularly school education is

guided and controlled by concern for results in examination irrespective of the quality of learning --whether fragile or sustainable. The competition, though artificial, for securing percentage of marks in the final examination creates unusual stress in the students leading often to mental break down and suicides. This must change.

Change in the mechanics of examination will be too simplistic a solution, amounting to treating the symptoms, not the disease itself. Examination-stress is directly related to facing the challenge of examination with 'fragile' learning due to memorizing huge stock of information. In order to manage the stress factor in examination it will be necessary to ensure sustainable learning which the function of instructional processes is.

Yet, it will be necessary to reconstruct and redesign examination system with attributes like flexibility where a student can achieve mastery learning in a flexible time frame and accumulate credits; eliminating power tests (fixed duration), adopt continuous and comprehensive evaluation. The practice of mark sheets indicating marks in certain subjects must be replaced by a portfolio that would accommodate a student's performance in a variety of domains like life skills, academic/nonacademic and vocational subjects, personal qualities, etc. The portfolio should be comprehensive, revealing of the total being of the student.

In this context, it is extremely important to recongnise the role that guidance and counselling play for meeting the needs of adolescent students going through the secondary and higher secondary stages of education. Provision for guidance and counseling is necessary in view of the fact that adolescent boys and girls are facing a fast process of socio-economic and cultural change, and quite often the traditional institutional frameworks provided by the family and community are not adequate for helping the adolescent to cope with the demands made upon him/her. In a society going through a rapid process of institutional change and modernization, facilities for guidance and counseling in every secondary school are necessary. Even as the secondary education system expands towards universalisation, staff for guidance and counseling will be required to ensure that first generation school goers receive adequate coverage in terms of their psychological and personality related needs. Financial allocation necessary for making guidance and counseling a common reality of every secondary school will need to be worked out, and institutional infrastructure necessary for making professional input for such a facility will have to be put in place.

### **Schooling Facility**

There is a lot of disparity in schooling facilities in various regions of the country. There are disparities among the private schools, among private and government schools in the same state, between schools in central sector like KVS, NVS, Tibetan Schools, Sainik Schools, etc. Also, there are no specific norms for secondary schools. No wonder, India hosts secondary schools with magnificent building, library, laboratories, massive computer labs, cricket academy when majority of the secondary schools languish in dire poverty and deprivation. It must be appreciated that just the four-wall classrooms and teachers as per norms will not make a quality school. For providing universal and free access to quality secondary education, it is imperative that specially

designed norms are developed at the national level and then disaggregated for each State/UT keeping in mind the geographical, socio-cultural, linguistic and demographic conditions of not just the State/UT but also, wherever necessary, of the Blocks.

Also, the disparities among various categories of schools must be reduced. This will require planning of educational facilities, and management of educational services to be streamlined. After due consideration, committee proposes a sample norm for secondary schooling as given here —

### **Norms for Secondary Schools**

<b>Land</b>	2 to 4 acres
<b>Constructed area</b>	not more than 50% of the land area
<b>Teachers</b>	One for every 30 students to be steadily moved to 1:20; at least one for every subject area; qualified teachers for sports, games and physical education, music and art,
<b>Facilities</b>	<ul style="list-style-type: none"> <li>➤ One classroom for every 30 students</li> <li>➤ One integrated junior science lab. (for Classes 6<sup>th</sup> to 8<sup>th</sup>)</li> <li>➤ One Science lab each for physics, chemistry, biology, English Language, Geography, Mathematics for 9<sup>th</sup> to 12<sup>th</sup> grades</li> <li>➤ Disabled friendly facilities like ramp, special toilets, classroom furniture, etc.</li> <li>➤ Braille and sign language-related equipment/computer software”</li> <li>➤ SIT to receive EDUSAT programmes</li> <li>➤ OHPs, LCD projector</li> <li>➤ Musical instruments, Gym equipment, sports and games material</li> <li>➤ Junior computer lab with 30 computers for 6<sup>th</sup> to 8<sup>th</sup> graders with internet connectivity*</li> <li>➤ Senior Computer lab. with 30 computers for 9<sup>th</sup> to 12<sup>th</sup> graders with internet connectivity</li> <li>➤ Separate health/restrooms for boys and girls</li> <li>➤ Separate cubicles for teachers with computing facilities – one computer for every 4 teachers with internet connectivity</li> <li>➤ Safe drinking water facilities</li> <li>➤ School canteen and stores</li> <li>➤ Separate toilets for girls and boys, and staff</li> <li>➤ Library with computer facilities and professionally qualified staff</li> <li>➤ Separate offices of Principal and vice-principal with computer facilities</li> </ul>

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\* In Chinese schools, the computer centers are usually huge with 150 to 200 computers, VDUs nearly sunk into the desks; all with high band internet connectivity, probably served through a high power server.

- Electricity
- Telephone
- School office for non-teaching staff with computer facilities
- Hobby room (s) for developing creativity and life skills including music, art and paintings
- Playgrounds – soccer, hockey, volleyball, basketball, badminton, tennis, preferably separate for girls
- Indoor games facilities separately for girls and boys
- Gymnasium separately for girls and boys
- Gardens and Social Forestry

The norms may appear immediately to be utopian. But Committee considers it to be the necessary utopia. The norms listed above already exist in large number of Kendriya Vidyalayas. Many of the reputed private schools have facilities much more than what is laid out in the norm. For large majority of the secondary schools, particularly the government aided institutions in various states, however, the norms would appear to be an Utopia. This mirage of an ‘utopia’ is probably because large number of schools do not have these facilities. The State did not reprioritise the national economy to mobilise adequate resources for creating such facilities in the government, local body or aided schools inspite of the commitment made in the 1986 policy that the public outlay on education shall “uniformly exceed 6 per cent of the national income” and the directive under Article 41 of the Constitution to “make effective provision for securing right to . . . . education“ subject to “limits of economic capacity and development” of the State” (read this in conjunction with the interpretation by the 1993 Supreme Court judgment as given in Chapter 1, first paragraph.”] Yet, it is necessary because without these facilities diversified quality schooling through constructivist paradigm is impossible.

The Committee does not maintain that these facilities can be created here and now. These facilities can be developed over a period of time in a phased manner. It may begin with the minimum provision of additional classrooms and teachers, but must move on to laboratories, libraries, computer lab, sports and games facilities, art and culture facilities, etc. in phases. Yet, if funds are allocated at the expected level (6% of GDP and beyond), such facilities can be created in a shorter span of time.

The capital investment in secondary education is massive, but entirely within the limits of economic capacity and development. However, the school facilities are used for not more than four to five hours a day. Effort should be made to make better use of the schooling facility by running it in more than one shift wherever feasible. For example, it is quite common among the Delhi Government schools to use the same building for two shifts. The second important choice is to create large schools as proposed in PURA (providing urban facilities in rural areas) by the President of India wherever possible particularly in thickly populated rural and urban areas. The per student establishment cost of large schools are comparatively less than such costs for small schools. In this context, it may be noted that ideas like PURA may be pursued only if we can ensure that the concerns with respect to gender issues, caste hierarchy, disability, girls engaged in sibling care, children supporting

families by gathering fuel and fodder or fetching water before or after school hours and availability of effective and free transport have been looked into with the sensitivity such issues deserve. If this can't be ensured, it would be better to stick to the conventional approach to provide a secondary school as per the specified norms within walking or cycling distance of the adolescent child's residence." The important consideration is creating norm based schooling facilities and making optimum use of such facilities.

## **Conclusion**

Committee is of considered view that no great purpose will be served by mere expansion of secondary education in its current form and structure. For achieving the mission of quality schooling for all for optimisation of latent talents and potentialities, secondary education has to be reconceptualised afresh as education of the adolescents in transition, as education for nurturing multiple intelligence and capabilities. Accordingly, curricular concepts and structures, instructional processes and pedagogy, student assessment and evaluation have to be redesigned. All such shifts must be contained in a compatible quality infrastructure. The Committee recommends a culture shift in secondary education.

