

WORKING GROUP REPORT
ON
SECONDARY AND VOCATIONAL EDUCATION
12th FIVE YEAR PLAN
2012-2017

Department of School Education and Literacy
MINISTRY OF HUMAN RESOURCE DEVELOPMENT
Government of India, New Delhi

OCTOBER 2011

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SECTION – I

INTRODUCTION

Working Group on Secondary and Vocational Education

In the context of formulation of the 12th Five Year Plan, the Planning Commission through its order No. M-12015/1/2011-HRD dated 8th April, 2011 had set up a Working Group on Secondary and Vocational Education under the chairpersonship of Secretary, Department of School Education and Literacy, Ministry of Human Resource Development. A copy of the said Order is at **Appendix A**.

The Working Group constituted three Sub-Groups on (i) Secondary Education, (ii) Vocational Education and (iii) Central Schools, Curricular Reforms and Examination System in Secondary Education . The constitution of Sub-Groups is given in **Appendix B**. The Sub-Groups had a series of meetings to formulate their recommendations. The recommendations of the three Sub-Groups were considered in the second meeting of the Working Group held on 24th September 2011. This report is a compilation of the reports of all Sub-Groups finalized after the discussions held in the meeting of the Working Group.

**No.M-12015/1/2011-HRD
Planning Commission
Yojana Bhavan, Sansad Marg,
New Delhi-110001**

Dated: 8th April, 2011

ORDER

Subject: Formulation of the Twelfth Five Year Plan (2012-17) – Constitution of Working Group on Secondary and Vocational Education – regarding.

In the context of the formulation of the Twelfth Five Year Plan (2012-17), it has been decided to set up a Working Group on Secondary and Vocational Education under the Department of School Education and Literacy, Ministry of Human Resource Development.

1. The Composition of the Working Group is at **Annexure I**
2. The Terms of Reference of the Working Group are given at **Annexure- II**
3. The Chairperson of the Working Group, if deemed necessary, may constitute sub-groups and/or may co-opt additional members.
4. The Working Group will finalize its report by 30th September 2011.
5. The expenditure on TA/DA etc. of the official members in connection with the meetings of the Working Group will be borne by the parent Department/Ministry/Organization to which the official belongs, as per the rules of entitlement applicable to them. The non-official members of the Working Group will be entitled to TA/DA as admissible to Grade I officers of the Government of India and this expenditure will be borne by the Convener Department.

**Sd/-
(Shakila T. Shamsu)
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Copy forwarded to:

1. Chairperson & Members of the Working Group.
2. PS to Deputy Chairman, Planning Commission
3. PS to MOS (P&PI)
4. PS to All Members of Planning Commission
5. PS to Member Secretary, Planning Commission
6. PS to Secretary(Expenditure), Department of Expenditure
7. Ministry of Finance (Plan Finance Division)
8. PS to Secretary, Ministry of Home Affairs, New Delhi
9. Pr. Advisers /Sr. Consultants /Advisers/JS(Admn.)/Heads of Division
10. I.F Cell, PC Division, Planning Commission
11. Admn. I/Accs.I/Genl I & II Sections, Planning Commission
12. Information Officer, Planning Commission
13. Library, Planning Commission

LIST OF EXPERTS FOR THE WORKING GROUP ON SECONDARY AND VOCATIONAL EDUCATION – TWELFTH FIVE YEAR PLAN.

- 1) **Smt. Anshu Vaish, Secretary, Chairperson
Dept.of School Education & Literacy
MHRD**
- 2) Ms. Anita Kaul,
Addl. Secretary (Elementary Education) , Member
MHRD
- 3) Dr. Jagmohan Singh Raju,
Joint Secretary (Adult Education)), Member
MHRD
- 4) Dr. Amarjit Singh,
Joint Secretary (EE), Member
MHRD
- 5) Prof. Mohd. Akhtar Siddiqui,
Chairman National Council of Teacher Education, Member
New Delhi
- 6) Dr.S.S. Jena,
Chairman, National Institute of Open School (NIOS) Member
New Delhi
- 7) Prof.G. Ravindra (I/c),
Director, Member
NCERT
- 8) Shri Avinash Dikshit,
Commissioner, Member
KVS
- 9) Shri Manoj Singh,
Commissioner, Member
NVS
- 10) Joint Director,
PSSCIVE, Member
Bhopal
- 11) DDG (Trg.),
DGE&T, Member
Ministry of Labour

- 12) Prof.N. Govinda , Member
NUEPA,
- 13) Dr. Vineet Joshi, Member
Chairman,
CBSE
- 14) Shri Anil Bordia,
Chairperson, Member
Foundation for Education and Development,
Jaipur
- 5) Prof. Avtar Singh, Member
NCERT
- 16) Dr.G.N.Karna,
Hon.President, Member
Soc. for Disability and Rehabilitation Studies
- 17) Prof. Muchkund Dubey,
President, Member
Council for social Development,
Delhi
- 18) Dr. Anjlee Prakash Member
Chairperson
Education Quality Foundation of India,
1209, Padma Tower I,
Rajendra Place, New Delhi-110008
- 19) Principal Secretary,
School Education Member
Govt. of Gujarat
- 20) Principal Secretary,
School Education Member
Govt. of Jammu & Kashmir
- 21) Principal Secretary,
School Education Member
Govt. of Jharkhand
- 22) Principal Secretary, Member
School Education
Govt. of Madhya Pradesh
- 23) Principal Secretary, Member
School Education
Govt. of Mizoram

- 24) Principal Secretary, Member
School Education
Govt. of Uttarakhand
- 25) Principal Secretary, Member
School Education
Govt. of West Bengal
- 26) Chairman, Member
State Board of Secondary Education
Maharashtra
- 27) Chairman,
State Board of Secondary Education Member
Kerala
- 28) Chairman, Member
State Board of Secondary Education
Rajasthan
- 29) Chairman, Member
State Board of Secondary Education
Orissa
- 30) Chairman, Member
State Board of Secondary Education
Punjab
- 31) Head, Member
National Bal Bhavan,
New Delhi
- 32) Shri. K.P Singh
Deputy Adviser (HRD-SE) Member
Planning Commission
- 33) Dr. C. Chandramohan
Adviser,(Education & Sports), Member
Planning Commission
- 34) Dr. S. C. Khuntia,
JS (Secondary Education), MHRD Member- Convener

TERMS OF REFERENCE OF THE WORKING GROUP ON SECONDARY AND VOCATIONAL EDUCATION – TWELFTH FIVE YEAR PLAN.

1. To review the status of secondary and vocational education
2. To suggest measures for universalizing quality education upto class X and subsequently class XII for all children in the relevant age group who are willing to pursue education upto that stage.
3. To review existing Plan schemes of secondary and senior secondary education with a view to:
 - a. Improving their effectiveness in terms of increased enrolment, improved quality and increased retention,
 - b. Suggesting new schemes/amalgamate existing Schemes with focused targeting for increased access and quality secondary and senior secondary education
 - c. Provide a blue print of specific pace setting activities for enhanced role of KVs and NVS and Model School in improving overall quality and standards of secondary education in local area/region
4. To suggest measures for bringing girls, SC&ST, OBCs, Minorities, the Disabled and other disadvantaged groups on par with the rest, thereby eliminating gender, spatial (rural and urban), social and other disparities, and focus targeting of marginalized groups in the area of Secondary and Vocational Education.
5. To suggest measures for providing adequate financial and other support to (i) talented and (ii) needy students, so that they are able to realise their full potential, and no one desirous of pursuing Secondary/Vocational Education is deprived of it due to financial and other constraints.
6. Suggest measures for restructuring of Centre and State Secondary Boards and set nationally acceptable quality standards for secondary and sr. secondary education and related educational reforms including barrier free entry and transparency and time bound decision making and other procedural simplifications and elimination of corruption.
7. To review the role of existing institutional arrangement which support secondary education, namely, NCERT, Teacher Training Institutes, SCERTs, NUEPA, NIOS with a view to redefine their role to the extent necessary

8. To assess the financial requirements for existing and proposed schemes and programmes in secondary education for the XII Plan period.
9. To suggest a long term vision for improving access and quality of secondary education and for re-orienting this to the needs of the coming generation and the knowledge economy.
10. To define the role of the private sector in providing secondary education in the XII Plan, and in the long term, including examination of incentives required for increased contribution of the private sector.
11. To define the role of open and distance learning in universalizing access and providing education of satisfactory quality to students who cannot pursue formal education.
12. To suggest measures for improvement of vocational education in the secondary /senior secondary school system and development of futuristic curriculum with due regard to emerging market demand for skills , particularly in the tertiary sector and institutional mechanism for objectively grading /rating VE institutions which should be excluded.
13. To examine how best the employers or end users of vocational education can be included in the process.

Composition of the Sub-group on Secondary Education:

Prof. R.Govinda, Director (I/C) ,NCERT and Vice-Chancellor, NUEPA (Chairperson)

Members:

Smt. RadhaChauhan, Joint Secretary(SE-I), Ministry of HRD

Dr. Shakila T.Shamsu, Joint Advisor, Planning Commission

Mervyn D'Souza, Chairman, Goa Board of Secondary & Higher Secondary Education, Goa

Shri Vineet Joshi, Chairman, Central Board of Secondary Education, New Delhi

Dr. S.S. Jena, Chairman, National Institute of Open Schooling, New Delhi

Shri Shrikant Baldi, Principal Secretary (Education), Himachal Pradesh, Shimla

Ms. Sabitha, Principal Secretary (Education), Tamil Nadu, Chennai

Prof. Krishna Kumar, Central Institute of Education (CIE), Delhi University, Delhi

Prof. Anita Rampal, Delhi University, Delhi

Prof. H.O. Gupta, Head Department of Secondary Education, NCERT, New Delhi

Shri J.P. Singh, Member Secretary, Rehabilitation Council of India, & Indian Spinal Injuries Centre, New Delhi

Shri Avinash Dikshit, Commissioner, Kendriya Vidyalaya Sangathan, New Delhi

Ms. Caralyn Khongwar Deshmukh, Director (School-1/Policy), Ministry of Human Resource Development (Member Convenor)

Co-opted Members:

Dr. K.K. Biswal, Associate Professor, NUEPA

Dr. Ranjana Arora, Associate Professor, NCERT

Dr. N. K. Mohanty, Assistant Professor, NUEPA

Dr. Y.Shreekanth, Assistant Professor, NCERT

Terms of Reference of the Sub-Group on Secondary Education

- To review the status of Secondary Education in the country and to formulate a long-term vision for improving access and quality of secondary education and for re-orienting the entire secondary education to needs of the coming generation and knowledge economy.
- To identify the bottlenecks in universalization of secondary education and suggest strategies to achieve the goal of universal access and retention in secondary education.
- To review the implementation of the schemes, i.e., Rashtriya Madhyamik Shiksha Abhiyan (RMSA), Model School Scheme, Girls' Hostel Scheme, ICT @ schools, Inclusive Education for Disabled Children at Secondary Stage (IEDSS), National Means cum Merit Scholarship (NMMS), Schemes for incentive to Girls and Appointment of Language teacher (ALT) and to suggest measures for improving the effectiveness of these schemes.
- To suggest measures for addressing the equity issues in order to ensure that quality secondary education is made available to all children.
- To suggest any new schemes
- To suggest the modalities for subsuming relevant centrally sponsored schemes of secondary education in RMSA for synergies and economies of scale.
- Measures to achieve convergence of RMSA and other centrally sponsored schemes of Ministry of HRD in secondary education with schemes of other Department/Ministries.
- Expanding RMSA to senior secondary level and financial implications for the same.
- To assess the financial requirements for existing and proposed schemes and programmes in secondary education for the XII Plan period.
- To define the role of open and distance learning in universalizing access and providing education of satisfactory quality to students who cannot pursue formal education, and to suggest strategies to expand the scope and extent of open and distance education.
- To define the role of private sector in providing secondary education in the 12th plan, and suggest measures that will enhance private participation through suitable cooperative arrangements.

F. No. 7-12/2011-Sch I /CDN
Government of India
Ministry of Human Resource Development
Department of School Education & Literacy

New Delhi, dated 12th July 2011

Sub: Setting-up of Sub-Group on Vocational Education in Secondary Education for the 12th Five Year Plan (2012-2017)

The Planning Commission has constituted a Working Group Secondary and Vocational Education in School Education for the Twelfth Five Year Plan (2012-2017) vide Commission's Order No. M-12015/1/2011-Edn dated 8th April, 2011 under the Chairpersonship of Ms. Anshu Vaish, Secretary, Department of School Education and Literacy, Ministry of Human Resource Development. In terms of Para 3 of the said order, the Chairperson of the Working Group hereby constitutes **Sub-Group on Vocational Education in Secondary Education** with the following composition:

1. Dr. S.C. Khuntia, Principal Secretary, PWD, Government of Karnataka, Bangalore - **Chairman**
2. Joint Secretary (SE-I), Ministry of HRD.
3. Smt. Vinita Agarwal, Director, Ministry of WCD, New Delhi.
4. Ms. Swati Mazumdar, Director, Symbiosis University, Pune
5. Secretary (Education), Tamil Nadu, Chennai
6. Joint Director, PSSCIVE, Bhopal-462011
7. DDG, Training, GGET, Shram Shakti Bhavan, New Delhi
8. Shri Vineet Joshi, Chairman, CBSE, New Delhi
9. Shri Basab Banerjee, NSDC
10. Chairman, State Board of Secondary Education, Rajasthan
11. Representative of Wadhwani Foundation
12. Dr. S. S. Jena, Chairman, National Institute of Open Schooling, Noida, U.P.
13. Representative of Ministry of Labour and Employment
14. Ms. Surina Rajan, Secretary, Education, Govt. of Haryana, Chandigarh
15. Dr. Alka Bhargava, Director (IE&VE), Ministry of Human Resource Development - **Member Convenor**

TERMS OF REFERENCE

1. To review the status of vocational education at secondary & higher secondary stages.
2. To review the existing system of vocational education with a view to assess gaps and weaknesses.
3. To highlight best practices and success in States to strengthen vocational education system in the country.
4. To study the proposed NVEQF being drafted by the Ministry and its applicability to the secondary stage of education (level 1 to 4) foundation.

5. To suggest policy changes to improve vertical and horizontal mobility of children passing out of class XII with vocational electives/vocational stream.
6. To suggest means of stronger synergy between vocational education and industry/employers.
7. To suggest revision to the CSS of Vocationalisation of Secondary Education for the XII Plan.
8. To suggest reforms at Central and State levels for enhanced delivery systems for the CSS of Vocationalisation of Secondary Education & NVEQF.
9. To suggest ways and means for enhancing the capacity of PSSCIVE in view of the larger mandate under NVEQF.
10. To assess the financial requirements for existing and proposed schemes and programmes in vocational education for the XII Plan period.
11. To define the role of private sector in providing vocational education in the XII Plan, and in the long term, measures required for increased contribution of private sector in vocational education.
12. To define the role of open and distance learning in increasing the outreach of quality vocational education.

2. The Secretarial services to the Sub-Group on Vocational Education in Secondary Education will be provided by TSG (RMSA). Non-official members of the Sub-Group will be given travelling allowance etc. as per Government rules for attending the meetings of the Sub-Group.

3. This has the approval of Secretary (SE&L).

Sd/-
(Devendra Kumar)
Under Secretary to Government of India
Tel. No. 23384582
e-mail: dkumar61@rediffmail.com

To
All members of the Sub-Group

Copy to:

1. Adviser (Education), Planning Commission, New Delhi
2. Joint Secretary (SE.I Bureau)
3. Director, (IE&VE), MHRD, Deptt. of S&EL, with the request to kindly take further necessary action for holding the meeting(s) of the respective Sub-Group.

Shri L Balasubramanian, President – NIIT Skills Initiative, NIIT Limited, Chennai was co opted in the sub group with the approval of Secretary (SE&L)

Government of India

ORDER

Subject : Setting-up of Sub-Group on Central Schools, Curricular Reforms and Examination Systems in Secondary Education for the 12th Five Year Plan (2012-2017)

A Sub Group on Central Schools, Curricular Reforms and Examination System in Secondary education for the 12th Five Year Plan (2012-2017) has been set up with the following composition.

1.	Prof. Krishna Kumar, Central Institute of Education (CIE), Delhi University, New Delhi	Chairman
2.	Dr. K. Biswal, Professor, NUEPA, New Delhi	Member
3.	Shri R.P. Sisodia, Joint secretary (SE-I), Ministry of HRD ¹	Member
4.	Dr. S.S. Jena, Chairman, NIOS, Noida, U.P.	Member
5.	Prof. A.K. Sharma, Former Director, NCERT, C-3, Sector-48, Noida-201304, U.P.	Member
6.	Shri Avinash Dikshit, Commissioner, K.V.S., New Delhi	Member
7.	Shri Manoj Singh, Commissioner, N.V.S., New Delhi ²	Member
8.	Shri Ashok Baranwal, Commissioner, School Education, Bhopal, M.P.	Member
9.	Prof. Rajaram Sharma, Joint Director, Central Institute of Educational Technology(CIET), Sri Aurobindo Marg, New Delhi	Member
10.	Dr. (Smt.) V.M. Sunanda Kumari, Chairman, Kerala Board of Higher Secondary Education, Housing Board Building, Santhi Nagar, Thiruvananthapuram-695001 ³	Member
11.	Shri Hasamukh Adhiya, Chairman, Gujarat Secondary and Higher Secondary Education Board, Sector-10-B, Near Old Sachivalaya, Gandhinagar-382043	Member

The Terms of Reference of the Sub Group are as follows:

1. To review the status of curricular reforms with specific reference to NCF, 2005 and measures needed to bring uniformity in syllabi and curricula in State and central Boards.
2. To assess the CCE strategy as a whole and recommend measures to further strengthen it.
3. To study the evaluation and assessment systems adopted by different Boards and suggest necessary reforms.

¹ Later replaced by Shri Apurva Chandra, JS

² Shri Apurva Chandra, who held the charge, represented.

³ Mr. P.S.Mohammed Sagir, Director attended the meeting.

4. To provide a blue-print of specific pace setting activities for enhances role of KVs, NVs and Model Schools in improving overall quality and standards of secondary education.
5. To review the role of existing institutional arrangements which support secondary education namely NCERT, NUEPA, SCERTs and NIOS and to examine the need for institutional re-structuring to achieve the goals of quality and excellence.
6. To suggest measures for re-structuring of central and State Boards and elimination of unauthorized Boards.

Partial Modification of Above Order

No. 7-12/2011-Sch 1 / CDN dated 19th September, 2011

ORDER

Subject : Composition of the Sub-Groups set up for the 12th Five Year Plan (2012-17)

The name of Shri R.P.Sisodia, Joint Secretary, Ministry of HRD is replaced with that of Ms. Radha S. Chauhan, Joint Secretary, SE-I Bureau, MHRD, as Member of the following four Sub-Groups :

- i. Sub-Group on Secondary Education,
 - ii. Sub-Group on Vocational Education in Secondary Education,
 - iii. Sub-Group on Central Schools, Curricular Reforms and Examination Systems in Secondary Education and
 - iv. Sub-Group on Public-Private Partnership in School Education.
2. Further, Shri Apurva Chandra, Joint Secretary SE-II Bureau, MHRD is included as a Member of the following two Sub-Groups :
- i. Sub-Group on Central Schools, Curricular Reforms and Examination Systems in Secondary Education and
 - ii. Sub-Group on Public-Private Partnership in School Education.
3. This has the approval of the competent authority

To

All the Members of the four Sub-Groups.

Copy to

2. Shri R.P.Sisodia, Joint Secretary (Admn), HE, MHRD, New Delhi
3. Ms. Radha S. Chauhan, Joint Secretary (SE-I Bureau), MHRD, New Delhi
4. Shri Apurva Chandra, Joint Secretary (SE-II Bureau), MHRD, New Delhi
5. Ms. Caralyn K. Deshmukh, Member – Convenor, Sub-Group on Secondary Education
6. Ms. Alka Bhargav, Member-Convenor, Sub-Group on Vocational Education
7. Shri Vineet Joshi, Member-Convenor, Sub-Group on Central Schools, Circular Reforms and Examination Systems in Secondary Education
8. Shri Harish Kumar, Member-Convenor, Sub-Group on Public Private Partnership in School Education
9. Joint Secretary (EE 1), MHRD
10. Adviser (Education), Planning Commission, New Delhi.

SECTION – II

SECONDARY EDUCATION

1. Vision and Development Perspectives

1.1 Vision

The swift pace of changes in socio-political and economic contexts that characterise the contemporary world, in general, and India in particular is unprecedented. These rapid changes profoundly affect the living conditions of children everywhere and need to be taken into account if children are to become full participants in the world of tomorrow.⁴One would naturally look up to education as the means of meeting the consequences of this fast evolving developmental context. While provision of primary education for all as guaranteed by the Right to Education Act 2009 could ensure significant improvement in the overall status of human development, it is unlikely that the country will significantly succeed in reducing poverty and creating a more equitable society without adequately focusing on improving secondary education. While primary education is a basic enabling factor for participation and freedom, for leading a life with dignity and overcoming basic deprivation, secondary education is the gateway for prosperity, for transforming the economy and establishing social justice in any country. It opens the world of work to the youth of the country and contributes to socio-economic development of the community.

Effective planning for development of secondary education has to be guided by a broadened vision of change and development that is in tune with the changing economic scenario and our continued concern for equity and quality. Thus, mere expansion of secondary schools, more of the same, is not likely to help. It has to radically transform its basic character in tune with the demands of the emerging knowledge intensive economy, and the far-reaching impact of the globalized market, and the fast changing structure of the knowledge generation establishment under the framework of the evolving intellectual property regime. With emergence of the market, not just the state and the civil society, as a powerful arbiter for provision of education, questions of equity and quality have got further compounded.

It is in the above context that the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) was launched during the 11th Five Year Plan to expand the reach of the secondary education and enhance its quality as a major move towards universalization of secondary education. The 12th Five Year Plan will be guided by this vision of the RMSA to provide access to quality secondary education for all. Coupled with this is the emerging move to extend provisions of the Right to Education(RTE) Act to cover Secondary Education.

Moving towards the goals of universalization and embracing the Rights perspective for provision of secondary schooling facilities demands adoption of new perspectives in its structural as well as

⁴*Our Creative Diversity: Report of the World Commission on Culture and Development*, UNESCO, 1996. p.152

curricular dimensions. Keeping this in view, development of secondary education is envisioned to be strengthened around the following four core objectives.

Universal Access: Access is to be envisaged in physical, social, cultural and economic terms, which calls for a redefinition of some of the basic features of the Indian School. Solving the problem of access at the physical level alone would be inadequate. Accessibility to schooling has to be built on the platform of inclusiveness which comprehensively accommodates diverse groups of children in every school. Such an approach demands change in the mindsets and attitudes of all stakeholders – students, teachers, parents, and the curriculum planners or textbook writers.

Equality and Social Justice: The school system, in the Indian context, has to strive for equality and social justice in several aspects such as gender inequality, economic disparity, social inequalities with particular focus on SCs and STs, cultural diversity (including the issues of religious and linguistic diversity), education of children with special needs (both physical and mental), and rural-urban disparities. All these dimensions need to be reflected not only in organizing schools but also with sensitivity in the curriculum, in order that all children are able to complete secondary education. The issue has a structural dimension too as 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.

Relevance to Development Context: Role of secondary education is envisaged to be multi-fold, (a) critical role in nurturing citizenship qualities in tune with democratic, egalitarian and secular principles; (b) increased emphasis on developing abilities for concept formation (not just piling up information) and its application in daily life and attributes such as critical thought and creativity; (c) evolving values that promote knowledge, skills and attitudes necessary to live in harmony in a pluralistic society; (d) generic competencies that cut across various domains of knowledge, with particular focus on needs of adolescents; and (e) skill formation in the context of rapidly changing technology which demands formation of multiple skills, transfer of learning and ability to learn. It is essential that school learning is linked to the social and economic background of the students and the productive skills and experiences they bring to the school. At the same time schools have also to ensure that all children will have access to global knowledge resources.

Structural and Curricular Aspects: Curricular reforms cannot be delinked from structural reforms. There is a general consensus with respect to the adoption of 10+2 pattern of school education, even though variations across states persist, 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 arrangement concept, diversified courses will be introduced only at the +2 stage. It is envisaged that secondary education curriculum and structure will be moulded in such a way that (a) Productive work is 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) is launched in mission mode incorporating modular courses with lateral and vertical linkages. The programme is to be designed to integrate with the National Vocational Education Qualification Framework that is taking shape rapidly.

12th Plan Vision for Secondary Education

Making good quality education available, accessible and affordable to all young persons in the age group of 14-18 years.

1.2 Expansion with Quality and Equity

The vision for secondary education is to make good quality education available, accessible and affordable to all young persons in the age group of 14-18 years. With this vision in mind, the following targets are set to be achieved during the 12th Five Year Plan:

- (a) Universal access to secondary education with a GER of 100%;
- (b) Enhancing retention of children in secondary classes; and
- (c) Achieving the target of 75% GER in Higher Secondary Classes by 2017.

If the GER targets of 100% in secondary education (grades IX-X) and 75% in higher secondary education (grades XI-XII) (as per SES GER in 2007-08 was 58.2 for grades IX and X and 33.4 for grades XI and XII) are set to be achieved by the end of the 12th plan period, the required average increase in the size of the GER per annum between 2007/08 and 2016/17 would have to be around 5 percentage points both at the secondary and higher secondary levels. Given the average increase in the size of GER per annum between 2004/05 and 2007/08 (i.e. 2 percentage points each for GER at the secondary and higher secondary levels), the required change in the size of the GER at secondary and higher secondary levels (i.e. around 5 percentage points per annum) between 2007/08 and 2016/17 may appear difficult. But this has to be viewed in the context of two factors. First is the recent endorsement of the CAGE committee to extend the coverage of RTE Act to secondary stage. Second, the effect of significant enhancement to near universal level in primary schools achieved through SSA during the last decade will be unfolding in the next five years, significantly impacting the demand for school places in secondary schools.

The vision of making affordable quality secondary education accessible to all young people in the age group 14-18 implies that all those who have completed eight years of elementary education and ten years of secondary education should be provided with equal opportunities to access quality secondary and higher secondary education respectively. In other words, it is not the relevant age-group but the minimum condition of completing elementary education that is necessary to access secondary education.

Further, universalisation of quality secondary education implies creating secondary schooling provisions of a defined standard irrespective of the location and management of the institution to accommodate all those eligible grade VIII and grade X graduates who are willing to participate in secondary and higher secondary education. This would be a major goal to be achieved by the end of the 12th Plan period. It is expected that initiatives such as RTE of eight years of schooling would not only be increasing participation levels in elementary education but also substantially improve the internal efficiency of elementary education in the coming years and ensure higher levels of transition to secondary schooling.

1.3 Development Priorities and Strategic Areas for Intervention

In view of achieving the target of 100% GER for grades IX-X during the 12th Plan period, the strategic areas for intervention, among others, would include: (i) consolidating the existing intake capacity of the government and government-aided institutions and assessing the potential capacity of the existing unaided institutions, particularly in the rural areas; (ii) ensuring that at least all secondary schools/sections conform to a minimum level of standards (clearly defined in terms of infrastructure, staffing, processes, autonomy and accountability of institutions); (iii) revising curriculum and reforming examination system; (iv) empowering schools to adopt to the change/reform programmes; and (v) strengthening support services/resource institutions, monitoring and evaluation mechanisms. Moreover, as far as possible efforts need to be made to go for the sector-wide approach to bring

about improvements in secondary schooling in partnership with state governments and also through launching of Centrally Sponsored Schemes with broader vision. Additionally, the Public-Private Partnership (PPP) in education should be adopted after adequately evaluating its implications for the goal of ensuring equitable quality secondary education for all.

The target of achieving the GER of 100% at the secondary level (grades IX and X) and 75% at the higher secondary level (grades XI-XII) may be realized by focusing on the following major broad development strategies:

(i) Mapping available Secondary School Resources and consolidation of the intake capacity of the existing institution: A comprehensive exercise of school mapping at the ground level by the States and UTs is an imperative need in order to appropriately and adequately address issues related to providing access as also to ensure optimal utilisation of existing infrastructure. An appropriate model defining the partnership arrangements between government and non-governmental sector may help facilitate utilization of the potential of the private sector to absorb additional demand for infrastructure in secondary education. But the point of caution is that secondary schooling in such institutions needs to be affordable to the bottom deciles of the population. There is an urgent need in this Plan period to focus on Economically Backward Blocks (EBB) to reach the learners from the marginalised groups to provide them access to secondary education. There is also a need to revisit policies and strategies with reference to existence of private secondary school network dominated by small schools/sections and largely influenced by political and local factors, which would over a period become unsustainable in terms of maintaining standards of equity and quality in provisions, processes and outcomes.

(ii) Emphasis on making all government, aided and unaided secondary and higher secondary schools to conform to minimum standards in provisions and processes: This implies greater role of the Central Government in supporting the States, particularly poor States, to ensure minimum provisions in secondary and higher secondary institutions at least in terms of basic infrastructure and teaching-learning facilities such as school sanitation, classrooms, teachers, non-teaching staff, library, laboratories, ICT facilities and infrastructure for extracurricular activities. Insisting on States to consolidate their norms defining minimum standards in secondary schooling provisions and processes would be critical to ensuring equity in secondary schooling provisions across states and rural and urban areas. Without this, it would not be possible to achieve an equitable development of secondary education in the country.

(iii) Supporting secondary/higher secondary schools to undertake school effectiveness activities: During the 12th Plan, focus should be on building the capacity of schools both in terms of knowledge and skills, autonomy and accountability structure, and allocation of un-tied grants for undertaking school improvement measures. Moreover, a minimum threshold level of capacity of secondary/higher secondary schools is a necessary condition for effective implementation of centrally designed secondary education development initiatives. It is, therefore, critical to create space for schools to “think and innovate” during the 12th Plan period.

(iv) Creating space for Public-Private Partnership (PPP): The spectrum of possibilities for alliance between the public and private sectors within the overall national education development goals include areas such as financial provision, human resource development, service delivery, infrastructure, facilities management, monitoring and evaluation, etc. The basic purpose of PPP should be to achieve outcomes that add value beyond what either party could achieve acting alone. This should be the guiding principle for deciding the institutional framework and the feasible model (s) of PPP. Currently, among the institutions having secondary sections, 46.3% are funded by the State/UT Government; 20.55% are govt aided; 32.45% are privately funded (un-aided); and only 09% are funded by the Central Government or Public Sector Undertakings/Companies.

A large number of schools in the country, initially started as private schools through local initiative, have eventually become grant-in-aid schools with support from state government. Such a system encourages local participation and fills the gap that exists in the interior areas. If a good regulatory mechanism is built to ensure quality, this will be a preferable option than government setting up its own schools. Whereas the aided schools generally receive almost full salary of the teaching staff from the respective State governments and have to only provide for the capital expenditure, private unaided schools do not receive any grant and have to be financially sustainable on their own. Therefore, there is a difference in fee structure (though some private unaided schools run on charity) where unaided schools necessarily have to recover their cost through the school fees. Encouraging private unaided schools would cater only to the population which can pay, unless there is a policy of cross subsidization of fees so that certain percentage of children from the poorer sections of the society can be accommodated free or at subsidized fees.

Provision of vocational education, particularly linked to industrial activities, is another area where private sector could help greatly as most of the teaching learning can take place in the premises of private sector companies and factories. In this area, private sector should also be involved in designing curriculum and in designing a testing and certification system so that the demand for appropriate skill by the industry can be met. This implies taking forward the efforts already afoot under the banner of NVEQF with full vigour during the 12th Plan period.

2. Review of Secondary Education in 11th Five Year Plan Interventions

2.1 Secondary Education in Tenth Five Year Plan

The thrust of secondary education during the Tenth Plan period was on improving access and reducing disparities by emphasizing the Common School System which mandates schools in a particular area to take students from low-income families in the neighborhood. The Tenth Plan also focused on revision of curricula with emphasis on vocationalisation and employment-oriented courses, expansion and diversification of the open learning system, reorganization of teacher training, and greater use of ICTs. The number of secondary and higher secondary institutions were 1.12 lakh and 0.57 lakh and the enrolment in classes IX-X and XI-XII were 25.9 million and 14.1 million respectively in 2006-07. The GER for secondary (IX-X) was 53.3% and that for higher secondary 29.0%. The combined GER for both the levels was only 41.1%. Whereas GER (IX and X) for SCs and STs was 51.9% and 25.8% respectively, which was indicative of a substantial social gap in enrolments in these groups. The dropout rate at secondary level (classes I-X), though declined from 62% in 2004-05, still it remained as high as 59.9% in 2006-07 (at the end of the 10th Plan).

Besides, there were glaring inter-state and intra-state variations in enrolment, dropouts, and access to secondary and higher secondary schools. At the national level, the average number of secondary/higher secondary schools per 1 lakh population is as low as 14 and it is lower than the national average in Bihar (4), UP (7), WB(10), and also Jharkhand (4) and Chhatisgarh (12). The national average number of secondary and higher secondary schools per 100 sq.km is only four, and Bihar, UP, Rajasthan, MP, Chhatisgarh, and Jharkhand fall below this national average. Consequently, the GER in these States was lower than the national average of 39.91% in 2004-05 for combined secondary and senior secondary stages.

2.2 Objectives and Targets Set for the XIth Five Year Plan

The Eleventh Plan aimed to: (i) raise the minimum level of education to class X and accordingly universalize access to secondary education; (ii) ensure good quality secondary education with focus on Science, Mathematics, and English; and (iii) to reduce the gender, social, and regional gaps in enrolments, dropouts, and school retention.

With a view to achieve these objectives and targets, a few new Centrally Sponsored Schemes (CSS) were launched during the 11th Five year plan period, the most important being the RMSA, and schemes which were already launched in 10th Plan period were continued. The following schemes (both on-going and newly launched schemes) were operational in the 11th Plan, a review of which is given below:

- (i) Kendriya Vidyalaya Sangathan (KVS)
- (ii) Navodaya Vidyalayas (NVS)
- (iii) Central Tibetan School Administration (CTSAs)
- (iv) National Institute of Open Schooling (NIOS)
- (v) Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
- (vi) Model Schools
- (vii) Scheme for Construction and Running of Girls' Hostels for Students of Secondary and Higher Secondary Schools
- (viii) Information and Communication Technology in Schools (ICT @ Schools)
- (ix) Inclusive Education for Disabled at Secondary Stage (IEDSS)

- (x) National Means-cum-Merit Scholarship
- (xi) National Scheme of Incentive to Girls for Secondary Education
- (xii) Centrally Sponsored Scheme of Financial Assistance for Appointment of Language Teachers
- (xiv) Environment Orientation to School Education (EOSE)

2.3 Centrally Sponsored Schemes: A Review

2.3.1 KVS, NVS, CTSA and NIOS

The scheme of Kendriya Vidyalaya Sangathan (KVS) was approved by Government of India in November 1962 to provide uninterrupted education to the wards of the transferable Central Government employees. Initially, 20 regimental schools were taken over as Central Schools during the academic session 1963-64. This number has now gone up to 1067 functional schools including 3 abroad (Kathmandu, Moscow and Tehran) as on 01.02.2011. 39 KVs are running in double shift. During the year 2010-11, sanction for opening of 107 Kendriya Vidyalayas (KVs) including 7 in Bundelkhand Region was given. The orders for opening of 93KVs (91 KVs during 2010-11 and 2 KVs during 2011-12 have been issued). Out of these, 85 KVs have been made functional and efforts are on to make the remaining 6 KVs functional during the academic session 2011-12.

The Jawahar Navodaya Vidyalayas (JNVs) are pace setting residential co-educational schools providing quality education to talented children predominantly from rural areas. As on date, out of 609 districts (excluding districts in Tamil Nadu), the Samiti has sanctioned 576 JNVs out of which 569 are functional. In addition, Government of India also approved establishment of 20 JNVs in the districts that have a large concentration of Scheduled Caste and Scheduled Tribes. Out of these, 19 JNVs have been sanctioned and 14 are functional. The enrolment of SC and ST children in these schools is 24.5% and 17.7%, respectively in 2010-11.

CTSA receiving 100% Plan and Non-Plan funding has 67 schools spread across the country for the children of Tibetan refugees. Presently CTSA is running 33 pre-primary schools, 12 primary schools, 8 Middle Schools, 5 Secondary Schools and 9 Senior Secondary Schools. Of the sanctioned teaching strength of 628, 497 teachers are working and process of filling up rest of the post is in progress and out of 235 non-teaching sanctioned strength 190 personnel are working in different schools and headquarters in Delhi.