## CHAPTER 3

# SECONDARY EDUCATION IN INDIA: FUTURE SCENARIO

### Introduction

India is emerging as the fastest-growing economy in the world. Several international reviews predicted that 21st century belongs to India and China as much as 20th century belonged to the USA, and 19th century to Europe. Such international reviews also warn lot of pitfalls and landmines on the way. The success depends largely upon human resource development.

Whereas, the Indian higher education provides leadership-manpower in various sectors of national life and economy, secondary education has emerged as the single largest provider of working people in all spheres of national productivity. Secondary education is the minimum common denominator. At this critical juncture of Indian development, secondary education needs a fresh look and examination for several reasons.

1. To maintain and accelerate the pace of growth of Indian economy, it will be necessary to raise the minimum basic education for the population, preferably to 12 years of schooling as common in most of the Organisation for Economic Corporate and Development OECD and other developing countries.
2. In order to meet the challenge of globalisation, enrolment in higher education has to increase from the current about 6% to at least 20% of the concerned age group (compare this with 33 per cent in the OECD countries, 50% and universalisation of higher education in UK and USA respectively). According to estimates, the transition rate from higher secondary stage to the undergraduate programmes is almost 65 per cent; and that provides six per cent enrolment in higher education. Essentially, hence, higher education has to be supported by a larger constituency. Besides, quality of higher education is squarely dependent upon the quality of graduates from secondary education.
3. There is an increasing social demand for secondary education further accelerated by the massive emphasis on universal elementary education through SSA. Earliest by 2007 and more likely by 2010, the demand for secondary education will sky rocket in the country.

The sky rocketing demand may completely destabilise the school education system leading to significant frustration to the growing aspiration of the people and risking the fast growing Indian economy. In this section, an effort has been made to (i) project likely growth of and demand for secondary education till 2020, and (ii) estimate the implications of such demands in terms of requirement of class rooms, teachers, infrastructure facilities and financial requirements etc.

## **Part I**

### **Projections of Enrolment, Class Rooms, Teachers and Infrastructure Facilities**

This section attempts to project enrolment, number of class rooms, teachers and infrastructure facilities at secondary level during the period 2003-04 to 2019-2020.

#### **Section I: Enrolment Projection at Secondary Level**

Due to the thrust on Universal Elementary Education through SSA, there is every possibility of significant increase in demand for secondary education by 2010. Enrolment projection can be based upon several considerations; accordingly there may be alternative projections. In this report, projections have been made on the basis of success of SSA at the elementary level. The SSA envisages achieving the goal of UEE by 2010 (MHRD, 2000). So, the projection given below is based on 100 per cent success of SSA.

However, based on the growing upper primary enrolment since the implementation of SSA, the possibility of achieving 100 per cent of SSA target may not be feasible but at least 75 per cent achievement of SSA target is not out of place. Hence, this section also makes an attempt to project enrolment in Secondary classes from 2003-04 to 2019-20 based on 75% success of SSA (*see Appendix for Alternative Scenario*).

For projecting the enrolment in secondary classes (Grades IX-X), 2002-03 have been taken as the base year enrolment. The enrolment projection for grade IX is based on the enrolment in grade VIII in the previous year and the transition rate from grade VIII to grade IX. The enrolment projection at the upper primary level is based on the growth rate of upper primary enrolment between 2002-03 and 2009-10 (MHRD, 2001). Based on this growth rate, the current projections in upper primary enrolment from 2006-07 to 2019-20 have been made in order to project enrolment in Grade IX during the same period. However it has also been assumed that the growth rate of enrolment of girls, which is more than the growth rate of enrolment of boys during 2002-03 and 2009-10, will be reduced after 2013 and would be the same as the growth rate of enrolment of boys.



## Scenario I: Enrolment Projections Based on 100 per cent Success of SSA

**Table 1: Projected Enrolment in Grades IX-X from 2003-04 to 2019-20  
(Based on 100% Success of SSA)**

(In Million)

Year	Enrolment ( Grades IX-X)			Additional Enrolment ( Grades IX-X)			Cumulative Additional Enrolment ( Grades IX-X)
	Boys	Girls	Total	Boys	Girls	Total	
2002-03*	12.76	9.03	21.79				
2003-04	14.57	10.78	25.37	1.81	1.75	3.58	3.58
2004-05	15.53	11.89	27.47	0.97	1.11	2.09	5.68
2005-06	16.57	13.11	29.74	1.03	1.22	2.27	7.95
2006-07	17.66	14.45	32.19	1.10	1.35	2.45	10.40
2007-08	18.84	15.94	34.85	1.17	1.48	2.66	13.06
2008-09	20.09	17.57	37.72	1.25	1.64	2.88	15.93
2009-10	21.42	19.38	40.84	1.33	1.80	3.11	19.05
2010-11	22.84	21.36	44.21	1.42	1.99	3.37	22.42
2011-12	24.17	22.44	46.61	1.33	1.07	2.40	24.82
2012-13	25.57	23.56	49.14	1.40	1.13	2.53	27.35
2013-14	27.06	24.75	51.81	1.49	1.18	2.67	30.02
2014-15	28.63	25.99	54.62	1.57	1.24	2.81	32.83
2015-16	30.30	27.30	57.59	1.66	1.31	2.97	35.80
2016-17	32.05	28.67	60.72	1.76	1.37	3.13	38.93
2017-18	33.92	30.11	64.02	1.86	1.44	3.30	42.23
2018-19	35.89	31.62	67.50	1.97	1.51	3.48	45.71
2019-20	37.97	33.21	71.18	2.08	1.59	3.67	49.39

### Basis of Computation:

1. Enrolment figures for 2002-03 are as per Selected Educational Statistics, 2002-03, MHRD, GOI
2. Enrolment projection is based on SSA Target which assumes UEE in the year 2009-10;
3. Population in the age group 14-15 has been computed on the basis of Census data as per the following assumptions:
  - A. Up to 2009-10, Growth in Population of age group 14-15 was computed on the basis of actual rate of growth in population between 1991-2001;
  - B. From 2010-11 onward, the population growth rate of age group 14-15 was assumed to be declining by 0.5 in the actual growth rate;
4. The percentage share of grade VIII enrolment to total upper primary enrolment (classes VI-VIII) in 2001-02 (29.74 per cent, 28.87 per cent and 29.38 per cent for boys, girls and total respectively) will remain constant through out the projection period.
5. The transition rate from grade VIII to IX shall be 90% in 2009-10, which will gradually increase to 100% by the year 2019-20. This is based on the present transition rate (2001-02) between grade VIII and grade IX, which is around 85 per cent.
6. Share of over and under age children to total enrolment shall be 15 per cent, which will gradually decrease to 10 per cent and 5 per cent in the years 2010-11, 2014-15 and 2019-20 respectively.
7. The target year for the USE shall be 2019-20. Thus the projected enrolment (NER) in 2019-20 is equal to the population of age group 14-15 in 2019. Hence the GER in 2019-20 shall be 105%.
8. Enrolment projection between the years 2010-11 and 2019-20 has been estimated on the basis of annual average growth rate of 5.8% for Boys and 5.02% for Girls.
9. Thus the GER between now and until 2019-20 shall be less than 100%, thereby indicating left out children during the period (For details, see the GER Ratio in Table A2.1 in Appendix 2)

10. Projected enrolment in grade IX for all the years (from 2003-04 to 2019-20) have been multiplied by two to obtain total enrolment in secondary classes (Classes IX-X).
  11. The additional enrolment is increase in enrolment over the previous year;
  12. Cumulative enrolment is the cumulative total of additional enrolment, which is used for computing the requirements of teachers;
- \* Actual as per Selected Educational Statistics, 2002-03, MHRD, Govt. of India*

According to this scenario, there will be need to create additional space for about 22 million students in grades IX and X by 2010-11.

## **Section II: Projection of Secondary Class Rooms and Teachers**

This section deals with the projection of number of Secondary Class Rooms, Teachers and infrastructure facilities based upon the projected year wise additional enrolment. The projection of number of classrooms is based upon (a) additional enrolment; and (b) pupil-teacher ratio of 30:1. Since, the pupil teacher ratio at the secondary level in 2001-02 is 34:1, the teacher pupil ratio has been assumed to be 30:1 in view of the effective teaching learning process in the future.

There are three possibilities of accommodating the additional enrolment; (i) by opening new secondary schools, (ii) by upgrading some of the existing elementary schools by opening secondary sections; and (iii) by opening additional secondary sections in the existing high schools. Since opening of new high schools will be costlier, the Committee recommends for the remaining two options. The Committee also recommends that all the existing 90760 high schools and the same number (90760) of elementary schools (out of 2,45,274 elementary schools at present in 2002-03) will be provided with 3 laboratories each since the present ratio of upper primary to high schools is about 3:1.

The year wise requirement of additional classrooms and teachers are given in Table 2.

**Table 2: Number of Class Rooms and Teachers Required from 2003-04 to 2019-20 (Based on 100% Success of SSA)**

Year	Additional Enrolment (Grades IX-X) (In Million)			Additional Class Rooms Required	Additional Teachers Required	Cumulative Additional Teachers Required
	Boys	Girls	Total			
1	2	3	4		5	6
2003-04	1.81	1.75	3.58	119488	179232	179232
2004-05	0.97	1.11	2.09	69811	104716	283948
2005-06	1.03	1.22	2.27	75573	113359	397307
2006-07	1.10	1.35	2.45	81810	122715	520022
2007-08	1.17	1.48	2.66	88562	132844	652866
2008-09	1.25	1.64	2.88	95872	143808	796674
2009-10	1.33	1.80	3.11	103785	155677	952351
2010-11	1.42	1.99	3.37	112351	168526	1120877
2011-12	1.33	1.07	2.40	79995	119992	1240870
2012-13	1.40	1.13	2.53	84360	126540	1367410
2013-14	1.49	1.18	2.67	88965	133447	1500857
2014-15	1.57	1.24	2.81	93822	140733	1641591
2015-16	1.66	1.31	2.97	98946	148419	1790010
2016-17	1.76	1.37	3.13	104351	156527	1946537
2017-18	1.86	1.44	3.30	110053	165080	2111617
2018-19	1.97	1.51	3.48	116069	174103	2285720
2019-20	2.08	1.59	3.67	122414	183621	2469342

**Basis of Computation:**

1. Projection of number of classrooms is based on pupil-teacher ratio of 30:1. Since, the Pupil teacher ratio at the secondary level in 2001-02 is 34:1, the teacher pupil ratio shall be assumed to be 30:1.
2. Additional requirement of teachers is based on the consideration of subject specialisation of teachers at the secondary level. Hence, it has been assumed that the secondary schools shall be provided with 1.5 teachers per additional classroom

## Part II

### Financial Projections

#### Estimating Additional Financial Requirement

The additional financial requirement to meet the demand at secondary level on account of 100 per cent success of SSA, has been estimated based on certain cost norms and assumptions. The additional financial requirement has been estimated considering few important components, viz, teacher cost; other recurring cost; and cost of inspection and supervision, capital cost and cost on quality improvement. The cost norms and assumptions are given here:

*The additional financial requirement from 2003-04 to 2019-20 is given in Table 3.*

**Table 3: Estimation of Financial Requirement for Additional Enrolment from 2003-4 to 2019-20 (Based on 100% Success of SSA)**

(Rs. In Millions)

Years	Exp on Salary	Other Recurring Exp.	Recurring Exp.	Insp. & Sup. Exp	Total Recurring Exp	Capital Expenditure	Total Financial Implications
1	2	3	4 = 2+3	5 = 4*2%	6 = 4+5	7	8=6+7
2003-04	24734	6184	30918	618	31536	17923	49459
2004-05	40889	10222	51111	1022	52133	10472	62605
2005-06	59596	14899	74495	1490	75985	11336	87321
2006-07	81123	20281	101404	2028	103432	12272	115704
2007-08	105764	26441	132205	2644	134849	13284	148134
2008-09	133841	33460	167302	3346	170648	14381	185028
2009-10	165709	41427	207136	4143	211279	15568	226847
2010-11	201758	50439	252197	5044	257241	16853	274094
2011-12	230802	57700	288502	5770	294272	11999	306271
2012-13	262543	65636	328178	6564	334742	12654	347396
2013-14	297170	74292	371462	7429	378891	13345	392236
2014-15	334884	83721	418606	8372	426978	14073	441051
2015-16	375902	93976	469878	9398	479275	14842	494117
2016-17	420452	105113	525565	10511	536076	15653	551729
2017-18	468779	117195	585974	11719	597693	16508	614201
2018-19	521144	130286	651430	13029	664459	17410	681869
2019-20	577826	144456	722282	14446	736728	18362	755090

**Basis of Computation:**

1. The salary cost of additional teachers has been arrived at by considering the annual gross salary of TGT as per the Fifth Pay Commission, including the annual increments during the projection period (which is the pay scale of teachers in KVS).
2. The additional teacher salaries are not to exceed 80 per cent of the total recurring expenditure in order to allocate 20 per cent of the spending on improving the quality of infrastructure and other developmental expenditures in secondary education.
3. These additional enrolments, classrooms and teachers in the secondary education system will also require additional expenditure on inspection and supervision. Since the current expenditure on inspection and supervision accounts for 0.55 per cent in the total expenditure on secondary education in 2001-02, the additional requirement for inspection and supervision has been estimated as apportioning 2 per cent of the total estimated recurring expenditure on secondary education for each year.
4. The estimated additional recurring expenditure in each year shall include the salary expenditure, other recurring expenditure and the expenditure on inspection and supervision
5. The capital cost of construction per class room has been assumed to be Rs.1,50,000 as per the SSA norms. This also includes the expenditure on construction of toilets for boys and girls separately wherever necessary.
6. The cost of providing laboratories will be Rs. 1,50,000 per laboratory.

\*Note: Capital Expenditure = Cost of construction of additional class rooms  
= No. of additional class rooms in a year × Rs. 1,50,000.

**Financial Requirement for Quality Improvement**

Estimation of the additional financial requirement for pre-service teacher training requires estimation of unit cost of training per graduate teacher. However, information on trained unemployed teachers or surplus trained

teachers is not available. In the absence of this information, estimation of the number of additional teachers to be trained would be either under or over estimated. Further, it may be noted that the pre-service training of teachers would fall in the domain of higher education. However, the committee has considered the additional financial requirement for in-service training of graduate teachers at secondary level. Hence, the cost of in-service training of graduate teachers has been included in 'other recurring expenditures'.

For improving quality of infrastructure in secondary education, additional investment and recurring expenses will have to be incurred. These expenditures include (a) the expenditure on laboratories and (b) 'other recurring expenditures'.

The total financial requirements including the expenditure on quality improvement is given in Table 4. The additional financial requirement for universalising secondary education as per cent of GDP works out to be around 0.18 per cent in 2003-04 and to 0.86 per cent 2019-20.

The additional financial requirements estimated here are only indicative of the additional financial requirements, which would vary considering the special requirements of regional imbalances, the socially deprived sections and the rural-urban disparities, etc.