NIOS provides opportunities for continuing education to those who missed completing school education. In 2009-10, 419702 lakh students were enrolled at the secondary and senior secondary stages through 11 Regional Centres, 1943 accredited institutions for academic courses, and 1002 accredited vocational institutions (AVIs) for programme delivery through open learning and distance learning. NIOS centres have also been set up in UAE, Kuwait, Nepal, and China.

2.3.2 Rashtriya Madhyamik Shiksha Abhiyan (RMSA) The RMSA scheme was launched in March, 2009 in the backdrop of the Constitutional mandate to universalise elementary education, and the success of Sarva Shiksha Abhiyan (SSA). The need for a new mission for secondary education was emphasized in the Mid-Term Appraisal of the 10th Five Year Plan (June 2005), and in the reports of two CAGE Committees (Committee of the Central Advisory Board of Education (CAGE) on 'Universalisation of Secondary Education' (June 2005) and the CAGE Committee on "Girls' Education & Common School System" in its report of June, 2005).

Vision:

To make secondary education of good quality available, accessible & affordable to all young persons in the age group 15-16 years

Objectives:

To achieve a GER of 75% for classes IX-X within 5 years by providing a secondary school within a reasonable distance (5-7 km) of every habitation.

- To improve quality of education imparted at secondary level through making all secondary schools conform to prescribed norms.
- To remove gender, socio-economic and disability barriers.
- To achieve universal access to secondary education by 2017, i.e., by the end of 12th Five Year Plan.
- To achieve universal retention by 2020.

Strategies and Interventions

The scheme was implemented in partnership with State Governments. The broad strategies of the scheme for improving access included: (a) Provision of necessary infrastructure and resources in the secondary; and (b) Provision of extra support for education of girls, rural children and students belonging to SC/ST, minority and other weaker sections of the society. The interventions which were supported under RMSA were (a) Upgradation of UPS to Secondary school, (b) Strengthening of existing Secondary school, (c) Additional Classroom, (d) Science laboratory with equipment, (e) Library, (f) Computer room, (g) Art craft and Culture room, (h) Toilet blocks and water Facility, (i) Major repair, and (j) Residential quarters for teachers. The strategies for improving the quality were (a) School Grant, (b) Minor Repair, (c) Teachers training, (d) Salary of teaching & non-teaching staff in new and existing schools, (e) Setting up of EduSat in Schools, (f) Excursion trip for students, (g) Study tour outside the State, (h) Performing arts, (i) Maths laboratory kit, (j) Book Fair, (k) Science fair, (k) Language and Digital Communication Laboratory, (l) Orientation Programmes for head teachers and Educational Planners, (m) Sports material for schools, (n) Self defence training for students especially girls, (o) Special teaching for weaker students, and (p) Guidance and counselling. The interventions for addressing equity included: (a) Activity for Maa-Beti Mela, (b) Transport facilities for girls, (c) SC/ST Oriented activities (Shiksha Mahasabha, traditional game meet, traditional art/craft/ dance competition, (d) Interaction with stakeholders and chain agents in SC/ST/Minority/Tea-Tribe dominated areas, and (e) Retention derive for tea-tribes and minority girls' student.

Funding Pattern

- Central Government to bear 75% of the project expenditure during the 11th Five Year Plan. Funding pattern was 90:10 for NER States.
- 25% of the cost to be borne by State governments.
- State governments to commit resources in State projects.

2.3.3 Model Schools**Objectives:**

- To have at least one good quality secondary school in every block that will work as pace-setting institution and provide support to other secondary schools in that area (mostly rural) addressing the issues of contextual curriculum and pedagogic practices for secondary stage learners.
- The school to be a model in infrastructure, curriculum, evaluation and school governance

Strategies:

- A model school to have infrastructure and facilities comparable with Kendriya Vidyalayas,
- The medium of instruction to be decided by the State Governments with emphasis on teaching of English and spoken English.
- The schools to have classes from VI to XII, or IX to XII.
- 3500 model schools to be set up in EBBs and managed by State Governments
- 2500 model schools to be set up in PPP mode in non-EBBs.

Funding Pattern (For the Model schools in EBBs managed by States)

- Central and State fund sharing in the ratio of 75:25 for all States except special category States and NE States.
- 90:10 fund sharing for NE and special category States.

2.3.4 Scheme for Construction and Running of Girls' Hostel for Students of Secondary and Higher Secondary Schools**Objectives:**

- To retain the girls in secondary school (IX to XII).
- At least 50% of the girls admitted to the hostels should belong to SC, ST, OBC, Minority communities.

Strategies:

- Implementation to be through State Governments
- In blocks without any KGBV, students in all government or aided schools in the vicinity of the hostel would be eligible for admission

Funding Pattern:

Sharing pattern in the ratio of 90:10 between Centre and the States during the 11th Five Year Plan.

2.3.5 Information and Communication Technology in Schools (ICT @ Schools)**Objectives**

- To establish an enabling environment to promote the usage of ICT especially in Higher Secondary and Secondary Government Schools in rural areas. Critical factors of such an enabling environment include widespread availability of access devices, connectivity to the Internet and promotion of ICT literacy.
- To ensure the availability of quality content on-line and through access devices both in the private sector and by SIETs.
- To enrich the existing curriculum and pedagogy by employing ICT tools for teaching and learning.
- To enable students to acquire skills needed for the Digital world for higher studies and gainful employment.
- To provide an effective learning environment for children with special needs through ICT tools.

Strategies

- A computer lab having at least 10 stations.
- For Smart Schools the lab may have at least 40 workstations

Funding pattern

Central and State fund sharing in the ratio of 75:25 for all States except NE States.
90:10 fund sharing for NE.

2.3.6 Inclusive Education for Disabled at Secondary Stage (IEDSS)

Objectives:

- To provide educational opportunities to children with mild to moderate disability, in common schools and facilitate their retention in this school system
- An amount of Rs.3000/- per child per annum was earmarked for activities such as identification and assessment, assistive devices, allowance for transport, escorts, reader, uniforms, books and stationary, stipend for girls, etc.
- Creation of barrier free environment,
- Rs.200/- per girl child per month is provided as stipend.

Funding Pattern

In addition to 100% Central assistance, State Governments to provide Rs.600 per child per annum as scholarship.

2.3.7 National Means-cum- Merit Scholarship

To award scholarships to meritorious students of economically weaker sections to arrest their dropout at class VIII and encourage them to continue in the secondary stage that is upto class XII.

2.3.8 National Scheme of Incentive to Girls for Secondary Education

Objectives:

- To promote enrolment of girls belonging to weaker sections of the society,
- To ensure their retention at least till completion of 10th class and preferably till 12th class,
- To reduce their drop out at secondary and higher secondary stages
- To improve gender parity and to empower girls.

Strategies and Interventions

A sum of Rs. 3000 is deposited in the name of each eligible girl as a fixed deposit and she would be entitled to withdraw it along with interest thereon on reaching 18 years of age provided she passes at least class 10 and remains unmarried.

2.3.9 Financial Assistance for Appointment of Language Teachers

Strategies:

- Financial assistance to the States to set up administrative structure, area vocational surveys, preparation of curriculum, text book, work book curriculum guides, training manual, teacher training programme, strengthening technical support system for research and development, training and evaluation etc.
- Financial assistance to NGOs and voluntary organizations towards implementation of specific innovative projects for conducting short term courses

Funding Allocation: Rs. 75 cr in the 11th Plan

2.3.10 Environmental Orientation to School Education (EOSE)

Objectives:

- To generate awareness amongst children about environment
- To bring about positive attitudinal changes in children

Strategies

- i. Provides Grants in Aid to NGO's for conducting activities oriented towards environmental awareness.
- ii. Orientation of Stakeholders
- iii. Organization of District Environmental Conference
- iv. Organization of State/UT Environmental Conference
- v. Organization of Summer and Winter Camps involving teachers and local authorities
- vi. Adoption of schools from each district by the State to strengthen them in the area of environmental activities

Funding

Allocation in the 11th Plan was Rs. 17.846 Crores.

2.4 Scheme-wise Financial Allocation and achievement of Targets in the 11th Plan

Funding Pattern	Allocation and Expenditure	Targets	Physical (Approvals)	Achievement																				
Rashtriya Madhyamik Shiksha Abhiyan																								
75:25 for all States except NE NE: 90:10	<i>(Rs. In Cr)</i>			Major components		Major components																		
	Year	Allocation of Funds		Exp	Component	Target	Component	Approvals																
		BE	RE																					
	2007-08	1305.00	0.15	0.00	New Schools	11188	New Schools	9216																
	2008-09	2185.00	260.00	0.00	Strengthening of Secondary Schools	44000	Strengthening of Secondary Schools	35062																
	2009-10	1353.98	550.00	550.00	Additional teachers for existing school	1.79	Additional teachers for existing school	118162																
	2010-11	1700.00	1500.00	1483.56																				
	2011-12	2493.90	2493.50	626.62																				
Total	9037.88	4804.05	2660.18																					
Model Schools																								
75:25 for all States except special category states for which 90:10	<table border="1"> <thead> <tr> <th>Year</th> <th>Allocation</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2009-10</td> <td style="text-align: right;">251.71</td> <td style="text-align: right;">251.71</td> </tr> <tr> <td>2010-11</td> <td style="text-align: right;">480.12</td> <td style="text-align: right;">480.12</td> </tr> <tr> <td>2011-12</td> <td style="text-align: right;">1200.00</td> <td style="text-align: right;">508.44</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">1931.83</td> <td style="text-align: right;">1240.27</td> </tr> </tbody> </table>	Year	Allocation	Expenditure	2009-10	251.71	251.71	2010-11	480.12	480.12	2011-12	1200.00	508.44	Total	1931.83	1240.27	<ul style="list-style-type: none"> 3500 new Model school in Govt Mode 2500 model school in PPP mode 	<ul style="list-style-type: none"> 1826 new Model school in Govt mode Scheme under consideration for approval 						
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Year	No. of CWSN covered	Resource Teachers engaged	No. of schools																																																			
2007-08	3,57,448	6013	64,307																																																			
2008-09	3,19,210	3715	1,10,773																																																			
2009-10	1,15,363	2565	5,590																																																			
2010-11	1,46,292	4484	25,923																																																			
National Means-cum- Merit Scholarship																																																						
	A corpus of Rs. 750 crore was created with State Bank of India in 2008-09 and a like amount was added to this corpus fund every year raising this fund to Rs. 3000 crore.	<ul style="list-style-type: none"> 100000 scholarships each year 	<ul style="list-style-type: none"> Partial Achievement <table border="1"> <thead> <tr> <th>Year</th> <th>States covered</th> <th>Students covered</th> </tr> </thead> <tbody> <tr> <td>2008-09</td> <td>34</td> <td>55544</td> </tr> <tr> <td>2009-10</td> <td>28</td> <td>82199</td> </tr> <tr> <td>2010-11</td> <td>20</td> <td>104752</td> </tr> </tbody> </table>	Year	States covered	Students covered	2008-09	34	55544	2009-10	28	82199	2010-11	20	104752																																							
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National Scheme of Incentive to Girls for Secondary Education																																																						
	Allocation : Rs.1, 500 crore <table border="1"> <thead> <tr> <th>Year</th> <th>Exp</th> </tr> </thead> <tbody> <tr> <td>2008-09</td> <td>122.87</td> </tr> <tr> <td>2009-10</td> <td>63.17</td> </tr> <tr> <td>2010-11</td> <td>3.72</td> </tr> </tbody> </table>	Year	Exp	2008-09	122.87	2009-10	63.17	2010-11	3.72	<ul style="list-style-type: none"> All girls enrolled in class IX every year 	<ul style="list-style-type: none"> Partial Achievement <table border="1"> <thead> <tr> <th>Year</th> <th>Students covered</th> </tr> </thead> <tbody> <tr> <td>2008-09</td> <td>409580</td> </tr> <tr> <td>2009-10</td> <td>210576</td> </tr> <tr> <td>2010-11</td> <td>12402</td> </tr> </tbody> </table>	Year	Students covered	2008-09	409580	2009-10	210576	2010-11	12402																																			
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2.5 Progress of secondary education in 11th Five Year Plan

From the review of the Schemes (as given in above table), the sub-group observed that in spite of many constraints and limitations including the fact that except for ICT, IEDSS, ALT, major CSSs such as RMSA, Girl's Hostel and Model Schools were rolled out in the middle of the 11th Plan, substantial progress within short duration of implementation has been made in the area of secondary education.

Progress in achieving aforesaid physical targets has positively impacted focus on secondary education in States/UTs. As per the report of states/UTs in PAB meetings, enrolment of Girls from all the categories has generally increased. Grants sanctioned for repair and improvement of other aspects of schools under different schemes contributed to building an environment for improving the quality of secondary education. Regular in-service teacher training at secondary stage for last two consecutive years provided under RMSA, has initiated efforts towards setting up mechanism for in-service teacher training at the secondary stage, which was not there in States/UTs prior to implementation of the Scheme.

2.5.1 Issues and Challenges in 11th Plan

Alongside aforesaid achievements, the sub-group also observed following gaps and limitations related to implementation of schemes aiming towards broader goals of access, equity and quality. Some schemes have shown slow progress in the 11th Five Year Plan.

Access:

- RMSA does not make provision for any residential facility for both boys and girl to provide access to learners residing in sparsely populated difficult terrain.
- Under schemes such as RMSA, Girls hostel and Model schools sanctioning of civil works for strengthening infrastructure is done keeping in view rates and norms given in the RMSA framework which are low as compared to State schedule of rates. Due to this, some states could not avail the provisions of scheme for strengthening infrastructure facilities in secondary schools. Though State schedule of Rate has been approved for Girls Hostel scheme in 2011-12 but it is yet not applicable for RMSA and Model school. Apart from the financial ceiling for the sanction of civil works, the scheme of RMSA does not make separate provisions for schools without building or dilapidated building, restricted cost for major repair being too low.
- Non-coverage of Govt. Aided schools under the scheme restricts States where aided school are lead player in secondary education like UP, WB, Maharashtra and also other states where substantial number of aided schools exist to be benefitted by the scheme for improving quality of secondary education.
- Further, non-coverage of higher secondary schools/ sections under RMSA has also been seen as hindrance towards development of integrated plans for schools up to class XII.
- In secondary education sector, open schooling system is envisaged to play a major role in providing secondary education facilities via distance mode addressing both the access as well as equity concerns. However inadequate guidelines on the kind of support to Out of school children and open schools centres under any of the schemes for secondary education sector has not yielded desired results.
- Strategies for disaster management are also a concern which requires active intervention. For instance currently lack of provision of fire extinguisher unit as a part of civil work design under any of the schemes raises concerns for safety.

Equity

- Most interventions under the schemes are designed to ensure equitable participation of all categories of children including girls, marginalised groups and also differently abled children. Various schemes make provisions such as providing girls' hostel in EBBs, enabling conditions in the schools for Child with Special Needs (CWSN) under IEDSS, RMSA etc. These schemes individually have provided sufficient support for the marginalised sections of the society. However, their standalone implementation has yielded little results as far as convergence and holistic planning and implementation are concerned. States/UTs find it limiting to plan interventions for the same school under different schemes and seek separate approvals in different PABs held at different durations. Convergence of planning, appraisal and implementation under different schemes for same segment of society needs to be considered under 12th Five Year Plan.
- Scarcity of institutions offering teacher training in special sectors and lack of special educators further raises an issue of providing effective training and support to teachers and CWSN under IEDSS.

Quality

- The main interventions planned were establishment of Model schools, providing enabling environment in the schools by way of appointing subject-specific teachers, capacity building of teachers and involvement of resource education institutes, grants to schools for equipments, books, periodicals, providing ICT facilities, etc. However, in absence of comprehensive norms on various components of quality and adequate guidelines as well as a policy framework in case of ICT, States/UTs could not progress much on quality. For example, the recurring grant per school provided under RMSA is less in view of long list of interventions to be carried for improving classroom processes and providing enabling environment in secondary schools.
- Lack of provisions for untied funds as well as absence of specific norms restricts States/UTs to propose innovations in the area of curriculum and pedagogy.
- With regard to model schools, States/UTs are finding it difficult to set up a separate society for managing Model schools and also procurement of land is a major impediment because of which progress under this scheme is slow.
- Chronic shortage of infrastructural facilities is detrimental to quality (NCF-2005). No CSS provides facilities such as necessary furniture for staff and students of secondary schools.
- RMSA, ICT@School, IEDSS make provisions for teacher training for different duration and in standalone manner without infusing in it the emerging curricular and pedagogic vision, which makes very less impact in improving classroom processes. This points towards need for subsuming different schemes under one overarching scheme for holistic implementation of crucial quality components.
- Institutes like DIETs/SCERTs play major role in academic planning, preparing a road map to good quality education. However in none of the schemes for secondary education, comprehensive plan for strengthening these institutes has been provided.
- ICT @school was the scheme launched with the vision to provide ICT literacy to all students. Inadequate basic facilities in schools like computer rooms, IT trained teachers, electricity, etc. have posed significant challenge in achieving the targets set by the scheme.

Planning, Monitoring and Finance related issues

- Available funding of 2.2% of the total allocation under RMSA for MMER activities has been an impediment for creating dedicated team for its planning and implementation and research work in secondary education sector. The effect is grave for smaller districts and State/ UTs
- In absence of adequate publicity and community mobilisation activities, achievements under the individual beneficiary schemes such as National Merit Scholarship and National Scheme of Incentive to Girls for Secondary Education have been limited which significantly impact the achievement of envisioned goals.
- RMSA implementation has been considerably slowed down due to delays in release of funds owing to shortage of funds. Large amount of funds for the activities sanctioned till 2011-12, have not been released to States, yet.

3. Current Status of Secondary Education

In an increasingly globalising world, secondary education (12 years of schooling) is being seen as a part of basic education in most countries. Besides creating knowledge, skills and attitudes appropriate for an inclusive society, investment in secondary education is considered critical for preparing a citizenry that is committed to good governance, fiscal accountability and transparency. Secondary education increasingly is being integrated in the comprehensive long-term strategies for development at the national level so as to ensure a holistic social inclusion.