**Table 4: Projection of Total Financial Requirements  
(Based on 100% Success of SSA)**

(Rs. In Millions)

Years	Total Financial Implications for Additional Enrolment	Expenditure on Quality Improvement		Cumulative Financial Reqt. For USE As a % of GDP
		Cost of Laboratories	Other of Recurring Expenditure	
1	2	3	4	5
2002-03*				
2003-04	49459			0.18
2004-05	62605			0.21
2005-06	87321			0.27
2006-07	115704	40842 + 40842*	607597*	0.34
2007-08	148134		607597*	0.40
2008-09	185028			0.47
2009-10	226847			0.53
2010-11	274094			0.60
2011-12	306271			0.62
2012-13	347396			0.66
2013-14	392236			0.69
2014-15	441051			0.72
2015-16	494117			0.75
2016-17	551729			0.78
2017-18	614201			0.81
2018-19	681869			0.83
2019-20	755090			0.86

**Basis of Computation:**

1. The cost of laboratories has been estimated by assuming that all the existing 90760 high schools and the same number (90760) of upper

primary schools (out of 2,45,274 upper primary schools at present in 2002-03) will be provided with at least 3 laboratories each (for Physics, Chemistry, Biology and Language; the language laboratory may be conducted in any vacant class room/laboratory). The total financial requirement for construction of laboratories will be Rs. 40842 million in the upgraded upper primary schools and also Rs. 40842 million in the existing high schools, which shall have to be provided in 2006-07 as an one-time investment

2. The 'other recurring expenditures' for quality improvement has been estimated based on the difference between the projected per student recurring expenditure and the inflated per student expenditure on secondary education. The per additional student expenditure has been estimated by dividing the total additional recurring expenditure by the projected additional enrolment. The inflated per student expenditure has been estimated by taking the per student expenditure on secondary education in 2000-01 and inflating it by the current inflation rate of 5 per cent. The difference between per student additional expenditure and inflated per student expenditure has been multiplied by the projected total enrolment to estimate the additional financial requirement for quality improvement. This expenditure on quality improvement in 2006-07 is estimated as Rs. 1215193 millions, which shall be provided in two years during 2006-07 and 2007-08.

\* *This does not include the one-time expenditure on construction of laboratories and the expenditure on quality improvement.*

Kothari Commission recommended for 6 per cent of GDP as an investment on education to begin with and should have reached by this level by the end of 1986-87 based on the projected growth of population and projected growth of the economy. But Government of India has not yet reached this share even after four decades. This has resulted in under investment in the access, enrolment, class rooms, teachers, and other infrastructure facilities. Hence, this cumulative under investment would require a huge amount of investment on education at all levels. Given the current allocation of expenditure on education as per cent of GDP as 3.95 per cent, secondary education has been allocated with a share of 0.94 per cent in 2000-01. However, if the investment on education as 6 % of GDP as recommended by Kothari Commission is allocated, the additional requirement for universalising elementary and secondary education could be easily met out with the increased allocations. Further, if the investment on education could be increased to 8 per cent of the GDP with the expansion in the education system as well as to meet the requirements of the human capital in the globalised world, the allocation towards all levels of education could be enhanced (see Table 5).

**Table 5: Current and Probable Share of Expenditure on Education as per cent of GDP by Levels of Education**

Year	Expenditure on Education as % of GDP	Expr. on Elementary Education as % of GDP	Expr. on Secondary Education as % of GDP	Expr on Higher Education as % of GDP
2000-01*	3.95	1.42	0.94	0.44
	If 6 %	3	2	1
	If 8 %	4	2.5	1.5

\* *Based on Analysis of Budgeted Expenditure on Education, 2000-01 to 2002-03, MHRD, Government of India, New Delhi, 2003.*

## Alternative Scenario: Based on 75 % success of SSA

Table A1: Projected Enrolment in Grades IX-X from 2003-04 to 2019-20  
(Based on 75% Success of SSA upto 2009-10)

(In Million)

Year	Enrolment ( Grades IX-X)			Additional Enrolment ( Grades IX-X)			Cumulative Additional Enrolment ( Grades IX-X)
	Boys	Girls	Total	Boys	Girls	Total	
2002-03*	12.76	9.03	21.79				
2003-04	13.97	10.30	24.29	1.21	1.27	2.50	2.50
2004-05	14.29	10.85	25.17	0.32	0.55	0.88	3.38
2005-06	14.62	11.43	26.08	0.33	0.58	0.91	4.29
2006-07	14.96	12.04	27.02	0.34	0.61	0.94	5.23
2007-08	15.30	12.69	28.00	0.34	0.64	0.98	6.21
2008-09	15.65	13.37	29.01	0.35	0.68	1.01	7.22
2009-10	16.01	14.08	30.06	0.36	0.71	1.05	8.27
2010-11	16.38	14.83	31.15	0.37	0.75	1.09	9.36
2011-12	17.98	16.22	34.20	1.60	1.39	3.05	12.41
2012-13	19.74	17.74	37.48	1.76	1.52	3.28	15.69
2013-14	21.67	19.40	41.08	1.93	1.66	3.60	19.29
2014-15	23.80	21.22	45.02	2.12	1.82	3.94	23.23
2015-16	26.13	23.21	49.34	2.33	1.99	4.32	27.55
2016-17	28.69	25.38	54.07	2.56	2.17	4.73	32.28
2017-18	31.50	27.76	59.26	2.81	2.38	5.19	37.47
2018-19	34.58	30.36	64.95	3.09	2.60	5.69	43.16
2019-20	37.97	33.21	71.18	3.39	2.84	6.23	49.39

**Basis of Computation:**

- Enrolment figures for 2002-03 are as per Selected Educational Statistics, 2002-03, MHRD, GOI
- Enrolment projection is based on 75 % success of SSA Target which assumes UEE in the year 2009-10;
- Population in the age group 14-15 has been computed on the basis of Census data as per the following assumptions:
  - Up to 2009-10, Growth in Population of age group 14-15 was computed on the basis of actual rate of growth in population between 1991-2001;
  - From 2010-11 onward, the population growth rate of age group 14-15 was assumed to be declining by 0.5 in the actual growth rate;
- The percentage share of grade VIII enrolment to total upper primary enrolment (classes VI-VIII) in 2001-02 (29.74 per cent, 28.87 per cent and 29.38 per cent for boys, girls and total respectively) will remain constant through out the projection period.
- The transition rate from grade VIII to IX shall be 90% in 2009-10, which will gradually increase to 100% by the year 2019-20. This is based on the present transition rate (2001-02) between grade VIII and grade IX, which is around 85 per cent.
- Share of over and under age children to total enrolment shall be 15 per cent, which will gradually decrease to 10 per cent and 5 per cent in the years 2010-11, 2014-15 and 2019-20 respectively.
- The target year for the USE shall be 2019-20. Thus the projected enrolment (NER) in 2019-20 is equal to the population of age group 14-15 in 2019. Hence the GER in 2019-20 shall be 105%.
- Enrolment projection between the years 2010-11 and 2019-20 has been estimated on the basis of annual average growth rate of 5.8% for Boys and 5.02% for Girls.
- Thus the GER between now and until 2019-20 shall be less than 100%, thereby indicating left out children during the period (For details, see the GER Ratio in Table A2.2. in Appendix 2)

10. Projected enrolment in grade IX for all the years (from 2003-04 to 2019-20) have been multiplied by two to obtain total enrolment in secondary classes (Classes IX-X).
11. The additional enrolment is increase in enrolment over the previous year
12. Cumulative enrolment is the cumulative total of additional enrolment, which is used for computing the requirements of teachers.

\* Actual as per Selected Educational Statistics, 2002-03, MHRD, Govt of India.

**Table A2: Number of Class Rooms and Teachers Required from 2003-04 to 2019-20 (Based on 75% Success of SSA)**

Year	Additional Enrolment (Grades IX-X) ( In Million)			Additional Class Rooms Required	Additional Teachers Required	Cumulative Additional Teachers Required
	Boys	Girls	Total			
1	2	3	4		5	6
2003-04	1.21	1.27	2.50	83283	124925	124925
2004-05	0.32	0.55	0.88	29307	43961	168886
2005-06	0.33	0.58	0.91	30368	45552	214438
2006-07	0.34	0.61	0.94	31468	47201	261640
2007-08	0.34	0.64	0.98	32607	48910	310550
2008-09	0.35	0.68	1.01	33787	50680	361230
2009-10	0.36	0.71	1.05	35010	52515	413745
2010-11	0.37	0.75	1.09	36277	54416	468161
2011-12	1.60	1.39	3.05	101608	152412	620573
2012-13	1.76	1.52	3.28	109360	164039	784612
2013-14	1.93	1.66	3.60	119855	179783	964395
2014-15	2.12	1.82	3.94	131359	197038	1161433
2015-16	2.33	1.99	4.32	143967	215950	1377382
2016-17	2.56	2.17	4.73	157785	236678	1614060
2017-18	2.81	2.38	5.19	172931	259396	1873457
2018-19	3.09	2.60	5.69	189531	284297	2157753
2019-20	3.39	2.84	6.23	207726	311589	2469342

**Basis of Computation:**

1. Projection of number of classrooms is based on pupil-teacher ratio of 30:1. Since, the Pupil teacher ratio at the secondary level in 2001-02 is 34:1, the teacher pupil ratio shall be assumed to be 30:1.
2. Additional requirement of teachers is based on the consideration of subject specialisation of teachers at the secondary level. Hence, it has been assumed that the secondary schools shall be provided with 1.5 teachers per additional classroom.



**Table A3: Estimation of Financial Requirement for Additional Enrolment from 2003-4 to 2019-20 (Based on 75% Success of SSA)**

(Rs. In Millions)

Years	Exp on Salary	Other Recurring Exp	Recurring Exp.	Insp. & Sup. Exp	Total Recurring Expr	Capital Expenditure	Total Financial Implications
1	2	3	4 = 2+3	5 = 4*2%	6 = 4+5	7	8=6+7
2003-04	17240	4310	21550	431	21981	12493	34473
2004-05	24320	6080	30400	608	31008	4396	35404
2005-06	32166	8041	40207	804	41011	4555	45567
2006-07	40816	10204	51020	1020	52040	4720	56760
2007-08	50309	12577	62886	1258	64144	4891	69035
2008-09	60687	15172	75858	1517	77375	5068	82444
2009-10	71992	17998	89990	1800	91789	5251	97041
2010-11	84269	21067	105336	2107	107443	5442	112885
2011-12	115427	28857	144283	2886	147169	15241	162410
2012-13	150646	37661	188307	3766	192073	16404	208477
2013-14	190950	47738	238688	4774	243461	17978	261440
2014-15	236932	59233	296165	5923	302089	19704	321792
2015-16	289250	72313	361563	7231	368794	21595	390389
2016-17	348637	87159	435796	8716	444512	23668	468180
2017-18	415907	103977	519884	10398	530282	25940	556222
2018-19	491968	122992	614960	12299	627259	28430	655689
2019-20	577826	144456	722282	14446	736728	31159	767887

**Basis of Computation:**

1. The salary cost of additional teachers has been arrived at by considering the annual gross salary of TGT as per the Fifth Pay Commission, including the annual increments during the projection period (which is the pay scale of teachers in KVS).
2. The additional teacher salaries are not to exceed 80 per cent of the total recurring expenditure in order to allocate 20 per cent of the spending on improving the quality of infrastructure and other developmental expenditures in secondary education.
3. These additional enrolments, classrooms and teachers in the secondary education system will also require additional expenditure on inspection and supervision. Since the current expenditure on inspection and supervision accounts for 0.55 per cent in the total expenditure on secondary education in 2001-02, the additional requirement for inspection and supervision has been estimated as apportioning 2 per cent of the total estimated recurring expenditure on secondary education for each year.
4. The estimated additional recurring expenditure in each year shall include the salary expenditure, other recurring expenditure and the expenditure on inspection and supervision
5. The capital cost of construction per class room has been assumed to be Rs.1,50,000 as per the SSA norms. This also includes the expenditure on construction of toilets for boys and girls separately wherever necessary.
6. The cost of providing laboratories will be Rs. 1,50,000 per laboratory.

\*Note: Capital Expenditure = Cost of construction of additional class rooms  
= No. of additional class rooms in a year × Rs. 1,50,000.

**Table A4: Projection of Total Financial Requirements  
(Based on 75% Success of SSA)**

*(Rs. In Millions)*

Years	Total Financial Implications for Additional Enrolment	Expenditure on Quality Improvement		Total Financial Implications
		Cost of Laboratories	Other Recurring Expenditure	
1	2	3	4	5
2002-03*				
2003-04	34473			0.12
2004-05	35404			0.12
2005-06	45567			0.14
2006-07	56760	40842 + 40842	685469	0.17
2007-08	69035		685469	0.19
2008-09	82444			0.21
2009-10	97041			0.23
2010-11	112885			0.25
2011-12	162410			0.33
2012-13	208477			0.39
2013-14	261440			0.46
2014-15	321792			0.53
2015-16	390389			0.59
2016-17	468180			0.66
2017-18	556222			0.73
2018-19	655689			0.80
2019-20	767887			0.87

**Basis of Computation:**

1. The cost of laboratories has been estimated by assuming that all the existing 90760 high schools and the same number (90760) of upper primary schools (out of 2,45,274 upper primary schools at present in 2002-03) will be provided with at least 3 laboratories each (for Physics, Chemistry, Biology and Language; the language laboratory may be conducted in any vacant class room/laboratory). The total financial requirement for construction of laboratories will be Rs. 40842 million in the upgraded upper primary schools and also Rs. 40842 million in the existing high schools, which shall have to be provided in 2006-07 as an one-time investment
2. The 'other recurring expenditures' for quality improvement has been estimated based on the difference between the projected per student recurring expenditure and the inflated per student expenditure on secondary education. The per additional student expenditure has been estimated by dividing the total additional recurring expenditure by the projected additional enrolment. The inflated per student expenditure has been estimated by taking the per student expenditure on secondary education in 2000-01 and inflating it by the current inflation rate of 5 per cent. The difference between per student additional expenditure and inflated per student expenditure has been multiplied by the projected total enrolment to estimate the additional financial requirement for quality improvement. This expenditure on quality improvement in 2006-07 is estimated as Rs. 1370937 millions, which shall be provided in two years during 2006-07 and 2007-08.

*\*This does not include the one-time expenditure on construction of laboratories and the expenditure on quality improvement.*

**Table A2.1****GER in Secondary Education ( Based on 100 % Success of SSA)**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
2002-03*	51.60	41.75	47.00
2003-04	57.45	48.62	53.38
2004-05	59.76	52.29	56.37
2005-06	62.15	56.24	59.52
2006-07	64.65	60.48	62.84
2007-08	67.24	65.04	66.35
2008-09	69.94	69.95	70.06
2009-10	72.75	75.23	73.98
2010-11	75.66	80.91	78.11
2011-12	78.09	82.88	80.32
2012-13	80.59	84.90	82.60
2013-14	83.17	86.97	84.94
2014-15	85.83	89.08	87.35
2015-16	88.58	91.26	89.83
2016-17	91.41	93.48	92.38
2017-18	94.34	95.76	95.00
2018-19	97.36	98.09	97.70
2019-20	100.48	100.48	100.48

**Table A2.2****GER in Secondary Education (Based on 75 % success of SSA Targets)**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
2002-03*	51.60	41.75	47.00
2003-04	55.11	46.46	51.10
2004-05	54.99	47.73	51.65
2005-06	54.86	49.05	52.20
2006-07	54.74	50.39	52.75
2007-08	54.61	51.78	53.32
2008-09	54.49	53.20	53.89
2009-10	54.36	54.67	54.46
2010-11	54.24	56.17	55.04
2011-12	58.09	59.92	58.94
2012-13	62.20	63.92	63.00
2013-14	66.62	68.19	67.35
2014-15	71.34	72.74	71.99
2015-16	76.40	77.59	76.96
2016-17	81.81	82.77	82.26
2017-18	87.61	88.30	87.93
2018-19	93.83	94.19	94.00
2019-20	100.48	100.48	100.48

## CHAPTER 4

### **PLANNING AND MANAGEMENT ISSUES**

Universalisation of Secondary Education will need to fulfill three major criteria, namely, universal enrolment in the 9<sup>th</sup> and 10<sup>th</sup> grades, universal retention achieving zero dropout rate, and universal performance at a predetermined level, at least 60 per cent of the students of the 10<sup>th</sup> grade will achieve 60 per cent mastery over subjects and other learning tasks.

Initial questions that need to be resolved are: achieving universal access, equity and social justice. Whereas universal access may be possible to achieve through expansion of schooling facilities in the formal and unconventional modes, special efforts will be required for achieving equity, social justice and performance of all the diverse groups of learners.