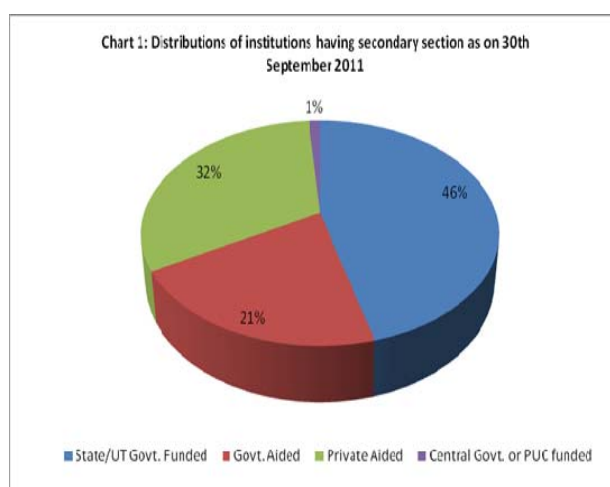
3.1 Access and Participation

In independent India, the network of educational institutions has expanded remarkably. Between 1950/51 and 2007/08, the number of secondary and higher secondary level institutions increased by more than twenty-three fold, from 7416 to 173.0 thousand (SES, 2007-08). As per SEMIS, the number of institutions having secondary and/or higher secondary sections (grades IX-X &/or grades XI-XII) was more than 195.0 thousand in 2009-10, which included around 166.0 thousand institutions having secondary section and around 57.0 thousand⁵ institutions having higher secondary section (NUEPA, 2011). Around 71% of institutions having secondary sections are located in rural India. The share of institutions having the secondary section located in tribal and hilly areas in the country is 12.6% and 11.1% respectively (SEMIS 2009/10). Among the institutions having the secondary section, 46.3% are funded by the State/UT Government; 20.55 are govt aided; 32.45% are privately funded (un-aided); and only 09% are funded by the Central Government or Public Sector Undertakings/Companies (see Chart 1). Around 83% of State/UT government funded institutions having secondary sections are located in rural areas. Similarly, around 70% of aided secondary schools/sections are found in rural areas (see Table 2). It is important to note that more than half of the un-aided institutions (55.1%) with secondary sections are found in rural areas. Besides, around one-third of the institutions with secondary sections are very small institution having 80 or less enrolment in grades IX-X; and 32.2% of them have 81-160 enrolment in grades IX-X (see Table 1). Institutions with small size of the secondary sections are found across all management categories; relatively more in case of un-aided institutions (see Table 2). While around 29% of govt funded institutions and 21% of aided institutions are small institutions in rural India, around 47% of un-aided institutions in rural areas are very small institutions with 80 or less enrolment in grades IX-X. This has important policy implications in terms of making quality secondary education affordable and sustainable in rural India.

⁵ Some of these institutions have secondary section too, and therefore, should not be added to the number of institutions having secondary sections to get the total number of secondary and higher secondary institutions in the country.

Table 1: Distribution of institutions having secondary and/or higher secondary sections in India by location and sources of funding as on 30th September 2009

Source of Funding	Location of the Institution					
	Rural		Urban		Total	
	Count	Row N %	Count	Row N %	Count	Row N %
Institutions with Secondary Section (Grades IX-X)⁶						
State or UT Govt. funded	63604	82.7	13342	17.3	76946	100.0
Govt. Aided	23843	70.1	10153	29.9	33996	100.0
Private Un-aided	29650	55.1	24129	44.9	53779	100.0
Central Govt. or PUC Funded	820	56.0	644	44.0	1464	100.0
Total	117917	71.0	48268	29.0	166185	100.0
Institutions with Higher Secondary Section (Grades XI-XII)⁷						
State or UT Govt. funded	18896	74.2	6565	25.8	25461	100.0
Govt. Aided	7062	60.2	4673	39.8	11735	100.0
Private Un-aided	9294	50.2	9211	49.8	18505	100.0
Central Govt. or PUC Funded	477	51.4	451	48.6	928	100.0
Total	35729	63.1	20900	36.9	56629	100.0



Source: NUEPA, SEMIS 2009-10.

⁶ Not equal to all secondary level institutions; it is more than that as it includes secondary sections in higher secondary schools and junior colleges.

⁷ Not equal to all higher secondary schools; it is more than that as it includes higher secondary sections in +2 colleges and degree colleges.

More than 63% of institutions with higher secondary section are located in rural India; 10.3% in tribal areas and 9.6% in hilly areas. Around 66% of institutions with higher secondary institutions are either fully funded or aided by the state governments; 45% of them are fully funded by the state governments. Around one-third of the total number of institutions with higher secondary section is funded by the private sector (i.e. un-aided institutions). In rural India, 74% of such institutions are fully funded and 60% are aided by the state governments (see Table 2). However, around 26% of such institutions are very small (i.e. total enrolment in grades XI-XII < 80) and more than half of them has enrolment in grades XI-XII 160 or less. The share of very small institutions with higher secondary section is around 28% in the total state government funded institutions; and it is around 38% in the total un-aided institutions (see Table 3).

Table 2: Distribution of institutions having secondary and/or higher secondary sections in India by size and sources of funding as on 30th September 2009

Source of Funding		Size of the Secondary/Higher Secondary School or Section in terms of the Total Enrolment in Grades IX-X/XI-XII, 2009											
		80 or less		81-160		161-240		241-320		321 and above		Total	
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Secondary School/Section (Grades IX-X)													
State or UT Govt funded	Rural	19945	31.4	21974	34.5	10062	15.8	4686	7.4	6937	10.9	63604	100.0
	Urban	2692	20.2	3265	24.5	2459	18.4	1616	12.1	3310	24.8	13342	100.0
	Total	22637	29.4	25239	32.8	12521	16.3	6302	8.2	10247	13.3	76946	100.0
Govt. Aided	Rural	5384	22.6	9578	40.2	3881	16.3	1928	8.1	3072	12.9	23843	100.0
	Urban	1897	18.7	2679	26.4	1604	15.8	1121	11.0	2852	28.1	10153	100.0
	Total	7281	21.4	12257	36.1	5485	16.1	3049	9.0	5924	17.4	33996	100.0
Un-aided	Rural	13629	46.0	8718	29.4	3003	10.1	1420	4.8	2880	9.7	29650	100.0
	Urban	11358	47.1	6730	27.9	2866	11.9	1403	5.8	1772	7.3	24129	100.0
	Total	24987	46.5	15448	28.7	5869	10.9	2823	5.2	4652	8.7	53779	100.0
Central Govt or PUC Funded	Rural	296	36.1	325	39.6	100	12.2	29	3.5	70	8.5	820	100.0
	Urban	126	19.6	192	29.8	131	20.3	95	14.8	100	15.5	644	100.0
	Total	422	28.8	517	35.3	231	15.8	124	8.5	170	11.6	1464	100.0
Total	Rural	39254	33.3	40595	34.4	17046	14.5	8063	6.8	12959	11.0	117917	100.0
	Urban	16073	33.3	12866	26.7	7060	14.6	4235	8.8	8034	16.6	48268	100.0

Source of Funding	Size of the Secondary/Higher Secondary School or Section in terms of the Total Enrolment in Grades IX-X/XI-XII, 2009												
	80 or less		81-160		161-240		241-320		321 and above		Total		
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	
Secondary School/Section (Grades IX-X)													
	Total	5527	33.3	53461	32.2	24106	14.5	12298	7.4	20993	12.6	166185	100.0
Higher Secondary School/Section (Grades XI-XII)													
State or UT Govt. funded	Rural	5301	28.1	5774	30.6	3017	16.0	1699	9.0	3105	16.4	18896	100.0
	Urban	830	12.6	1053	16.0	1134	17.3	917	14.0	2631	40.1	6565	100.0
	Total	6131	24.1	6827	26.8	4151	16.3	2616	10.3	5736	22.5	25461	100.0
Govt. Aided	Rural	1048	14.8	1991	28.2	1168	16.5	854	12.1	2001	28.3	7062	100.0
	Urban	516	11.0	868	18.6	682	14.6	544	11.6	2063	44.1	4673	100.0
	Total	1564	13.3	2859	24.4	1850	15.8	1398	11.9	4064	34.6	11735	100.0
Un-aided	Rural	3505	37.7	2449	26.4	1178	12.7	701	7.5	1461	15.7	9294	100.0
	Urban	3108	33.7	2299	25.0	1309	14.2	778	8.4	1717	18.6	9211	100.0
	Total	6613	35.7	4748	25.7	2487	13.4	1479	8.0	3178	17.2	18505	100.0
Central Govt. or PUC Funded	Rural	175	36.7	187	39.2	53	11.1	28	5.9	34	7.1	477	100.0
	Urban	92	20.4	139	30.8	81	18.0	50	11.1	89	19.7	451	100.0
	Total	267	28.8	326	35.1	134	14.4	78	8.4	123	13.3	928	100.0
Total	Rural	10029	28.1	10401	29.1	5416	15.2	3282	9.2	6601	18.5	35729	100.0
	Urban	4546	21.8	4359	20.9	3206	15.3	2289	11.0	6500	31.1	20900	100.0
	Total	14575	25.7	14760	26.1	8622	15.2	5571	9.8	13101	23.1	56629	100.0

Source: *Ibid.*

Has the expansion of secondary and higher secondary level institutions led to increased physical access to secondary schooling in India? Nine years ago, more than 73% of habitations in the country had access to a secondary school at a maximum walking distance of 5.0 kilometres; and more than 62% had access to a higher secondary school at a maximum walking distance of 8 kilometres (7th AIES, 2002). More than four-fifths (80%) of the population in the country had physical access to a secondary school at a maximum distance of 5kilometres from their habitations in 2002; and around 69% of them had physical access to higher secondary schooling provisions at a maximum distance of 8 kilometres. According to the NSSO 64th Round (2007/08), 82.9% of rural households and 99% of

urban households have access to a secondary school within 5 kilometres. Analysis of data on institutions at the secondary level (SSE, 2007/08) and projected population for the year 2007 (Census of India, 2001), it is found that, at the all-India level, on an average, 10 secondary schools/sections and 5 higher secondary schools/sections were available per 100,000 people in 2007/08. At the sub-national level, the size of this indicator varied between 3 secondary schools/sections per 100,000 people in Bihar and Delhi to 53 in Mizoram. What is more interesting is that compared to the poor households, the rich have access to all types of schooling provisions much closer to their homes, particularly in rural areas. The level of physical access to secondary schooling provisions, however, varies widely across states. However, lack of latest information hinders empirical assessment of the progress towards universal access to secondary schooling, hence the strong need for carrying out school mapping exercise in all states and union territories.

The number of teachers at the secondary level (Grades IX-XII) also increased from 127 thousand in 1950/51 to 2,126.9 thousand in 2007/08 (SES, 2007/08). The Pupil-Teacher Ratio (PTR) at the secondary and higher secondary stages taken together (Grades IX-XII), however, increased from 21 in 1950/51 to 33 in 2005/06. In 2007/08, PTR was 33 at the secondary stage (Grades IX-X) and 37 at the higher secondary level (XI-XII) (SES, various years). According to SEMIS (2009/10), the PTR at the secondary level (Grades IX-X) was 21 in 2009/10; and it was 35 at the higher secondary level (Grades XI-XII).

All types of schools lack adequate infrastructure like drinking water, urinals, libraries and laboratories. In India, around 7% of institutions with secondary section do not have drinking water; around 13% do not have urinals; 29% do not have library; as high as 58% of them do not have integrated science laboratory facility within their premises. However, infrastructure in the State government funded institutions is relatively poor where 11% do not have drinking water facility; 16% do not have urinals; 40% do not have library; and 72% do not have integrated science laboratory.

Participation in secondary education also shows encouraging trends, at least in absolute terms. From 1.5 million in 1950/51, the total enrolment in secondary and higher secondary stage has gone up almost thirty times to 44.48 million in 2007/08. At the all India level, during the period 2000/01 to 2007/08, the average annual growth rate of enrolment at secondary and higher secondary stage was highest (7.06%) compared to that of the middle (4.23%) and primary stages (2.52%) (SES, various years). At the all India level, the Gross Enrolment Ratio (GER for combined secondary and senior secondary stages) increased steadily from 19.3 in 1990/91 to 44.81% in 2007/08.⁸ The GER at secondary stage (Grades IX-X) was 51.65% in 2004/05, which increased to 58.15% (50.87% in rural areas) in 2007/08. In 2009/10, the GER at the secondary level (Grades IX-X)⁹ was 58.5%; it was 60% for boys and 56.8% for girls (SEMIS, 2009/10)(Table 3). The GER at the higher secondary stage (Grades XI-XII) was 27.82% in 2004/05, which increased to 33.48% (19.22% in rural areas) in 2007/08. The GER at the higher secondary level was 27.855; it was 28.94% for boys and 26.66 for girls in 2009/10 (Table 4). At the secondary level (Grades IX-X), the GER was 52.47% for Scheduled Castes and 43.27% for Scheduled Tribes in 2007/08. At the higher secondary level (Grades XI-XII), the GER was 27.91% for SCs and 20.33 for STs (SSE, 2007/08).

⁸It may be noted that the GER figures for secondary stage (Grades IX-X) and higher secondary (Grades XI-XII) stages were not available separately until 2004/05 making it difficult to study their growth trends.

⁹As the SEMIS is in the early years of its implementation, less than 100% coverage of secondary and higher secondary level institutions in some states, particularly in the private sector is partly responsible for near stagnant size of the GER in 2009/10. Moreover, the total enrolment at the secondary stage here does not include enrolment in open schooling and distance education.

Table 3: Gross Enrolment Ratio (State/UT wise) at secondary level (grades IX-X) in 2008-09 and 2009-10

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

Source: Estimated based on SEMIS 2009-10

According to NSS 52nd Round (NSSO, 1998), the Gross Attendance Ratio (GAR) at the secondary stage (Grades IX-X) and higher secondary stage (Grades XI-XII) was 51% and 32% respectively. The GAR at the secondary stage (Grades IX-X) has improved to 70% (66% in rural areas and 85% in urban areas), and at the higher secondary stage (Grades XI-XII), it has increased to 48% (41% in rural areas and 65% in urban areas) in 2007/08 (NSS 64th Round).

Table 4: Gross Enrolment Ratio at the higher secondary level (grades XI-XII) in 2008-09 and 2009-10

States/Uts	GER in Grades XI-XII in 2008-09			GER in Grades XI-XII in 2009-10		
	Boys	Girls	Total	Boys	Girls	Total
Andhra Pradesh	21.36	18.10	19.77	23.39	19.76	21.62
Assam	19.50	19.11	19.31	20.66	20.51	20.59
Bihar*	1.39	0.99	1.20	1.66	1.26	1.47
Chhattisgarh	34.12	26.40	30.34	35.82	29.72	32.82
Delhi	49.42	50.59	49.96	54.18	56.14	55.08
Gujarat	31.48	27.25	29.50	32.19	27.50	29.99
Haryana	33.52	30.87	32.31	37.46	34.81	36.25
Himachal Pradesh	69.48	67.53	68.54	70.14	69.72	69.94
Jammu & Kashmir	34.54	27.76	31.26	38.00	32.24	35.21
Jharkhand	20.76	13.91	17.47	23.63	16.30	20.09
Karnataka	40.17	39.63	39.91	41.90	41.65	41.78
Kerala	40.67	50.69	45.59	43.26	54.03	48.54
Madhya Pradesh	22.91	16.47	19.86	24.82	18.31	21.73
Maharashtra	45.75	41.57	43.77	48.70	44.28	46.61
Orissa*	0.02	0.01	0.02	0.03	0.02	0.03
Punjab	38.56	39.79	39.11	41.18	42.53	41.79
Rajasthan	32.03	18.04	25.45	41.39	24.95	33.64
Tamil Nadu	52.36	62.17	57.13	56.04	67.34	61.53
Uttar Pradesh	18.14	16.25	17.26	17.17	17.73	17.43
Uttaranchal	47.58	47.30	47.45	55.70	53.30	54.55
West Bengal	26.91	21.31	24.20	32.15	26.15	29.24
NE States	30.81	28.91	29.89	32.32	30.91	31.63
All India	26.87	24.30	25.65	28.94	26.66	27.85

Source: SEMIS 2009/10.

Note: Unusual GER figures are because of low or nearly no coverage of institutions having grades XI-XII. This is partly because of the organization/structure of school education as higher secondary education is mostly managed by a separate board and forms part of intermediate/+2 colleges.

3.2 Regional, Gender and Social Disparities

Even after remarkable progress in secondary education, regional, gender and social disparities in access and participation continue to be a major concern. Although the share of girls in the total enrolment at the secondary and higher secondary (Grades IX-XII) stages has increased substantially

from 13.3% in 1950/51 to 42% in 2005/06, there still exists wide gap in the participation of boys and girls. In fact in 1950/51, only 16 girls per 100 boys were enrolled in classes IX-X, which increased to 73 in 2005/06 and 77 in 2007/08. Interestingly, more or less the same level of gender disparity in participation in secondary education (Grades IX-X) is seen among other social categories. In 2007/08, 76 SC girls/100 boys and 70 ST girls/100 boys were enrolled in secondary classes IX-X. Over the years, the gender parity indices, both at the secondary and higher secondary stages have also improved significantly. In 2007/08, the Gender Parity Index (GPI) in participation was 0.84 and 0.85 respectively at the secondary (Grades IX-X) and higher secondary (Grades XI-XII) stages (SES, 2007/08).

3.3 Internal Efficiency

The internal efficiency of the secondary education is another major development concern. However, the repetition rates at the secondary and higher secondary stages are found to be somewhat lower at 5.5% and 3.5% respectively (NSSO, 2010)¹⁰. According to SEMIS (2009/10), the repetition rate in grade IX in 2009 was 8.1% at the secondary level; it was 7.4% for girls and 8.3% for boys. The dropout rate in Grade IX between 2008/09 and 2009/10 was 4.9% (3.7% for girls and 5.9% for boys) (NUEPA, 2011). If one considers the secondary level (Grades IX-X), the repetition and dropout rates would be substantially high.

3.4 Public Investment in Secondary Education

The imbalance in the pattern of public expenditure within the school education sector in India is clearly visible. While India spends around 62% of its planned education budget on elementary education, secondary education receives only about 16% of this budget (2008/09, BE). In fact, the share of secondary education in the total planned expenditure on education was around 11% (in 2005/06) prior to the launch of several centrally sponsored development programmes RMSA 2009.

7.The unit for collecting data on repeaters is the household and not the school

4. Proposed Interventions and Targets for 12th Plan

4.1 Access and Participation

Last decade has witnessed phenomenal increase in enrolment of children in schools putting tremendous pressure on investing resources to enhance access, equity and quality in school education at elementary and secondary level. 241,911,360 children were enrolled in schools as on 30th Sept.2008 demonstrating a big jump from an enrolment of 202,500,000 in the year 2004-05, in just a matter of three years. This definitely marks a major achievement of development planning in education during the last decade.