Universalisation of secondary education is a long journey. It cannot be achieved overnight, though success in SSA will substantially facilitate the process. It will take at least 15 years of committed effort in a mission mode approach; universal secondary education should be targeted to be achieved by 2020. Success in accomplishment of this goal will be determined by the quality of planning and execution backed by political will and support. In this section, an effort has been made to flag the main issues in planning for universal secondary education.

#### **Secondary Education Management Information System (SEMIS)**

Planning of educational system must be based on reliable data and information. Unlike elementary education where comprehensive and reliable database has been developed, secondary education does not have such authentic data with annual updates. With years of work, NIEPA has been able to develop a mechanism to update data on a wide range of the variables in elementary education every year; it publishes District Report Cards indicating the state of elementary education in each of the 539 districts (2004) to be increased to about 575 districts by 2005; and the State Report Cards indicating the state of elementary education in different states. It has covered 25 major states; the effort is on to cover the remaining 10 smaller states and union territories.

Data on secondary education is produced by All India Education Surveys by the NCERT. The some data from Seventh All India Education Survey are now available on the website. The frequency of data updation process has to be increased.

In order to develop a sound and dependable planning framework for secondary education, it will be necessary to develop SEMIS with disaggregated data at the state, district and block levels. NIEPA maintains a dynamic EMIS, called DISE, for elementary education covering about one million primary and elementary schools and brings out annual data update in the form of District Report Cards and State Report Cards both in print as well as in CR Rom formats. This DISE database contains a very large variety of school level information. A few states have already asked NIEPA to upstage the EMIS to cover secondary education. NIEPA should be called upon to develop SEMIS in the pattern of DISE on a project mode. NIEPA should be able to come out with

annual state, district and block report cards on secondary education, initially every two years and then annually.

### *Out of school adolescence and early youth*

The SEMIS right from the beginning must include data on out of school adolescence and early youth, particularly those who cannot participate in the formal conventional schools in stipulated hours in the day. A large number of them are engaged in productive labour in both rural and urban areas as can be seen from the wide gap between the number of adolescents in the relevant age cohort and number of enrolled students in secondary education. This is important since the universalisation of secondary education has been defined to ensure participation of all adolescence and youth in the age group 15 to 18, beginning with adolescents in the age group 15 and 16.

### *Focus Groups*

Another important consideration is the education of the 'Focus Groups' – girls, students from SC, ST and OBC Communities, and the (physically and mentally) challenged adolescents. As all these groups need special assistance and support, the SEMIS should specially provide for data capturing on these groups and also define mechanisms to monitor education of the focus groups. Also, this will facilitate building access, equality, relevance and structural parameters of secondary education to ensure universal secondary education among the focus groups.

### **Demand Projection**

Decentralised planning and management of elementary education under DPEP and SSA has made significant impact on moving towards the targets of UEE. There are lessons to learn. Planning for universal secondary education should, right from the beginning, be founded on decentralized planning. The first and foremost requirement for decentralised planning, besides the data and information on the ground realities would be projection of demand for secondary education. In the previous section such projections have been made at the national level. This must be treated as exemplar and indicative projections. Given the wide regional disparities in educational development, such national macro level projections would be of limited value, a positive tool for policy making. For meaningful planning of secondary education, projections must be done for each state with desegregation into districts and blocks, gender, caste, religious and linguistic background. For decentralised planning, such projections have to be made at meso and micro level namely, for each block and district.

While generating decentralized projection of demand for secondary education at block, district and state levels, it is important to take into cognizance the educational needs of different linguistic groups residing in the state. In certain districts, there is concentration of students from linguistic group other than the natural language of the state, e.g. large Hindi speaking population in Howrah town in West Bengal. The Census 2001 provides a detailed account of linguistic minorities in different Indian provinces as brought out by the Commission for Linguistic Minorities. The projection of demands for

secondary education should also take into consideration special educational needs of different linguistic and cultural groups. Almost every board of secondary education conducts examination in several languages. Multi-cultural curriculum mentioned in chapter 2 will further facilitate the process of education.

### **School Mapping and Course Mapping**

As mentioned earlier, in order to achieve universal access, the secondary education facilities have to be expanded. The expansion has to be accomplished through three different strategies depending upon the situational requirement. These are:

- a. setting up new schools where no secondary school exists in the defined habitation,
- b. upgrading elementary schools into high schools by adding extra classrooms and other facilities, and
- c. providing additional classrooms and other related facilities in the existing secondary schools to accommodate more students.

The financial implications for the three strategies are significantly different— most expensive is setting up new school and least is providing marginal support to the existing secondary schools for enhancing intake capacities. A few states have taken a policy decision to upgrade all elementary schools to high schools in phased manner. The policy expanded to the national level, an additional about 2.50 lakh high schools can be added to the existing number of secondary schools by upgrading the elementary schools.

The choice among the three alternatives given above has to be situational and based on school mapping in each block. There have been some important efforts in school mapping at elementary education at NIEPA. The expertise can be extended to secondary education. What is really necessary is to plot at the district and block levels the existing secondary and senior secondary schools. This should provide a sound basis for decisions about establishing new schools, upgradation of elementary schools, and lateral expansion of classrooms and facilities in the existing secondary schools.

In the process, it will be necessary to revise the norms for establishing secondary schools. For example, existing norms are to provide a primary school within one kilometer distance, an elementary school within three kilometers and a secondary school within five kilometers. These norms were developed keeping in mind the time and labour to walk to the school at a time when the roads and transport network was grossly underdeveloped. With considerable developments in the rural roads and transportation, the time and energy to travel has reduced substantially. For example, in the mid 1950s and 1960s, students took 75 to 90 minutes to cover five kilometers to school on foot through rugged village pathways sometimes through the fields and water logged patches. Same distance is covered now in bicycle through partly brick-laid, partly kuccha road in less than 30 minutes. This scenario is fairly common in very large part of the country. Exceptions, however, will be necessary in difficult terrains and hilly tracts. In the urban areas, students travel 20 to 30 kilometers for quality schooling. PURA, a project to which a detailed reference has been made in the budget speech by the Finance Minister proposes large

high quality schools with transport facilities in a cluster of villages rather than poor quality school within the vicinity. This needs serious consideration.

However, importance of school mapping is in generating a responsiveness to differential needs of secondary education in different localities. In urban and semi urban areas and in rural areas with reasonably well developed road connectivity and transportation, norms of distance should be relaxed to create viable large high quality schools. In the relatively remote, difficult hills and terrains, and underdeveloped areas, the norms of distance have to be reduced. Equally important is the concern for the education of girls, keeping in view the superstitions, social taboos, etc, that forbids girls to travel long distances and/or study in co-educational schools. The school mapping should also facilitate identifying needs for setting up residential schools in such areas. The main contention is that school mapping should not be done mechanically with distance as the sole criteria. Every district must set up a set of criteria for school mapping that will facilitate universal access to secondary education.

Another important mapping exercise has to be done is with respect to courses at the senior secondary level. The distribution of science stream as well as vocational courses is not as wide as courses in commerce and humanities streams. In order that the facilities for science and vocational education are equitably distributed it will be necessary to carry out course mapping in every district and block.

The same norms for school mapping cannot be valid through out the country. Keeping the goal of universal secondary education, state and locale specific norms should be developed in consultation with the states.

The mapping facility, now thrown open by the satellite launched by ISRO should be fully exploited.

### **Assessment of Physical Infrastructure**

As a follow-up to the mapping of schools and courses, and the projection of demands, the next stage of planning is assessment of physical infrastructure and educational facilities, namely the additional classrooms and new schools in such habitations where secondary schools are not available at a reasonable distance. Further, physical infrastructure cannot be restricted to additional classrooms; it must include associated infrastructure for all round development of the students like play grounds, gyms, etc. Such exercises have to be done necessarily at block level or even at the sub-block level. This should provide the actual requirement of required infrastructure in each district and the state for further planning of financial requirement, teacher requirement, etc. The assessment of physical infrastructure can be greatly facilitated by SEMIS as experienced in DISE for elementary schools.