Yet, many challenges have to be addressed in order to achieve the goal of universal quality secondary education as a right of every child in the country. In the present Plan period, the issues of access and participation are being addressed mainly under the overarching scheme of RMSA . In view of the fact that RMSA and other related Schemes such as Model schools, Construction of Girls Hostels was launched in the 11th Five Year Plan and has been in operation for a very short duration of 2-3 years, the sub-group recommends their continuation for the 12th Five Year Plan.

Other schemes such as Inclusive Education for Disabled at Secondary Stage (IEDSS), National Means-cum-Merit Scholarship, National Scheme of Incentive to Girls for Secondary Education, that mainly aim to address the issues of equity are equally helpful in achieving access and participation of different categories of learners and therefore they need to be continued in 12th Five Year Plan.

4.1.1 *Rashtriya Madhyamik Shiksha Abhiyaan (RMSA):*

The strategy under RMSA is to enhance access to secondary education and to improve quality, while ensuring equity, through strengthening of existing secondary schools or establishment of new secondary schools. The scheme being implemented in partnership with State Governments envisages: (i) provision of necessary infrastructure and resources in the secondary education sector to create higher capacity in secondary schools in the country, and for improvement in quality of learning in the school; (ii) provision for filling the missing gaps in the existing secondary schools system; (iii) provision of extra support for education of girls, rural children and students belonging to SC/ST, minority and other weaker sections of the society; and (iv) a holistic convergent framework for implementation of various schemes in secondary education. Equity aspects are addressed through (i) special focus in micro planning (ii) preference to Ashram schools in upgradation (iii) preference to areas with concentration of SC/ST/Minority for opening of schools (iv) special enrolment drive for the weaker section (v) more female teachers in schools; and (vi) separate toilet blocks for girls.

Improvement in quality is aimed through, (i) appointment of additional teachers to reduce PTR to 30:1, (ii) focus on Science, Math and English education, (iii) In-service training of teachers, (iv) science laboratories, (v) ICT enabled education, (vi) curriculum reform in states/UTs; and (vii) teaching learning reforms (viii) Excursions for students and teachers to learn from other sites (ix) Science Exhibitions and Book Fair, (x) examination reform in states/UTs, etc.

Therefore, for 12th Five Year Plan the sub-group proposes continuation of the scheme with following recommendations:

- It is evident that RMSA so far has been able to build an environment for focussing and addressing the issues of access, equity and quality in secondary education. However, during its implementation some limitations /gaps have been observed (already discussed in chapter III), which have delayed the achievement of targets set for 11th plan. The scheme of RMSA was launched in 3rd year of plan period i.e. 2009-10. The approvals under the scheme for first 2 years were accorded mainly at the end of the year. Hence the fund flow under the scheme has also been very limited and the States have not been able to avail as much benefit from the scheme as was envisaged. Also RMSA is the first scheme that was ever launched to support secondary schooling. In view of huge gap of available secondary schools and growing demand for secondary school in the RTE environment, it is recommended to continue the current sharing pattern of 75:25 and include special category States for 90:10 along with NE in the 12th Plan period
- **Extending the provision of RMSA scheme to Govt. Aided schools.** -20.55% of secondary schools in the country are govt. aided schools which provide secondary education to a large number of children of the age group 14-17 years. In many of the States such as- Maharashtra, West Bengal, U.P., Gujarat etc govt. aided schools are major service providers of secondary education. It has been observed and has also been reiterated by most of the States that non- coverage of aided school under the ambit of RMSA would significantly hinder achievement of the goal of universal access to secondary schools. It is proposed that aided schools be considered to be covered under the scheme for 12th Five Year Plan for support(both NR and recurring). However, states/UTs must ensure that all the governments' schools have been covered prior to providing infrastructure support to these aided schools.
- **Enhancing the ambit of RMSA to cover Higher Secondary Schools:** To achieve the set target of 75% GER at higher secondary level, it is essential to provide support to higher secondary schools. With coverage of about 60% of govt. secondary schools till 2011-12, a platform has been set where the coverage of scheme needs to be enhanced to include higher secondary schools. Hence, for 12th plan, the sub group strongly feels that support under RMSA be extended to higher secondary schools also. More so in view of the fact that the schemes that are being proposed for convergence under RMSA such as IEDSS, ICT and Vocational Education cover higher secondary also under their ambit. Excluding them under RMSA will lead to an avoidable anomalous situation.
- **Provision for residential schools/hostels for existing schools:** To enhance access and participation of children from difficult, hilly and sparsely populated areas and **most importantly districts afflicted with civil strife**, residential schools/ providing hostels for both boys and girls in already existing secondary schools is necessary as also being the only viable option. As a graded step, till such hostels are established, transportation as a specific component under RMSA must be factored in to provide immediate remedial measure at least in highly disturbed or geographically remote areas.
- **Adoption of State Schedule of Rates (SSOR) for civil construction under RMSA:** Under the schemes of Girls Hostels and Inclusive Education for Disabled Students (IEDS) implemented for secondary schools, the civil works is sanctioned to States as per SSOR. However, RMSA provides civil construction at normative costs (Rs. 46.25 lakhs for classroom, Rs. 5.10 Lakhs for science laboratory) .All the States/UTs have expressed their difficulty in carrying out the construction work at these rates as they do not account for differential rates in different parts of country/ States. Some of the states like A & N, Maharashtra, Karnataka have gone to the extent of not taking up construction related activities under RMSA due to this hurdle which has resulted in avoidable delays in achieving the set target of 11th Plan regarding strengthening and opening of new

schools. Sub-group strongly recommends adoption of SSOR for all civil work activities like strengthening of infrastructure in existing schools, construction of new schools building, teacher quarter etc, subject to a maximum of 50% of total outlay of the States/UTs. Presently there is a limit for major repair of the existing building, Rs. 4.00 lakhs per school for 2 section school (4 classroom school) and Rs. 2.00 lakhs for 1 section secondary school (2 classroom school). It is recommended to enhance the limit for major repairs up to 60% of the unit construction cost.

- **Inclusion of provision for building for building less school:** Presently, due to various factors there are schools with no building or dilapidated to the extent that they are uninhabitable and RMSA at present has no provision for providing any support to such buildings. To ensure universal minimum basic structure for a secondary school, provision for support to such schools should be taken up under RMSA.
- **Financial ceiling on infrastructure support for existing secondary schools to be waived off:** Since the inception of the programme, aim was to follow whole school approach for providing infrastructure to existing schools to ensure that any school covered in a year should take its full complement of gap filling measures. This not only ensures financial efficiency but also systematic allocation of resources and easy monitoring. However, due to prevailing financial ceiling, this approach could not be followed in its essence, depriving many schools of minimum infrastructure. Sub group recommends removal of financial ceiling and school wise sanctioning of infrastructural support as per enrolment.
- **Enhancing school grant upto Rs. 1 lakh per school from the existing Rs. 50,000 per school per annum:** While implementing the plan, the States experience difficulty in meeting the demands for different activities to be carried out in schools from the school grant. A wide variety of activities are catered to by the grant , which includes electricity bill, water bill, school office contingencies, book and periodicals, laboratory consumables, conducting annual day, sports day, organising co-curricular activities , purchase of music or other work experience related consumables etc. In view of the inadequacy of the amount, it is proposed that the grant may be enhanced upto Rs. 1 lakh per school.
- **Provision of student's furniture@ Rs.700/- per student:** For upper primary section, the provision of furniture has been mandated under RTE 2009 Act to ensure healthy and friendly environment at school. The availability of furniture at secondary level is even more important given the nature of subjects which engage secondary stage students in activities and more writing work. It is recommended that a separate provision for furniture for students to be made with the unit cost of Rs.700 per student to ensure enabling environment at schools. The sanctions may be accorded after proper assessment of gaps by SMDC.
- **Provision of Untied fund of Rs. 100 lakhs at district level for activities aimed at improving quality in schools:** The focus in the 12th Plan period for secondary education is on **innovative practices** which could lead to improvement in quality of education in schools. The present framework has no specific provision for the same, hence, to promote pilot innovative projects including their further upscaling an initial provision of upto Rs. 100lakhs may be provisioned for each district.
- **Mid-term Impact Assessment** Third party evaluation of performance under various initiatives should be undertaken for which a panel of agencies across implementation levels need to be identified and requisitioned for carrying out the evaluation and impact study. A generic Framework for assessment based on envisaged outcomes must be designed which can be customised at the State level with reference to specific scheme and its expected outcomes.
- **Perspective planning and rationalisation of Allocation:** As regards allocation of funds and its rationalisation it is recommended that every state should prepare a perspective plan not only in terms of physical targets but the year wise budget estimates

that it would provision under State budget for RMSA. This would enable the states as well as Central Govt. for optimal planning and allocation of resources among the states (including consideration of crucial indicators).

4.1.2 Subsuming of different schemes like IEDSS, ICT@schools, Girls hostel and vocational education under the umbrella of RMSA:

Schemes such as IEDSS and Girls' hostels target are being implemented with their own specific objectives of addressing equity goal. Running these schemes in silo mode creates avoidable hurdles in holistic planning and implementation of the schemes. Separate appraisal and approval mechanism for these schemes are resulting in duplication of efforts at State and National level. The same is true for other schemes aiming at quality such as Vocational Education and ICT@schools. Given the common broader goals of all these schemes the need is to converge them under the broader overarching programme of RMSA. Similar approach of subsuming NPEGEL, KGBV and IEDS under SSA has been adopted. Hence, to ensure administrative efficiency and optimal utilisation of resources, it is proposed that these schemes be subsumed under RMSA. Necessary modifications in RMSA framework proposed are:

- One integrated Plan proposal for all the interventions under Secondary sector to be appraised and approved.
- Construction of Girls' hostel and Scheme for Vocationalisation of Secondary Education be subsumed under the RMSA without any modification and with their existing sharing pattern.
- Specific components of the schemes like support to CWSN under IEDSS, hardware & software under ICT @ school continue as components under RMSA with the overall sharing pattern of RMSA.
- Provision of new toilets for children with special need be sanctioned only if the conversion is not possible or new toilets are not sanctioned under RMSA. It has to be ensured that among new toilets sanctioned under RMSA, at least one toilet should be made accessible to CWSN. This way duplication of resource allocation could be avoided.
- Teacher training components of in-service teachers training and induction training is provisioned in all the 4 schemes RMSA, IEDSS, ICT & Vocational education. It is proposed that this component be clubbed together and provision be made @ Rs. 500 per teachers per day. Duration of in-service teacher training to be enhanced from five days to 10 days infusing ICT concerns and IEDSS concerns in subject-specific training (as per the emerging curricular and pedagogic vision). Number of days for induction training to be increased from 10 to 20 days following the same approach. Different training modules can be prepared for different trainings but it would be mandatory to include content on handling CWSN in class, training on ICT and vocational aspects in all these programmes.
- **Convergence of efforts with other Ministries:** It is proposed that for Schools with playground provision for a full time sports teacher will be made available under RMSA. As also Schemes dovetailing of efforts under various interventions relating to Ministries of Culture, Social Justice and Empowerment, Tribal Affairs and Minority Affairs
- **The present resources for MMER activities to be enhanced to 6% of outlay:** Presently, under RMSA the funds provided for management, monitoring evaluation and research including community mobilisation is limited to 2.2% of the outlay. In view of long list of activities to be carried out, the funds available for MMER is too less. The problem is further aggravated for small districts/UTs. Hence it is proposed that the ceiling of MMER activities be raised to 6% (converging

provisions for varied existing MMER in afore mentioned schemes) and for smaller districts minimum Rs. 50 lakhs to be made available per district and the ceiling be applicable at national level.

- **Support to out of school children through open schooling:** At secondary level open and distance schooling system plays a critical role in providing access especially to disadvantaged group. Presently under the framework no guidelines has been formulated on the support for education through open school. It is proposed that students of disadvantaged segment like SC/ST and girls may be provided support by strengthening of NIOS system (as proposed separately in this chapter). However, a detailed and well thought out plan needs to be developed for mobilisation and publicity of open school as one of the options available for secondary and higher secondary education

Note: Financial projections keeping in view the aforesaid proposals are given in this chapter and chapter VIII respectively.

4.2 Model Schools: The scheme of Model Schools launched in November, 2008 to set up 6000 Model Schools, at the rate of one school per block as schools of excellence with a target to set up 3500 schools in Educational Backward Blocks (EBBs) (set up and managed by the State government) and the remaining 2500 schools to be set up and managed through PPP mode. A model school will have excellent infrastructure and facilities which will be at least of the standard of Kendriya Vidyalayas and with stipulations on pupil-teacher ratio, ICT usage, holistic educational environment, appropriate curriculum and emphasis on output and outcome. These schools will work as pace-setting institutions and support system to other secondary schools in that area (mostly rural) addressing the issues of contextual curriculum and pedagogic practices for secondary stage learners belong to EBB.

The scheme is proposed to be continued in the 12th plan with no modification. Financial Projection for 12th Five Year Plan is 31658.96 Crores.

4.3 Open Schooling

4.3.1 The Vision

The open schooling system is meant to supplement and complement the formal system to provide “education for all”, especially for educational development of disadvantaged groups, particularly the scheduled castes (SCs), the scheduled tribes (STs), minorities, other backward castes (OBCs) and differently-abled people. The Open schools in the country (NIOS and the State Open Schools) would have to take up this agenda vigorously so that vulnerable sections of the society and those living in difficult contexts may also reap the benefits of education. The basic philosophy of such approach is to reach the unreached and unreachable.

To improve Vocational Education and Training (VET), National Knowledge Commission'(NKC) recommendations focus on increasing the flexibility of VET within the main-stream education system. NKC has also emphasized the need to expand capacity through innovative delivery models, including robust public private partnerships. Given that only seven per cent of the country's labour force is in the organised sector, enhanced training options available for the unorganized and informal sector will be critical for enhancing the productivity of the bulk of our working population. It is necessary to ensure a robust regulatory and accreditation framework, along with proper certification of vocational education and training. This will allow easier mobility into higher education streams seamlessly and enhance the value of such trainings. The National Institute of Open Schooling (NIOS) provides opportunities to interested learners by making available the vocational courses through open and distance learning (ODL) mode. For the vocational education **blended learning** approach, using both

open distance learning methodologies and hands on training, is followed. Considering the magnitude of the challenge in terms of the skilling approx. 500 million by 2022, the need of the hour is to pool all the resources and provide skill training in all the possible modes, be it face to face or through distance learning. The NIOS, State Open Schools and other open distance learning institutions may be linked with the State skills development centres to achieve the target of skilling approx. 15 million persons every year.

It has often been observed that more than 57% of the present enrolments at the Secondary level courses of NIOS are of students between the age groups 14-18 years and about 30% of the total enrolment is in the age group of 14-16. Further, more than 72 % learners are in the age group of 14 to 20 years and more than 92% from the total enrolment are within the age bracket of 14-25 years are currently participating in the open schooling programmes, thereby indicating that mostly the vulnerable youths who otherwise cannot participate in the formal schooling system or even drop out due to various socio-economic reasons tend to avail education through this system.

At the beginning of the XIth Plan 10 States had initiated setting up of State Open Schools (SOS). NIOS spearheading the mission through the National Consortium of Open Schools (NCOS), provided technical and financial support to the states of Gujarat, Himachal Pradesh, Bihar, Uttar Pradesh, Chattishgarh, and Assam facilitating the opening of SOS. Efforts have also been made to open SOS in the states of Goa, Jharkhand, Maharashtra, Orissa, Meghalaya, Manipur and Uttarakhand.

4.3.2 Perspective Plan for XIIth Plan

If the open learning system has to cater to 15 % students in secondary education, it should develop a capacity to provide education to 1.20 crore children in the age group of 14-18. NIOS at present enrolls more than 4.8 lakh students annually with a total cumulative enrolment of 2.2 million learners currently both for secondary and Sr. Secondary level. It is proposed to raise the cumulative enrolment in NIOS to 25 lakhs by the end of Twelfth Plan. But it is proposed that major bulk of enrolment should be burdened by the State Open Schools with the target of about 1 million learners to support RMSA. It is in this context, the NIOS should largely function as resource organisation to help in creating State Open Schools (SOSs) and strengthen them by organising capacity building programmes and undertaking systemic researches.

Access, Equity & Quality in Open Schooling

Up-scaling Open Schooling System: It is imperative to upgrade and strengthen the infrastructure of NIOS at national level and establishing a systemic linkages with SOSs under RMSA to improve the outreach of open schooling programmes to all parts of the country with special focus on skill development, vocationalization of Secondary and Sr. Secondary Education and increase the presence of open learning system in 148 educationally backward districts of the country. The existing 16 State Open Schools need to be strengthened by providing infrastructure grants to help them increase their enrolment. Steps are required to be taken on priority basis to set up SOSs in the remaining 13 States.

Increasing Access: In order to meet the target of enrolling 1.20 crore students in the Open Schools, a significant action point is to increase access. The following steps are envisaged in this context:

- In order to increase enrolment from 2.2 lakhs to 25 lakhs in NIOS by 2016-17, the number of Study Centres is proposed to be increased from 3300 to 4500. NIOS proposes to set up its Study Centres in all the Kendriya Vidyalayas, Navodaya Vidyalayas, selected CBSE schools, Govt. Schools in the states located in backward region etc. so that the infrastructure available in these schools could be optimally used.

- Norms for Study Centres/Accredited Institutions will need to be revised. Selected Accredited Vocational Institutions may be allowed to act as Academic Study Centres for academic programmes, too.
- In order to achieve the target of enrolling 1 million students in SOSs, the State Governments will need to be persuaded to set up 18,000 Study Centres in a phased manner.
- A strong linkage needs to be established with the formal education system for sharing of resources available in the schools after the school hours, be it physical and human resources in a complementary principle. The open schools should undertake activities related to strengthening the physical infrastructure in the remote and in-accessible locations for quality improvement.

Promoting Equity with Inclusive Education: In order to promote equity and inclusiveness, the following steps are envisaged during XIIth plan:

- In order to increase access to Muslim minority students, steps are being taken for setting up study centres in Madarsas and Maktabas under the SPQEM programme.
- NIOS has been offering its Secondary courses in 6 regional languages as mediums. It offers 17 languages as subjects at Secondary level. It is envisaged to offer more languages as subjects as well as mediums in a phased manner as per emerging demand. When SOSs are set up in all the states, the Regional Languages will be taken care of by the respective SOS.
- Efforts to set up more Study Centres in Educationally Backward Districts/Blocks as well as special regions/states like the North East and other hilly and hard to reach regions.
- Courses can be made more equitable (as also relevant) by introducing elements of work education and integrating skill development with academic courses that may help in livelihood and poverty alleviation. NIOS offers one vocational subject along with academic subjects at the secondary and the senior secondary stages. This option will need to be strengthened by making available more choices in vocational subjects that are relevant in today's market economy.