Mere lateral expansion of secondary schooling facilities can serve the purpose of only universal (physical) access. The provision of extra classrooms and teachers will not ensure quality, nor would it contribute to the concept of schooling described earlier. In order to provide quality education and life skills to the students, all schools have to be upgraded qualitatively. This is true for the existing secondary and senior secondary schools as well as the new ones to be established. Such facilities at the minimum will include provision for laboratories, library and learning resources, information technology resources,

audiovisual facilities including SITs support educational delivery through EDUSAT, facilities for sports and games, and cultural activities.

For providing quality secondary education, it will be necessary to develop norms for schools. While there should be a core set of national norms, these norms have to be further elaborated and developed with locale specificity in each state, district and blocks in consultation with the states.

### **Open Learning System**

Irrespective of expansion of educational facilities in secondary schooling, all the adolescence and youth in the concerned age group will not be able to take advantage of formal schooling in stipulated hours of the day that often coincide with the productive labour required in the rural areas for agriculture and in urban areas for a variety of income generating activities particular for the lower middle-class and poor families. It will be necessary to design, create and establish alternative educational provisions for such prospective learners. Besides the National Institute of Open Schooling, several states have established open schools providing comparable quality of education with that in the formal schools. The open school network has to be expanded to ensure that every State provides open schooling facility through regional languages. The existing open schools depend largely upon the print material and personal contact programs through the formal schools. A large majority of the open school students are unable to take advantage of personal contact programs and counseling services; they primarily depend upon the print material which often varies in quality. It will be necessary to enhance quality of open schooling through a variety of measures, particularly the counseling and tutorial services.

A great opportunity has been opened by the launching of the educational satellite in September 2004. The video-conferencing facility can provide virtual classroom facility for school education through regional languages through state channels. In order to ensure that open schooling derives full advantage of the videoconferencing facilities as a compliment to counseling and tutorial services through EDUSAT, all the secondary and senior secondary schools that serve as study centre must be equipped with satellite interactive technology (SIT) facilities. Also, DTH delivery of education through cable network should be explored.

This opens a new area of planning along with decentralised planning for formal secondary schools. It will be necessary to plan for open schooling provision in every state.

The open learning system at higher education comprising open universities and distance education departments in the dual mode universities cater to the educational needs of more than 20% students in higher education. The open school network when fully developed should be able to cater to at least 15% students in secondary education.

Second shift (evening shift) school for working youth should also be considered wherever feasible.

### **Teacher Requirement**

Teachers are the most significant element in secondary education. Based on the projection of demand for secondary education, an important and necessary exercise will be the projection of requirement of additional teachers for



universal secondary education. With the upgradation of courses and contents, secondary education particularly in science, mathematics and certain departments of social sciences, require specialist teaching faculty. As a result, the teacher-student ratio may not be the right criteria for assessing teacher requirement. Equally true is the non-applicability of classroom-teacher ratio in secondary education. The teacher requirement is to be based on requirement of subject specialists in different schools; the teacher-student ratio and teacher-classroom ratio can form the complementary criteria for determining the requirement of teachers. In the previous section, the requirement of additional teachers at the national level has been projected. For decentralised planning at the district and block levels, the teacher requirement should be assessed at the block level accumulated at the district level. This will facilitate developing teachers as a district level cadre.

### **Block and District Plan**

The actions mentioned above should provide adequate inputs to develop district and block level plan of expansion of secondary education with relevant facilities for upgradation of quality of secondary education. The first and foremost requirement is to develop district and block specific plan of development of secondary education spread over the next 15 years -- 2005 to 2020. Such decentralised plan at the district and block levels should indicate development in different phases e.g. development plans for the remaining years of the 10th Five-year plan, and then projected further into relevant 11th through 13th Five year plans. However, such plans need to be reviewed from time to time in the midterm evaluation format as practised now. It will be necessary to carry out annual review as the expansion of secondary education facilities for universal access enters the last phase nearing 2020. For, Universalisation of Secondary Education will be increasingly difficult as one move from the first to the last mile situations.

### **Capacity Building of Educational Personnel**

Universal secondary education can be achieved only with universal retention and quality. The transition rates from 8<sup>th</sup> to 9<sup>th</sup> and 9<sup>th</sup> to 10<sup>th</sup> grades are more than 90 per cent. The estimated dropout rate between 9<sup>th</sup> and 10<sup>th</sup> is less than 10%. However, there is a massive failure at the board examination, often more than 50 per cent, that too after stringent scrutiny at the pre-board examination. As a result, the accumulated success rate is less than 40 per cent of those who enter the 9<sup>th</sup> standard. For universalisation of secondary education this must change.

The key to change is locked in the quality of schooling. Since teachers are the most important component of quality schooling, it will be necessary to continuously upgrade the quality of teachers through on-the-job training, in-service education programmes and a variety of other mechanisms, besides preservice qualifying programme of teacher training (B.Ed.). There is great regional disparity in the provision for secondary teacher training institutions in the country. There are regions, north-eastern region for example, do not have enough teacher training facilities compared to say Maharashtra, Karnataka and other such states where there are large number of private teacher training institutions. Careful state level planning will be necessary for ensuring steady

supply of trained teachers and their continuous upgradation. Such state specific planning must also be supported with dependable projections of teacher requirements with various subject specialisations.

The International Commission on Education for 21<sup>st</sup> Century (UNESCO) indicated that work-training-work-training cycle is more effective than long pre-service education of teachers. While the emphasis is on inservice education of the teachers for quality improvement, it is important to recognise that the conventional in-service education provided by the teacher education institutions do not actually contribute to the development of relevant skills and attitudes for quality improvement in instruction and student learning.

Besides the conventional in-service education programmes, it will be necessary to develop a mechanism whereby secondary school teachers will be able to share their experiences and learn from each other, indeed develop a learning community and culture. There are lots to learn from the experiences in BRC and CRCs in SSA in this regard.

The shift in the process and strategy of teacher upgradation has to be professionalised by developing a blueprint for development of each teacher in each school collated at the block level so that teachers of similar development needs may be provided with specific focused training and development inputs.

Many of the State governments have adopted the policy of recruiting para teachers as a cost saving alternative to regular professionally qualified fully paid teachers. In some of the states, teaching has been declared as a dying cadre. This is a dangerous trend with short-term relief at the cost of long-term debilitating effect on the education system. No society can simultaneously de-professionalise teachers yet educate its children and ensure the future. The considered opinion of the committee is to appoint professionally qualified teachers with full salary and benefits. Accordingly, the cost projections on teachers have been calculated; the norm practised in the Kendriya Vidyalay Sangathan has been the basis. Even at the risk of repetition, the committee refers to flag that is with the allocation of 6% GDP to the education sector, it would be possible to recruit fully qualified teachers with full salary and benefits. Any compromise on this issue will be at the risk of the future of the nation.

Heads of schools hold the key to quality management and self-renewal of schools. This is borne out by empirical research all over the world during the last five decades. It is important to recognise that managing and leading schools is a specialist job. It is not an automatic extension of activities of a teacher, although teaching skills and experience helps. Heads of schools must be provided professional training in management of schools of six months duration, preferably with three months of practice/practical training in the pattern of diploma in educational planning and management offered by NIEPA. However, like teachers, diploma education in school management of the headmasters with short term training every three to five years.

Over the years, inspection and supervision has been dysfunctional. With the expansion of educational facilities – schools and teachers – there was no corresponding increase in the supervising personnel. A few inspectorate staff is involved in a large variety of administrative work. Academic supervision has become a thing of the past. This must change. Quality universal secondary education warrants a well developed system of inspection and supervision. The financial projections in the previous chapter has provided for the cost. The

inspectorate staff must be increased. Importantly, the supervisory personnel must be provided with professional training in scientific practices in inspection and supervision.

## **Financial Policy**

Financial projections made in the previous section, have to be reviewed and reconstructed periodically. Further, in tune with decentralised micro-level planning, the financial projections have to be done for each state separately. A few statements outlining the financial policy and management are important.