The **Hunar Project** for Muslim Girls has been launched in Bihar and Delhi. It may be extended to all the states in a phased manner and to other socio-economically backward girls.

Special Programmes will need to be developed for **differently-abled learners**. The network of Special Accredited Institutions for the Educationally Disadvantaged will be strengthened through greater participation of NGOs and expanded for special needs groups and weaker sections of the society.

Ensuring Quality: Quality assurance measures in Materials and Methods are required to be taken on priority in order to place Open Schooling on a sound pedestal. The Open Schools should ensure requisite inputs that are inherent in the philosophy of Open and Distance Learning (ODL) system. The ODL is a new paradigm with some elements of shift such as

- From classroom to anywhere.
- From teacher centric to learner centric.
- From teacher as an instructor to teacher as a facilitator.
- From mainly oral instruction to technology aided instruction.
- From fixed time learning to anytime learning
- From 'You learn what we offer' to 'we offer what you want to learn'.
- From education a onetime activity to education as lifelong activity.

Accordingly, while developing the strategy plan for institutional reforms and strengthening of resource Institutions, emphasis needs to be laid on strengthening NIOS as national level resource institution. While discussing on the issues related to quality assurances in school education, the NCF 2005

states that “the indicators for quality in various aspects of school education may be prepared by NCERT for formal schooling **and by NIOS for open schooling**. The quality assurances are needed in all aspects of school education right from the curriculum, syllabi, textbooks, teaching-learning strategies, evaluation of students, planning, monitoring of implementation, infrastructure and other resources, and training of functionaries.” It is essential in the context to develop the Curriculum Framework for Open Schooling (CFOS) based on the principle of NCF 2005, with in-built mechanism on flexibility and adult learning.

4.3.3 Schemes for XIIth Plan for Open Schooling

Keeping in view of the perspective as outlined for the 12th Five Year Plan, the following schemes are being proposed in the context of strengthening Open Schooling system in the country.

1. Strengthening & Setting up of State Open Schools (SOS).

The objectives of open schooling programme are basically to derive from the guiding principles of education at secondary and sr. Secondary level i.e. (i) Universal Access, (ii) Equity and (iii) Social Justice and giving a pathway to the learners for higher education or entering into the livelihood.. Hence, the system recognises the need for developing special programmes to bring the out-of school children, especially girls and children from disadvantaged sections, to the secondary and sr. secondary education system. Despite massive expansion of educational facilities in school education in recent years, a large number of the adolescent and the youth in the concerned age groups are unable to take advantage of formal schooling during stipulated school hours that often coincide with the productive labour required in rural areas for agriculture and in urban areas for a variety of income generating activities, particularly for lower middle class and poor families. It is necessary to design, create and establish alternative educational provisions for such prospective learners using open distance learning (ODL) mode in a more flexible framework.

It is imperative, therefore, that the states not having open schooling facilities need to gear up for setting up of SOSs and also wherever the states have such provision it require to be strengthened. The 16 states such as West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, Madhya Pradesh, Rajasthan, Haryana, Punjab, Jammu & Kashmir, Gujarat, Himachal Pradesh, Bihar, Uttar Pradesh, Chhattisgarh, and Assam have already notified for setting up of the SOS. While steps will be taken to make them effectively functional during XIIth plan period, efforts will also be made to open 13 more new SOSs in the states of Arunachal Pradesh, Goa, Himachal Pradesh, Jharkhand, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tripura and Uttarakhand. This will require extensive as well as intensive advocacy along with provision of funding to State Open Schools .

Apart from providing technical consultancy to States for setting up Open Schools, areas where NIOS can, and will need to support the State Open Schools are: i) standardizing the curricula and helping them to develop contextualized study materials and ii) Capacity Building of the functionaries involved in designing curricula & developing study materials as well as tutors, coordinators, etc. iii) undertaking systemic research in the context of quality assurances and support service network.

To carry out all the above listed tasks, a budget out lay of **Rs. 210 cores** is proposed for the XIIth Plan period.

2. Developing Open Schooling Curriculum Framework based on NCF2005:

The Open Distance Learning (ODL) primarily promotes self-learning with minimum face-to-face learning support. The primary characteristic of the system is based on its inherent quality of flexibility in the context of choosing subjects, deciding pace and place of studies, selection of instructional inputs, etc. The Open Schooling Curriculum Framework is a road map to achieve national objectives of individual empowerment through education for all and, through it, to achieve national regeneration. It is proposed to develop a framework on curriculum specific to open schooling, both at the national and state level, based on the basic principle of NCF 2005.

Rs. 5 crores is proposed for the activities during the Plan period.

3. ICT for Open Schooling:

Some of the emerging trends in ICT which are required for educational institutions like NIOS and other state open schools, for capacity building and for improving educational programmes. are mentioned below.

The following are the thrust areas for ODL/ICT interface:

- With ICT inputs, develop Self-paced learning packages that enable learners to work individually on the basis of print material supplemented by audio and video cassettes, CDs, DVDs etc.
- Mixed-mode study (Blended Learning) that allows self-study to be supplemented with group-work, workshops, tutorials and other structured activities.
- On-line study that allows the learner to use on-line resources on computer, via internet. This may be in self-study mode and interaction with peers and teachers through chat, e-mail, web-cam, voice-mail, etc.
- Video conferencing at a convenient location for close interaction with the teacher without having to travel long distances.
- Audio conferencing which use telephone to communicate with teachers, tutors, and peers.
- Web based and e-learning support with the help of Open Education Resources (OER).

To carry out all these activities to support open schooling system in the country a sum of **Rs. 30 crores** is proposed during the Plan period for both infrastructural building and software development.

4. Examination Reforms

NIOS offers opportunities to its learners to appear in public examinations twice a year (April- May) and (October-November), so also a few State Open Schools. It is necessary to enhance the credibility of the examination system in order to gain respectability and acceptability for the open schooling system. The open schooling system needs to develop a comprehensive credible examination system with support from formal education system for improving the quality of examinations and for this there is a requirement of augmenting the infrastructural support using ICT for monitoring and supervision of the examination system.

One of the significant initiatives of NIOS is the provision of On Demand Examination (ODE) throughout the year. The stress of taking all subjects at a time on fixed dates is considerably reduced under ODES. An important dimension of the On Demand examination is the medium in which the question paper is generated. At present, the paper is bi-lingual – the question papers are being generated in English and in Hindi mediums. The On Demand Examination System (ODES) can also be expanded to include the Vocational Education Subjects in future. The SOS system needs to develop such mechanism in introducing the on-demand examination for the courses they have been offering.

To carry out all these activities a sum of Rs.10 crores is being proposed under the plan period.

5. Strengthening NIOS as Resource Institution:

Enriching Student Support Services Network:

In an open distance learning system the student support service is mostly provided through the network of institutions, otherwise known as study centres, and created through the formal education system. The study centres constitute the major mode for transacting content through organising personal contact programmes. These study centres shall have to set their target to provide facilities for individual or group tutoring and academic guidance/ counselling. These centres could act as information centres, resource consultation centres, and tutorial and counselling centres. Resource Centres and study centres have a very crucial role to play for facilitating learning for the distance learners in the context of open schooling. Qualified Counsellors should be available at study centres to guide students and help to minimize drop-out rates.

As different States strive to meet increased expectations for student's achievement, there is a growing understanding that learning happens in many places and that school alone cannot meet the learning needs of children. Consequently, there is an increased willingness at the national, State and local levels to consider how the kinds of support conventionally found outside schools can complement learning in schools and collectively result in better outcomes. This is possible only if an effective partnership is built linking community to education. This is possible by tapping the community resources through NGOs/ local schools by making them partner in the education system. The Community schools need to take a holistic approach to improve student's achievement, not only by providing quality instruction but also by offering a wide range of on-site support, services and after-school activities. The Community schools can act as a hub for a broad range of services and opportunities that can strengthen and support schools, families and communities. The Community School Partners should include parents, students, school staff, health and social service agencies, volunteers, business organizations and other community members who are interested in extending help in making the communities grow and flourish. Community Schools will offer a new centre of activity in neighbourhood to get together for educational, social, recreational and cultural activities. During the plan period it is proposed establish 148 Community Schools in the Educationally Backward Districts in the country by augmenting the whole school Development Plan.

A sum of Rs.30 crores is being proposed for the purpose during the Plan period.

6. Setting up of Regional Centres of NIOS:

The NIOS has set up only 11 Regional Centres till XIth Plan Period. In some of the Regional Centres the student strength is more than 80,000 with more than 700 study centres. Hence there is an urgent need to establish at least one Regional Centre in every State, with special focus on North-Eastern region in the country. It is proposed to set-up at least one New Regional Centre in 19 un-served states such as Arunachal Pradesh, Chhattisgarh, Gujarat, Goa, Haryana, Himachal, Jammu and Kashmir, Jharkhand, Karnataka, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Sikkim, Tamil Nadu, Tripura and Uttarakhand during the XIIth Plan period.

For the purpose a sum of Rs. 47.5crores is proposed during the Plan period.

7. Strengthening of the Resource Base

Keeping in view of the task assigned to the NIOS to emerge as a national level Resource Institution in Open Schooling, after it was re-named as National Institute of Open Schooling, there is a need to have major restructuring of its resource base and strengthening of the existing structure in terms of new tasks assigned to it by means of undertaking training and research activities for the system.

Creation of following three new Departments and two Cells are proposed in the context during the XIIth Plan period:

Department of Capacity Building

Training of the functionaries on a continuous basis has been seen as an integral part of the ODL system. Training should not be also seen as only one sort approach. It is essential to develop a systemic mechanism for the purpose. It is in this context, it has been proposed to establish a Department of Capacity Building in NIOS. with the following objectives:

- Undertake capacity building in the areas of Open Schooling
- Prepare planning and policy documents for NIOS and Open Schooling system in India
- Publish research reports, journals, and news papers
- Develop training materials for Open Schooling
- Coordinate the activities of National Consortium for Open Schooling (NCOS)

A budgetary provision of **Rs.5 crores** is being proposed for the purpose during the Plan period.

Department of Research & Development:

Research and Developmental activities, evolving innovative educational practices are the backbone of an educational system, including that of the ODLS. It is necessary to strengthen the system and explore new avenues of growth and development. Identification of certain priority areas for undertaking research are:

- Standards of open school curriculum need to be tested and verified through research studies.
- Identification of the academic, professional and vocational education courses to be developed and offered.
- Development of course materials, especially with ICT application, and assessing their efficacy through experimental and follow-up studies.
- Development of formative and summative models for evaluating performance of distance learners with the help of well designed experimental studies.
- Experimentation on alternative models/systems of evaluation based on changing needs and problems of learners under ODL system.

It is proposed to set up a Department of Research & Development in the institute.

A sum of **Rs. 5 crores** is being proposed during the Plan period for the purpose.

Department of ICT and Media

NIOS is the first national open and distance learning (ODL) organisation at school level using ICT for bringing major structural and functional transformation of its basic operations of Admission, Examination and Accreditation under the project NIOS Online and On Demand Examination System (ODES) by making the system learner centric.

It also provides the Technical Support on i) Processing and Managing the Data of about one lakh learners for the project Hunar, ii) Processing and Managing the Data of more than one corer learners for NLMA, and iii) Providing support for development of the ICT based course.

Media programmes are on use for telecast/broadcast and used in Personal Contact Programme (PCPs). A 24x7 Educational Channel (Vidya Darshan) has long been contemplated as a collaborative effort by CIET (NCERT) and NIOS for school education. This channel will further enhance the use of

ICT for making learning more effective. NIOS may also make use of **Community Radio** as well as **Mobile Technology** for enhancing learning and E-learning materials and Open Educational Resources to be increasingly used. Hence a proposal is being made to set up a new Department of Information & Communication Technology and Media during the XIIth Plan for which **Rs.7.5 crores** is being proposed.

Open Adult Education Cell

Outcomes of a literacy programme have so far been confined to ascertaining number of adults made literate. The Literacy tests have been administered to find out whether adults have reached the prescribed norms laid down for determining reading, writing and numeracy skills. Since Saakshar Bharat (SB) focuses on the need for literacy to empower women, NIOS has been identified as certifying institution to assess the level of literacy of target group and certify them open a gateway for availing basic education through equivalency programme. During the current Plan period a target has been fixed to certify 10 million adult literates at the level of basic literacy.

Another characteristic of SB is the emphasis that it lays on equivalency. As adults, progress with their learning, it is possible that a section would like to enter the formal stream of education or even be interested to join in the regular stream of employment. It would therefore be necessary to design an educational programme that recognizes the knowledge and skills these adults possess, acknowledges and accredits them so that they can enter the formal stream of education at an appropriate level. Besides developing suitable equivalency tests, appropriate curricular materials would have to be developed that are in consonance with adult needs and interests. Such materials would also need to keep in mind the pedagogy of adult learning, particularly women's leaning needs and learning styles.

A sum of **Rs. 2.5 crores** is being proposed for the Cell during the Plan period.

Cell for Teachers' Professional Development:

As per the RTE Act, the teacher deployed at the elementary level, if not possess minimum qualifications as lay down under the Act, shall acquire such minimum qualifications within a period of five years. It has been estimated that about 6 lakhs teachers (about 20% from the total teachers) working at elementary level in various states are still to obtain a training certificate in commensuration with the level. It is in this context, the NIOS has been entrusted with developing an in-service training programme titled "Diploma in Elementary Education (D.El.Ed.)" for training of untrained teachers in the country at elementary level. The process of course development is currently being taken with the support from the resource institution. The implementation of the programme needs greater support in terms of both manpower and resources.

It is in this context it is being proposed to set up a cell for Teacher's Professional Development in NIOS for which a sum of **Rs. 2.5 crores** is being proposed.

Strengthening of Academic & Vocational Departments

The Academic and Vocational Departments are responsible for designing the curricula and developing study materials for the Academic as well as Vocational Programmes. In Secondary, there are 27 subjects offered (17 languages and 10 non-language subjects), while in Sr. Secondary there are 21 subjects (4 languages and 17 other subjects). New subjects that are relevant to the changing times need to be introduced from time to time. In addition, there is the Open Basic Education Programme offered at 3 levels with 13 subjects in all; a new initiative is to develop a Teacher Education Programme (D.El.Ed.) for untrained teachers at elementary stage is also in progress under the department.

Similarly there are more than 80 vocational courses are being offered in the areas of Agriculture, IT, Engineering & Technology, Health & Paramedical , Business & Commerce, Home Science and Teacher Education, etc. Apart from course development, the academics are also involved in developing media inputs, assessment of student performance and monitoring of contact sessions. Strengthening of the department in terms of faculty support is essential in the context. A sum of **Rs. 5 crores** is being proposed during the Plan period.

Financial Projection for the 12th Five Year Plan is 360 crores (Annexure IX)

4.4 Equity:

Quality must also be judged in the mirror of equity. An education system characterised by gender inequality or discrimination against particular groups on ethnic or cultural grounds cannot be considered to be of high quality.

4.4.1. Gender Inequality: 'The Position Paper of the National Focus Group on Gender Issues in Education,(NCERT,2006)' points out that the overall enrolment of girls has increased, the dropout rate of girls from marginalised and rural sections, especially from the upper primary level upwards is extremely high. A sizeable proportion of out of school dropouts, chiefly migrant, poor and working children, are girls – school discontinuation rates of rural girls are twice as high as that of boys. Thus, the likelihood of an urban girl continuing in school is low, and of a rural girl reaching Class XII very unlikely. In real terms, what matters is not just access or enrolment but retention. While high costs of education is a social reason for poorer children not enrolling or dropping out of school, studies show that school factors are also responsible. The major reasons why children, both boys and girls, in both rural and urban area drop out are lack of interest in studies, hostile environment, poor teaching, non-comprehension, difficulties of coping, etc. Studies in general cite school and teaching curricula related factors such as unfriendly atmosphere in schools, doubts about the usefulness of schooling and inability to cope with studies as reasons for significant number of drop outs. Therefore, despite all the efforts of the education system to include girls, the system is “pushing out” those who are within, making it clear that issues of curriculum and pedagogy require critical attention in addition to enrolment.

Gender has to be recognised as a critical marker of transformation, and must become an important organising principle of the national and state curricular framework as well as every aspect of the actual curricula. Secondary stage curriculum should enable boys to question their own socialization into masculinity, and start the process of change in their personal relation and domestic life.

4.4.2. Deprivation of the Marginalised Groups: While an unprecedented rise in enrolment is evident of strong demand for education among the SC and ST, accessing basic school is as yet a massive problem. Though school participation rates have increased but attendance rates are quite unsatisfactory at the elementary level which is still worse at the secondary stage. Drop out, failure and low scholastic achievement affect SC and ST to a far greater degree than general category school children.

Many of our schools now have large numbers of first generation learners. They would be completely dependent on the school for inculcating reading and writing skills and nurturing a taste for reading, and for familiarising them with the language and culture of the school, especially when the home language is different from the language of school. Many such children are also vulnerable to conditions prevailing at home, which might make them prone to lack of punctuality, irregularity and inattentiveness in the classroom.

The cumulative impact of enrolment of the diverse group of children in schools leads to low rates of school completion. Gender disparities are conspicuous on all educational indicators revealing the under-education of girls. Gender and class along with tribe and caste constitute fundamental categories of exclusion. Furthermore, significant inter-state, inter-regional and rural-urban disparities exist in many states and regions. Intra-caste and intra-tribe variations are also sharp and indicate that the relatively more marginalised of SC and ST groups experience gross educational deprivation. Scheduled tribes appear to lag behind the Scheduled Castes in most States barring largely the North – Eastern regions, due to specific socio-historical factors.

School curriculum and pedagogy must provide opportunities for every child's learning and her free, creative and multidimensional development. The culture and experiences that the SC or ST Child brings to the school must be integral to an egalitarian teaching learning process in fulfilment of the goal of a meaningful education for all children.

4.4.3 Rural –Urban Divide: Rural –Urban divide in education is clearly visible in India. Many factors are responsible for this. These range from geographical to social-economic and cultural diversity. Illiteracy in rural parents is also an important reason. Lack of adequate physical facilities and information network often add to the widening rural-urban gap. At secondary level it is observed that while urban middle-class students are stressed from the need to perform extremely well, rural children are not sure about whether their preparation is adequate even to succeed. It is well documented that much of the higher failure and dropout rates in rural schools can be attributed to poor performance in three subjects- Mathematics, Science and English. This forces one to critically review the whole system of evaluation and examination.

In this context, multiplicity of subsystems and types of schools tend to have a detrimental effect on the overall quality of the education system. It is desirable to evolve a common school system to ensure comparable quality in different regions of the country. When children of different backgrounds study together, it improves the overall quality of learning and enriches the school ethos. Social justice has many obvious implications. One obvious implication is that special efforts will be required to ensure that education promotes an inclusive identity. Children belonging to religious and linguistic minorities need special provision and care in accordance with the perspective reflected in the Constitution. Flexibility, contextuality and plurality must be at the core of curricular vision.

4.4.4 Addressing Equity concerns:

Apart from RMSA and Model Schools which address the goal of equity set for secondary education, following schemes will help in providing secondary education to girls and learners belonging to marginalised groups.

1. Scheme for Construction and Running of Girls' Hostel for Students of Secondary and Higher Secondary Schools

Addressing equity concerns for girls, the Government of India launched the Girls' Hostel Scheme in October, 2008 which provides for one Girls' Hostel of capacity 100 for each of about 3500 educationally backward blocks in the country. The location preferably being within the campus of Kasturba Gandhi Balika Vidyalaya, and if that is not possible, within a Government Secondary School campus, the main objective of the scheme is to retain the girls in secondary school. The aim is to ensure that the girls are not denied the opportunity to continue their study due to distance, affordability of fees and other connected societal factors.

Under 12th plan, the scheme of Construction and Running of Girls' Hostel for Students of Secondary and Higher Secondary Schools is recommended to be continued under the overarching scheme of RMSA.

Financial Projection for 12th Five Year Plan is 7849.65 crores

2. Inclusive Education for Disabled at Secondary Stage (IEDSS)

IEDSS was approved in September, 2008 to replace IEDC Scheme from 2009-10. The Scheme is 100% centrally funded. This scheme is proposed to be subsumed under the RMSA under the 12th Plan.

The features to be continued are as follows:

- It covers children studying at Secondary Stage (Class IX to XII)
- It covers disabled children having blindness, low vision, leprosy cured, hearing impairment, locomotor disabilities, mental retardation, mental illness, autism and cerebral palsy.
- An amount of Rs.3000/- per child per annum earmarked for activities such as identification and assessment, assistive devices, allowance for transport, escorts, reader, uniforms, books and stationary, stipend for girls, etc. Besides, there is provision for engagement of special teachers, creation of barrier free environment, teacher training etc. There is emphasis on community orientation.
- Convergence with other programmes is emphasized.
- Rs.200/- per girl child per month is to be provided as stipend.
- In addition to Central assistance, State Governments are expected to provide Rs.600 per child per annum as scholarship. The demand for transport component under RMSA in general, should be considered specifically for beneficiaries under this category.

Financial Projection for 12th Five Year Plan is 6417.50 Crores.

3. National Means-cum-Merit Scholarship

With an objective to award scholarships to meritorious students of economically weaker sections to arrest their dropout at class VIII and encourage them to continue in the secondary stage that is upto class XII, the Government of India launched the Centrally Sponsored National Means-cum-Merit Scholarship Scheme in 2007-08. This scheme will be continued in 12th Five Year Plan to award 1,00,000 scholarships each year, at class 9 stage. Each student selected under the scheme is given Rs. 6,000 per annum (Rs. 500 per month) for study in classes IX to XII.

Under 12th Plan it is recommended that the Scheme be transferred to States under ACA based umbrella Scheme. Financial Projection for 12th Five Year Plan is 1600 crores.

4. National Scheme of Incentive to Girls for Secondary Education

“National Scheme of Incentive to Girls for Secondary Education” launched in 2008-09 will be continued in 12th Five Year Plan. According to the Scheme, a sum of Rs. 3000 is deposited in the name of each eligible girl as a fixed deposit and she would be entitled to withdraw it along with interest thereon on reaching 18 years of age provided she passes at least class 10 and remains unmarried. The scheme would cover (i) all eligible girls joining class 9 in Govt., Govt. Aided and local body schools and belonging to SC/ST Communities, and (ii) these from Kasturba Gandhi Balika Vidyalayas (irrespective of whether they belong to SC/ST). A sum of Rs.1,500 crores was provided under 11th Plan for this purpose. The objective of the Scheme is to promote enrolment of girls belonging to weaker sections of the society, to ensure their retention at least till completion of 10th

class and preferably till 12th class, to reduce their drop out at secondary and higher secondary stages and to improve gender parity and to empower girls.

Under 12th Plan it is recommended that the Scheme may be transferred to the States under the ACA based Umbrella schemes. Financial Projection for 12th Five Year Plan is 1500 crores.

4.5 Quality and Relevance

Quality is a systemic trait rather than only a feature of instruction or attainment. As an overarching attribute, quality expresses the system's capacity to reform itself for enhancing its ability to remedy its own weaknesses and to develop new capabilities. Quality is not merely a measure of efficiency; it also has a value dimension. The attempt to improve quality of education will succeed only if it goes hand in hand with steps to promote equality and social justice. In the context of education two principles characterize most attempts to define quality: the learners' cognitive development as the major explicit objective and role of education in promoting skills, values and attitudes of responsible and productive citizenship and in nurturing creative and emotional development. These two principles of quality in education clearly direct us towards reducing gap between the intended, transacted and achieved curriculum. Inverse relationship exists between this gap and the quality. Wider the gap, wider the possibility of poor quality and minimum the gap greater the possibility for quality. Further, our efforts for reducing the gap requires critical inputs with regard to quality which would include, realistic assessment in terms of learning progress, adequate career guidance and counselling provisions for adolescents and also to gear up processes with inbuilt monitoring and research components.

In 12th FY Plan following schemes will focus on the aforesaid concerns with respect to quality secondary education:

The scheme of RMSA takes care of quality of secondary education by supporting states/UTs for their quality interventions in the area of curriculum, teacher education, Continuous and Comprehensive Evaluation, etc. Other schemes which are designed to provide quality secondary education are given below:

4.5.1 Information and Communication Technology in Schools (ICT @ Schools)

The Information and Communication Technology (ICT) @ Schools Scheme was launched in December, 2004 to provide opportunities to secondary stage students to mainly build their capacity on ICT skills and make them learn through computer aided learning process. The Scheme was revised for 11th FY Plan and now is proposed to be continued for 12th FY Plan period. This scheme is a major catalyst to bridge the digital divide amongst students of various socio economic and other geographical barriers. Major objectives of the scheme are: To establish an enabling environment to promote the usage of ICT especially in Higher Secondary and Secondary Government and Government aided Schools. Critical factors to achieving such enabling environment include widespread availability of access devices, connectivity to the Internet and promotion of ICT literacy; To ensure the availability of quality content on-line and through access devices both in the private sector and by SIETs; To enrich the existing curriculum and pedagogy by employing ICT tools for teaching and learning; To enable students to acquire skills needed for the Digital world for higher studies and gainful employment; To provide an effective learning environment for children with special needs through ICT tools; To promote critical thinking and analytical skills by developing self - learning this shall transform the classroom environment from teacher-centric to student-centric learning; To promote the use of ICT tools in distance education including the employment of audio-visual medium and satellite-based devices. The Scheme currently covers both Government and Government aided secondary and higher secondary schools.

Under 12th five year plan the scheme ICT @ schools is recommended to be subsumed under RMSA as it would yield better result if integrated with the scheme of RMSA. The ICT @school provides for computer hardware and software for the schools and at the same time computer rooms are provided under RMSA. Integration of the scheme would enable optimal utilisation of resources.

Financial Projection for 12th Five Year Plan is 11000.00 Crores.

4.5.2 ICT enabled Secondary Education

The National Policy of ICT in School Education envisions and provides for development of a holistic framework of support to the school system. It proposes a Universal literacy programme focussing on enabling students and teachers to benefit from the potentials of ICT, diversifying it in to a variety of academic and vocational courses at the post-secondary stage. It also proposes computer assisted learning and a focus on computing to improve the quality of the teaching learning process as well as the outcomes of education. Leveraging the possibilities of internet technologies, it proposes setting up of State portals, management information systems, automation of administration, digital repositories and continuous teacher professional development. Catering to the needs of equity and access, it lays emphasis on leveraging technologies to meet the needs of the physically and socially disadvantaged groups.

With the inclusion of **a Mission Mode Project (MMP) on school education** under the National eGovernance Plan (NeGP), comprehensive technology enablement of the school education sector is on the anvil. The MMP (as approved by the Apex Committee on NeGP) envisions use of technology extensively to ensure delivery of services to all of its stakeholders such as students, teachers, autonomous institutions and partners on anytime anywhere basis leveraging the Common Service Centres (CSC) established upto the village level across the country under the NeGP.

The realisation of the objective would entail leveraging technology to remodel and streamline the sector as a whole to efficiently take care of its priorities including institutional and individual capacity building. In addition to delivery of services, focus will be on creation and development of digital content, training modules tailored pedagogically for virtual transmissions, webcasting of in-service training modules, optimal use of EDUSAT and connectivity available, ICT skills up gradation both for teaching learning as well as administration and management of the sector.

This along with the policy on ICT in School Education will enable a holistic and coordinated attempt being made both at the central as well as the State level to optimally use and leverage technology to achieve quality and efficiency in each and all of its interventions under various schemes.

4.5.3 Scheme of Vocationalisation of Secondary Education at + 2 Level

The Vocationalisation of Secondary Education provides for diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provides an alternative for those pursuing higher education. The Centrally Sponsored Scheme of Vocationalisation of Secondary Education at + 2 level is being implemented since 1988. A revised scheme is in operation since 1992-93. The Scheme provides for financial assistance to the States to set up administrative structure, area vocational surveys, preparation of curriculum, text book, work book curriculum guides, training manual, teacher training programme, strengthening technical support system for research and development, training and evaluation etc. It also provides financial assistance to NGOs and voluntary organizations towards implementation of

specific innovative projects for conducting shortterm courses. The Scheme, so far, has created a massive infrastructure of 21000 Sections in 9619 Schools thus catering to diversion of about 10 lakh students at +2 level. The grants released so far since the inception of the Scheme is Rs.765 Crores. Based on the recommendations of various Committee/Review Groups, the existing Scheme has been revamped.

For the 12th Plan it is recommended that the Scheme be subsumed under RMSA and should be implemented from secondary level itself unlike the present provision for its implementation from XI .

Financial Projection for 12th Five Year Plan is 14186.78 Crores.

4.5.4 Financial Assistance for Appointment of Language Teachers

The Central Government introduced a Centrally Sponsored Scheme in the Second Five Year Plan in pursuance of the provisions contained in Article 351 of the Constitution of India to provide 100% financial assistance to the State/UTs for

- (i) Appointment and training of Hindi teachers non-Hindi speaking States/UTs.
- (ii) Appointment of Urdu teachers and grant of honorarium for teaching Urdu in States/UTs; and
- (iii) Appointment of teachers of Modern Indian Language (other than Hindi) in Hindi speaking States/UTs.

The scheme was revised during 2008-09 as follows: -For appointment of Urdu Teachers, the criteria of assisting appointment of Urdu Teacher only in Block/Districts with concentration of Educationally backward Minorities identified by the Ministry of Social Justice was changed. The appointment can now be made in any locality where more than 25% are from Urdu language speaking group.

Financial Projection for 12th Five Year Plan is 75 crores.

4.5.5 Environmental Orientation to School Education (EOSE)

The centrally sponsored EOSE scheme (1988) was transferred to the NCERT during 2006. The scheme was initiated with the objective of environmental generating awareness amongst children by providing Grants in Aid to NGO's for conducting such activities oriented towards environmental awareness.

In the meeting of the GIAC, EOSE held on 11/09/2008 the GIAC suggested "the present scheme of EOSE" be reviewed and redesigned as the objective of the scheme in the present form has been attained through the mainstreaming of EE in the school system. In view of this a meeting was held with the official of the MHRD and it was decided that a framework for one year as well as five year be planned. Accordingly, as suggested by the MHRD, a detailed framework under the Chairmanship of Prof. Madhav Gadgil was prepared in consultation with the experts in the field of Environmental Education. The framework envisages achieving the objective of bringing about positive attitudinal changes in children. The programme laid down as per the framework basically consists of five parts:

- Orientation of Stakeholders to be associated with the organization of district and State/UT Environmental Conference
- Organization of District Environmental Conference which will be an annual event
- Organization of State/UT Environmental Conference which will also be an annual event
- Organization of Summer and Winter Camps involving teachers and local authorities
- Adoption of schools from each district by the State to strengthen them in the area of environmental activities

The said framework which has been prepared with an estimated expenditure of 17.846 Crores has been approved by the MHRD.

Financial Projection for 12th Five Year Plan is 20 Crores.

4.6 New Schemes under Quality

4.6.1 Programme of Leadership Development in School Education

Context

Leadership development is one area that has not received adequate attention in our country. In recent years, India has traversed unprecedented expansion of school education to meet the fast growing demand for schooling across all sections of the society. Flagship programmes of Government of India such as Sarva Shiksha Abhiyan and RMSA have significantly contributed to the fast growth of school participation in the country. With more information getting into the public domain on the status of schools and learning processes therein, public attention is shifting to the issues of efficiency and quality of the schools, thereby placing greater demand for overhauling of the governance and management of school education. The recent RTE Act 2009 looks at improving schools through school-based development plans with active participation of School management Committees as the ultimate goal. This calls for greater responsibility on our School leaders, which also means that they are equipped as agents of change to bring transformation in the school system. It is this realization that has recognized school as the basic unit of change and the role of school leadership beyond administration. It is often seen today that preparedness of our School Leaders to take up the challenge of managing change is lacking and short-term programmes organized by several training institutes are limited in scope and relevance and fail to leave an impact that changes the school system. It is in this context that the present proposal for launching a National Programme of School Leadership has been conceived as a continuous professional development activity for educational leaders.

Overall goals and objectives

- To prepare a new generation leaders who can effectively govern schools and transform the school education system
- To act as the vehicle to empower and drive critical education reforms through intensive, interdisciplinary curricular experiences, active exchange of ideas, and by adopting an interactive pedagogy approach that promotes team work and collaboration

Specific Goals and Objectives

- To create opportunities for professional development of leaders in school education
- To identify and nurture talent within and outside the school system to take leadership positions
- To establish a network of institutions who can impart leadership education
- To support research and documentation of effective practices in school leadership

Programme Structure

The programme is conceived to be comprehensive and flexible to address the diversity across the country. As unique forum for leadership, the programme is visualized to cover existing and freshly inducted school principals and administrators in leadership positions as well as senior teachers and others aspiring to take up leadership roles including school headship as well as the whole range of schools beginning from schools which have grades 1 to 5 to large school settings. The programme provides a common platform for interaction between private, aided and government education institutions, prepares prospective leaders, adapts cascade model-reaching the unreached and strengthens leadership capabilities of existing leaders. It would also include schools under different kinds of management including Government schools, private schools receiving grants-in-aid from the Government and those which are self-financing private schools. The essence of the programme is building leadership at all levels – institution, village, block, district, state and national level to bring changes in the way schools and school education systems are managed and led. The programme holds the capacity to transform functional managers in the system into creative and innovative leaders, who gets an opportunity to look beyond the present. The programme is visualized to cover a broad spectrum from talent mapping, talent mining, talent nurturing to commitment.

The programme will have two-tier institutional arrangement with a National Centre for Leadership in School Education and Leadership Academies in selected Institutions of Higher Learning. NUEPA through the National Centre for Leadership in School Education (NCSEL) will be entrusted with the responsibility of coordinating the work of the Leadership Academies located in different Institutes for Higher Learning. The programme envisages establishment of five Leadership Academies (LAs) in selected locations in the first year of the launch with establishment of 5 LAs every year with gradual increase to around 20-25 by the fifth year. The proposal suggests NCSEL to nurture Leadership Academies for a certain period of time and eventually leave academic leadership with the university sector.

National Centre for Leadership in School Education

The prime mission of the Centre is to build strong leadership at school level for institution building and to deliver quality education

Objectives

- Carry out national level activities for leadership development to strengthen governance and leadership in school educational school as well as system levels.
- Plan and design the programmes, monitor and control the funds for the entire programme till grass root levels, coordinate with government to get approval and funds for various innovative programmes
- Lead strategically for setting up of Leadership Academies and designing the contextualized managerial framework (structure, governance and administration)
- Develop a framework of leadership standards to be adopted by Leadership Academies
- Foster collaboration between state governments and the Leadership Academies

- Stimulate Universities and other organizations to take up empirical research work in the areas of school leadership and governance
- Help establish international collaborative arrangements with similar leadership development programmes and institutions
- To act as a nodal centre for research, development documentation in the field of school governance, in general and school education leadership in particular

Functions

- Overall coordination of programme implementation
- Organize programmes to identify and develop human resources for implementing the programme in various Institutes for Higher Learning
- Different academies to be locally design and implemented as a collaborative effort of state and local stakeholders

Leadership Academies

Goals and objectives

- Organize well designed need-based programmes for serving as well as prospective leaders to work in school education sector
- Facilitate creation of field-based teams of resource persons who can function as extended arm of the Academy and organize field/school based activities in specified geographical areas
- Support best teaching and research-based instructional practices through workshops and advocacy action involving teachers, principals and administrators
- Offer Fellowships to talented professionals for engaging in research and documentation of effective leadership practices in school education
- Generate and disseminate data-supported information related to several critical issues in school education, based on educational research and best practices
- Offer mentoring services to individual leaders and institutions
- Plan monitoring mechanisms for assessing and enhancing the impact of capacity building programmes

Location and Management

- Each Academy to function as autonomous body guided by a Advisory Board
- Location within a University or any other higher education institution dealing with school education

Coverage and Activities

Each Academy operates within a specified geographical area to reach out and conduct field based programmes- long term and short tailor made courses through multiple delivery systems like face to face interactions, e-learning, on campus, off campus, written material in the form of modules, reference books etc The LAs is visualized to be managed by core faculty and staff and also operating through a network of resource persons identified as 'leadership teams' in each State. The Academy covers government, private and aided schools at all levels from primary to senior secondary and members of school management committees

Overall Management of the Programme

- National Executive Committee: headed by the Minister for Human Resource Development, Government of India with suitable representation to both school and university level educationists and other stakeholders(8-10 representatives)
- Project Executive Board: core committee members with representation from the States on rotation for a fixed term entrusted with the task of managing fund flow, approving important decisions taken at various levels, and also guide the various leadership development bodies and agencies at state levels.
- National Coordination and Resource Support: members from the National Centre for School Leadership to control and organize need-based leadership programme in the states/union territories and various boards.