1. Financial projections for universalisation of secondary education made in the previous chapter including the cost of quality will require 2.33 percent of GDP. The requirement for universal elementary education is estimated at about 3.0% of GDP. Together, 5.13% of GDP per year would be adequate for universal elementary and secondary education. The review of the performance of UPA government has flagged its dissatisfaction over non-allocation of promised 6% of GDP to education. This raises the hope that allocation of 6% GDP may not be very far away.
2. The financial allocation should be phased out. To begin with, the State will ensure availability of classrooms on teachers in every school. This should be followed by library, laboratory, sports and games facility, et cetera. Target should be to move towards the norm of secondary schooling over the next 10 years.
3. About 25% secondary schools are private non-aided that do not receive any government grant. However, these private non-aided schools provide educational coverage to only 8.72% children (according to VIth All India survey data; VII the survey data are awaited). Compared to that percentage of students in private aided schools are above 46%. These privately run schools comprise nonprofit society/trust managed institutions, schools established by entrepreneurial motivations, and large chain of schools being set up by international initiatives. The right to establish schools is guaranteed by the Indian Constitution. However, as can be seen, government provides for secondary education of more than 90% students. Less than 10% students in private schools are from the creamy layer of the society. Although the number of privately run schools and percentage of students being covered by such schools are increasing, they would not be able to cater to the educational needs of today's out-of-school children who have to be schooled back for universalisation of secondary education. And, government must provide for their education. Although the 'creamy layer' can be asked to bear their educational costs reducing the financial burden on the government allowing it to divert the educational resources for those who cannot afford, the current pattern of growth of private participation does not indicate any significant relief to needed financial commitment of the government. The three cardinal principles for universal secondary education are:
  - o the government must ensure that no child is deprived of educational facility because of financial incapability,
  - a. no student is financially exploited; and
  - b. schooling is not used for commercial purposes as pronounced by the Supreme Court judgment.

4. Open schooling has traditionally been a cheaper alternative of education. More importantly, open scooters, despite their comparatively poor economic background, pay full cost of their education. Both are unacceptable; they do not stand the test of equity and social justice. Open schooling should receive full state support to ensure high-quality education and non-exploitation of the students. However, because of large enrolment, open learning system achieves economy of scale. The financial policy for opens schooling should be full financial support for quality education allowing and encouraging benefits of economy of scale.
5. Education is in the concurrent list and secondary education has largely been in the domain of the state governments. However, leaving universalisation of secondary education in the states will not make much headway. State governments already spend on an average about 22 per cent of the annual budget on education alone. Further, estimated 92 per cent of the total state expenditure on secondary education is the salary cost. Given the financial situation in the states, they will not have adequate fund for supporting expansion of secondary education and quality upgradation. Financing of universal secondary education must be a collective responsibility of the centre, state and the community (social financing).
6. With a centrally sponsored scheme, central government should fund the capital expenditure for building and quality upgradation facilities; additional teacher cost at least for the remaining period of 10<sup>th</sup> plan and the 11<sup>th</sup> plan, capacity building of teachers and headmasters, as well as research and development associated with universalisation of secondary education. State component should share the burden of recurring expenditure.
7. The centre-state sharing of financial burden should be in the pattern of SSA – 85:15 till end of 10<sup>th</sup> plan, and 75: 25 till the end of 11<sup>th</sup> plan. However, for the special category of states covered under Schedule 6 of the Constitution, central aid should be 100% till end of the 11<sup>th</sup> plan; 90:10 there after till the end of 12<sup>th</sup> plan. The cost of universalisation of secondary education in the backward regions defined under schedule 5 of the Constitution in states other than those covered under schedule 6 should also be provided fully by the central government till end of 11<sup>th</sup> plan and 90:10 till end of the 12<sup>th</sup> plan.
8. Because of large-scale mobilisation of elementary education due to success in SSA the pressure on secondary education is already being perceived. the pressure would be significantly high by 2007. The funding support for secondary education must begin with the financial year 2006-2007, preferably at the RE stage of 2005-2006.

### **Environment Building**

Last but not the least important parameter for planning of Universal Secondary Education is environment building and generating public opinion in favour of universalisation of secondary education. There are critics with myopic vision who question the wisdom of universal secondary education when universal elementary education has not been achieved yet. Given the emerging scenario

in ever increasing globalisation and Indian determination to emerge as an important global player, it is necessary to take a quantum jump rather than adopting incremental growth through piecemeal social engineering mechanism. It is only through environment building that community can be mobilized. This is particularly necessary to ensure participation of girls, scheduled castes and schedule tribe adolescence and youth, adolescence and youth with physical and mental disabilities, and prospective participants from the poorer community. Without involving all and each of them, Universal Secondary Education will remain another dream.

## CHAPTER 5

### RECOMMENDATIONS

1. The guiding Principles of Universal Secondary Education should be universal Access, Equality and Social Justice, Relevance and Development, and Structural and Curricular Considerations.
2. Enrolling all children through lateral expansion of facilities in secondary education will not play to meaningful universalisation of secondary education. For effectiveness, it will require a paradigm shift in the conceptualisation of secondary education. The new generation secondary education should be education of the adolescence for nurturing multiple intelligence in order to fructify full potential of each child. Accordingly, curriculum has to be flexible offering interest and capability based choices, supported by constructivist approach to learning and the flexible scientifically designed student assessment system.
3. There has to be in norm for schooling. Such norms should be developed for each state with common national parameters as well as state specific parameters.
4. The national level projections of enrolment as well as requirement of teachers, classrooms and finance should be treated as indicative. Similar projections and estimations should be done for each state separately.
5. Each state should develop a perspective plan for a universal secondary education. In order to develop perspective plan a comprehensive Secondary Education Management Information System (SEMIS) should be developed as early as possible. The SEMIS must specially provide for capturing data on girls, SC/ST, OBC, minorities and disabled children.
6. Decentralised micro-level planning to be the main approach to planning and implementation of Universal Secondary Education. Block should be the unit for such micro-level planning.
7. For universal quality secondary education, the states must avoid softer options of para teachers; fully qualified teachers with full salary and benefit must be the only option.
8. The present system of teacher education requires drastic reforms and expansion, in view of the fact that demand for professionally qualified teachers is going to increase rapidly with the spread of elementary education in the coming years. The present teacher education system is rooted in a behaviouristic theory of pedagogy and knowledge, and most of the teacher training institutes lack proper infrastructure and a sense of responsibility towards the goal of educational policy as articulated in 1986. The recently issued National Curriculum Framework proposes a constructivist orientation towards knowledge and teaching, which would imply a serious effort to train all teachers in classroom methods which might permit children to gain personal experience as a basis of understanding in all areas of the curriculum. The implications of the new National Curriculum Framework for pre-service education of teachers need to be worked out, both in terms of course revision and financial investments to be made. Equally serious are the implications for in-service

teacher education which will have to expand quite considerably and also become a lot more academically substantial activity than it is at present in many parts of the country.

9. Heads of schools must be trained, preferably through a six-month diploma programme with three months of practice and practical exercises.
10. Financial requirements for covering the cost of universal elementary and secondary education will form approximately 5.1 percent of the GDP. Hence with the immediate allocation of 6 percent of the GDP for education and progressive increase in this proportion will be necessary to move towards universalization of secondary education.
11. Commercialization of school education as well as teacher education institutions must be curbed in line with the policy of education which treats the running of educational institutions as a state and social responsibility. This is specially important in the current context in which a large number of private institutions, some of them receiving investment from abroad, are being set up. Even private institutions have a social responsibility in the context of the Constitutional amendment which has made elementary education a fundamental right of every child. The same can be said for the goal of universalization of secondary education. Under no circumstance can anyone be allowed to exploit our society's need for a credible system of school education. The question of quality needs to be seen as a dimension of systemic reform, and not as a basis for either acceptance of the presently entrenched divisive systems of education or for further increase in its divisiveness. Instead, future expansion of the school system should be accomplished along with systemic reforms which would make admission and curriculum policies capable of enhancing the inclusive character of the education system.
12. The pressure on secondary education is already being perceived. It will not be wise to wait for 2010 when the pressure may become unbearable. Investment towards the goal of universal secondary education must be made as early as possible, not later than 2006-07, preferably at the RE stage in the current financial year, 2005-06.

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