Financial projection for 12th Five Year Plan is 58.40 crores (Annexure-VII)

4.6.2 Scheme on School Quality Assessment and Accreditation

Assessment and evaluation of an institution is intended to be a means to document its educational quality and institutional effectiveness. Fostering institutional improvement and demonstrating its accountability are complementary processes that assure the quality of an institution.

The need for quality assurance arises from the following:

Assessment and accreditation provides an incentive for self-study and self improvement.

- It reassures external stakeholders such as employers, professional bodies and the general public, about the legitimate quality of the assessed and accredited schools as well as the relative quality status of the institution as compared to other similar institutions.
- Third party assessment and accreditation and the resultant certification, vouch for the competence of the institution assessed, to provide education of a high standard.
- Assessment and accreditation would enhance the responsiveness of communities of learners.
- Accreditation would ensure that institutions prepare the students for citizenship responsibilities, successful careers, acquisition of life skills and life- long learning.

As the whole, it would help institutions in capacity building.

After the initial affiliation process of the school, periodic visits though conducted do not always lead to a sustained effort to benchmark quality. In most schools the indicator of quality is often reflected in examinations results. A mechanism of **mandatory accreditation** of schools needs to be initiated. The process of accreditation would monitor identified outcomes at all levels and across all spheres of school education. It would help teachers, educational administrators and all other stakeholders involved in school education to learn from this exercise and improve themselves.

This is a voluntary method of quality assurance mostly achieved through interventional and participative processes carried out by peer assessors on behalf of an agency or the Board. In terms of status, it provides public with the information that an institution / school meets standards of quality set forth by an accrediting agency. As part of the process it reflects the fact that in the process of achieving accreditation the school goes through a process of self discovery and self audit as well as external review by peers which help to qualitatively improve the institution.

School Quality Assessment and Accreditation (SQAA) is a commitment to provide global parameters of attainment as in standards in schools. There is need for laying down a set of standards and best practices as paradigms for attaining the best benchmark in an individual institution for the up-liftment of learning outcomes in the domain of school education imparted to children. The SQAA would be a professional review by Peers of an institution's entire profile.

Framework of SQAA

An Educational quality has a system as inputs such as students, infrastructure, resources and teachers. The processes are admissions, instructions, evaluation etc. while the outputs are the students and their behavioural academic physical, social and emotional qualities. These components of inputs, processes and outputs are not independent on one another but they are interlinked and interdependent in a systemic manner. Key inputs into schooling curriculum, students, teachers, support staff, administrators, facilities, classrooms and policies. Key processes are Curriculum Development, Accreditation, Teaching, Financial Administration, Management, Student Support Services, Human Resource Management and Community Services. Similarly key outputs are students with a holistic development, research findings and community services.

The School Quality Assessment and Accreditation is holistic as it covers all aspects of a school functioning, namely its Scholastic and Co-scholastic Domains, Infrastructural Areas, Human Resources, Management and Administration, Leadership and Beneficiary Satisfaction.

The Seven Domains

The seven Domains (identified by CBSE) refer to inter related processes which define an institution qualitatively. These help developing the capabilities of schools holistically. By participating in the process of accreditation the institution will raise their level of excellence and march towards continuous improvement of quality.

The emphasis in all the seven domains is on the outcomes: excellence in academic and non-academic activities are tangible and overt, whereas outcomes in terms of discipline, punctuality, cleanliness, and job satisfaction are largely intangible and covert. Thus, certain dimensions are prerequisites for quality and certain others are the manifest forms of quality. From such a stance, quality is built on certain foundations, which are as important, if not more, as the known indicators of quality. Hence, the first stage is to clearly define the indicators of quality, as far as possible, in measurable terms. The quality of students, teachers, (leadership qualities of the) principal, physical infrastructure, instructional resources, and financial resources are some of the examples of inputs for quality.

Similarly, the quality of classroom-based and out-of-classroom instruction, student assessment and examination, co-curricular activities, office management, and linkages with outside agencies are some indicators of process quality. These are detailed below:

1. Scholastic Processes and Outcomes

The many systems and operatives that make education a functional and living entity are part of academic processes and products. By including within their wide realm policy makers, schools and their managements, principals, teachers and above all the learners these processes allow the creation of cohesive and creative learning spaces. The 3 sub-domains of this domain are Curriculum Planning, Teaching Learning Processes, Student Assessment and Performance.

2. Co-scholastic Processes and Outcomes

The Scholastic and Co Scholastic components make for an education that is holistic and comprehensively assesses an individual's potential, capabilities and interests. Within the present CCE Scheme, however, areas such as Life Skills Education, Work Experience, Values and Attitudes, Performing Art, Creative and Scientific Skills, Physical and Health Education have been conceptualized and framed so as to cover the multiple aspects of a student's personality that need to be nurtured.

3. Infrastructure – Adequacy, Functionality and Aesthetics

This is a vast area and covers facilities provided by the school in the areas of space, safety requirements, health management and the aesthetic component. Provisions need to be in place for buildings to be compliant for the differently abled.

4. Human Resources

This domain starts by first fixing the major boundaries of teacher to section ratio, as well as Working Days and then moves on to mandate Service Rules and Records, Recruitment practices, Academic Supervision and Continuing Professional Development. Schools staff refers to all employees, both teaching and non teaching.

5. Management and Administration

One would ideally think that Leadership and Management go hand in hand and hence the reason why they are presented together. Leadership starts with a vision. Management ensures that processes and practices are aligned with the vision and are ingrained in the system, so that the users are the active proponents of the essence of the vision.

6. Leadership

The potential role of the principal is in providing academic leadership to their schools.

A visionary leader to understand the way learning occurs creates plausible situations conducive to learning, views knowledge as personal experiences constructed in the shared context of teaching learning, rather than embedded in the external reality of textbooks, is sensitive to the social, professional and administrative contexts in which they need to operate, develops appropriate competencies to be able to create actual situations for scaffolding, develops an artistic and aesthetic sense in children through art education and addresses the learning needs of all children, including those who are marginalised and disabled. A leader views appraisal as a continuous educative process.

7. Beneficiary Satisfaction

Schools shall be successful in meeting this standard when it has the understanding, commitment and support of stakeholders. School personnel need to seek opportunities for collaboration to help the institution become a hub of excellence.

The school should foster effective communication and interpersonal skills which lead to better social skills. The benefits of involving all stakeholders in decision making are that schools can foster collaboration with community stakeholders to support student learning, have a formal channel to listen to and communicate with stakeholders and productively use the knowledge and skills of stakeholders to enhance the work of the school.

Financial requirement for the 12th Five Year Plan is Rs. 330.09 crores

4.6.3 Capacity Building and Strengthening of Resource Institutions

Capacity building of functionaries at different levels needs to be re-emphasised in this Plan period. Implementation of schemes requires understanding of their backgrounds, assumptions, goals, strategies for their implementation and monitoring. Moreover functionaries also need to be made aware about their rights, duties as well as code of ethics. Therefore, comprehensive orientation on the aforesaid aspects needs to be percolated effectively, across all levels of implementation.

At the secondary and higher secondary stage, subject wise teachers are required to be deputed in every school. Besides, the specialised teachers for physical education, art/craft and culture education also required to be deputed. Since teacher is the most important component in school education it is necessary to continuously upgrade the quality of teachers through in-service education and a variety of other measures, apart from pre-service qualifying programme of teacher training viz., B.Ed. There is great regional disparity in the provision for secondary teacher training institutions in the country. There are regions such as the north eastern region for example, that do not have enough teacher training facilities compared to other states.

Resource organisations such as NCERT, NUEPA, SCERT/SIERT, IASEs and CTEs need to be strengthened with necessary human and infrastructural resources to cater the capacity building needs of teachers, teacher educators and various functionaries at different levels.

A few proposals from the NCERT for the capacity building of states/UTs and also in view of its own strengthening in different areas are hereunder for consideration in the 12th Five Year Plan:

1. National Programme on Curriculum renewal and Institutional building to develop the capacity of states/UTs

Rationale:

We are now in the sixth year of the curriculum reform processes that was initiated with the National Curriculum Framework-2005. As a follow-up of the NCF-2005, most of the states have taken up schemes, programmes to implement the recommendations of NCF-2005 and especially in aftermath of the RTE Act 2009.

In the context of the implementation of NCF-2005, new syllabi, textbooks and other related material brought out by the NCERT have been introduced in Kendriya Vidyalayas, Navodaya Vidyalayas and secondary schools of a few states/UTs such as Arunachal Pradesh, Chandigarh, etc(Annexure-XI). Many orientation and training programmes for key resource persons of the KVS/NVs/ Tibetan Schools and state/UTs were conducted for perspective building on NCF-2005 and also for implementing the new textbooks through face-to-face and teleconferencing mode.

Now, in view of providing a new direction towards curriculum renewal and to provide inputs to further policy formulation and initiating schemes for future school education at secondary and higher secondary stage, it is inevitable to discern the status of implementation of the NCF-2005 in various

aspects such as curricular material, pedagogical processes, assessment and evaluation, enabling school environment and teacher professional development. Simultaneously supporting states/UTs academically on all of these aspects is also necessary. It is also necessary to build the capacity of functionaries at different levels on identified areas requiring support, using multiple strategies.

Objectives:

1. To study the implementation of NCF-2005 in various aspects of secondary education such as curricular material, pedagogical process, assessment and evaluation, enabling school environment and teacher professional development in secondary schools in states/UTs.
2. To identify areas on which state functionaries require support and evolve a mechanism involving various stakeholders to provide support to state functionaries at different levels to build their capacity.
3. To operationalise attachment programmes for teacher educators/key resource persons with the NCERT faculty/departments to provide them support in the area of curriculum, syllabi and textbooks development for longer duration of 3 months.

Programme Design

Coverage – all states and UTs

Sample and Methodology:

50 secondary schools (KVs-10, NVs-10, Govt. Schools-10, Govt. Aided Schools-10 and Local Body Schools-10) will be selected from each state/UT for studying the implementation of NCF-2005 through observation and interview schedules, conducting focused group discussion with teaching staff and principals of the secondary school for exploring management aspect as well as studying related documents.

Discussion with functionaries at various levels will also be held using interview schedules and focussed group techniques.

ICT support will be utilised for recording, collection and analysis of data. A dedicated interactive website will be developed to create a forum for sharing the planning, progress and monitoring of the programme.

Implementation strategy

NIE, CIET, PSSCIVE and all the five RIEs, SCERTS, IASEs, CTEs, KVS, NVS, State Universities and selected secondary schools

Principal of each RIE will be the Regional Coordinator for the Programme. Each RIE will provide state wise coordinator from its faculty for all the states located in that region.

State Coordinator will form a state team involving SCERT's director and two faculty members and also faculty drawn from IASEs, CTEs, KVS, NVS, State Universities and principals and teachers of selected secondary schools.

This team will be responsible for developing tools for the study, identifying areas requiring support for functionaries at different levels including teachers, developing material for capacity building and also building their capacity.

NIE departments will provide support to RIEs for subject-specific and concern-specific part of the programme including capacity building. CIET and PSSCIVE will provide support to RIEs on ICT and Work and Education parts of the programme. These departments will also provide support in

formulating the institutional attachment programme for teacher educators/key resource persons. DSE along with aforesaid NIE departments will coordinate the overall programme.

Duration of programme – two years from the date of initiation of the programme

Total Financial Requirement – Rs. 20 crores

2. Arts Education at Secondary Stage

NCF- 2005 has placed Arts Education as one of the curricular areas at secondary level of school education. It is a mandate for all the stakeholders of school education including school functionaries to provide adequate **human resources, material resources, space and time for** effective implementation in schools.

The vision for the above mandate is as follows;

- Every child at secondary level of school education will have equal opportunity to explore and study any one of the art forms (visual or performing) as per his/ her interest and ability.
- Provision of adequate and appropriate infrastructure and resources including well trained human resource at school as well as teacher education level to be made available.
- Adequate funds and facilities for *research, development and training* activities at different levels to facilitate different stakeholders (students, teachers, teacher educators, policy planner, school principals and administrators and even parents).
- Increased opportunities to opt for different vocational courses at school and professional level through vertical linkages

Strategies for Effective Implementation of Arts Education at the Secondary Stage

For ensuring quality education in arts at secondary level, a multi-layered strategy for teacher education at national, regional, state, district and school level is required. Human and financial resources, infrastructure, capacity building, networking with organizations, community support etc. are some of the primary concerns while planning such strategies.

NCTE in its '**Manual for the Teacher Education Institutions and Teacher Educators' on Organising teaching Learning Resources in Teacher Education Institutions has provided guidelines** on establishing Art and Craft Resource Centre in every teacher education institute to facilitate pre-service as well as in-service teachers with adequate knowledge and skills to perform their role as teachers to ensure quality teaching learning in every classroom.

NCERT, along with RIEs and SCERTs plays a leading role in establishing such resource centres and build capacity to enable these centres to undertake need based extension activities at the national/ regional / state and district/ cluster/ and block levels. Moreover to establish Art, Craft and Cultural Laboratories in every school as per the mandate of RMSA and to run it effectively, there is need to provide for model Resource Centres to conduct programmes on research, material development, documentation, capacity building and extension for quality school education in arts education at secondary level.

Financial requirement for 12th Plan period - Rs. 19.90

3. School Based Continuous and Comprehensive Evaluation and Innovation and NTS Scholarships

With the expansion of elementary education and the implementation of RTE Act 2009, assessment is viewed as an important tool to promote quality of education. With the de-emphasis on external examination as envisaged in NPE-1986 and further reiteration under RTE Act for elementary stage, it is desirable to evolve and promote school based assessment system. This calls for a massive orientation and training programme of teachers both for pre-service and in-service. Training through distance mode with the use of ICT will be an effective and less costing strategy. The challenge of quality in secondary sector will also remain a matter of equal concern. The holistic development of personally, knowledge and skills will prepare children for challenges of life. It will also need rigorous assessment and feedback to improve the learning levels of children. The necessary examination reforms slated in NCF-2005, can be brought with active participation of state education boards. The senior secondary sector which focuses on different streams and disciplines has altogether different stakes for students, parents, schools etc. The state education boards play a major role in assessment, classification and certification of students. The three hour external examination is quite inadequate to capture the real worth of the students. Therefore, due importance and weightage to achievements in school need to be recognized, reflected and certified by school (even by board if necessary). Therefore, school based assessment needs to be factored, promoted and implemented in entire school education sector. The learning levels of children at different stages need to be captured periodically through national achievement survey. Reforms in public examinations in terms of quality of questions, better management both during conduct and after conduct and analysis of the results data should continue to be an agenda for accomplishment with Education Boards.

Each State has multiple agencies i.e. SCERTs, SIEs, Education Boards, SPDs, Directorates etc. which have more or less same objective of imparting quality education to all and improving education system but lack synergy. There is need to establish effective networking amongst them for achieving the desired results.

In pursuance of the above the following programmes/projects are proposed for the 12th Five Year Plan.

1.	Training of the teachers in implementing school based Comprehensive and continuous evaluation in the states	-	30 crores
2.	(a) National Centre for Assessment and Evaluation as a step towards Establishing National Evaluation	-	20 crores
	(b) Conduct of National Achievement Survey and Participation in International Surveys	-	30 crores
3.	Development and Implementation of National Innovation Scholarship Scheme in the School Sector	-	50 crores
4.	Expansion in terms of numbers and amount of scholarships in NTS Scheme	-	70 crores
	Total Budget		200 crores

4. Dissemination of Priced Publications to States/UTs

The NCERT publishes various types of material other than textbooks i.e. child's literature, teacher resource material, research reports, etc. for different stakeholders such as students, teachers and

teacher educators. In view of disseminating these priced publications free to states/UTs for the capacity building of concerned state agencies and strengthening synergy between the NCERT and state agencies, NCERT presents a proposal for evolving mechanism for disseminating these material to states/UT for the 12th Five Year Plan.

Proposed Financial Requirement is 100.00 cr.

5. Up-gradation of Facilities in NCERT

In view of addressing the demands with regard to teacher preparation (pre-service and in-service) under RMSA and emerging demand of extending RTE Act up to secondary level, the NCERT needs upgradation of its facilities i.e. construction work in PSSCIVE, Bhopal, NERIE, Shillong, construction of Humanities Block and Convention Hall at NIE, etc. and also opening of four additional RIEs (in Andhra Pradesh, Bihar, Maharashtra and Chandigarh) for which Executive Committee of the NCERT had already shown its agreement.

Proposed Financial Requirement is 550.00 cr

5. Research, Monitoring and Evaluation

5.1 Research

Researches play a very important role in reform processes. As an academic activity research helps us to discover, interpret or revise facts, events, behaviours or theories or to make practical applications with the help of such facts, law or theories through an active, diligent and systematic process. Like every scheme or programme in education RMSA scheme also has a research component in-built in the planning, implementation and execution. The RMSA framework states that the Central Government and the State Governments will conduct independent research on different activities of RMSA by emerging independent institutes of repute. The findings of these research studies will be communicated to all the concerned authorities for corrective measures and further strengthening of the implementation of the scheme.

Programme /scheme/project often has inbuilt component of research alongwith programme evaluation. Many a times, activities under these two components overlap because of systemic tendency to treat these two in similar fashion. Whereas objective of conducting research is to enhance understanding and knowledge on different aspects in that very area and to provide evidences and inputs for bringing change in the education policies.

If one looks at the reporting aspects of research and evaluation, one may find a clear distinction between these two. Evaluation reports and research reports not only have different audiences but their main objectives are different. The goal of the research report as stated earlier is the enhancement of understanding and knowledge via publication to the concerned community. The main goal of the evaluation report is to inform and/or influence decision makers about input, processes and the output of the programme. The relative emphasis of the two activities is different.

In the area of school education, we lack deep and comprehensive research studies on different aspects particularly on classroom processes, teachers' own assumptions about various aspects of schooling, learners' cognitive needs different stages of development, effective school management, etc. Due to this gap in the area of research, we often try to implement scheme or programme uniformly in every state/UT often without researching its specific contextual needs on different aspects of school education. It is not enough to study macro education policies as they are articulated by governments and operationalized by centralized ministries of education. What is promised or envisioned on paper is often quite different from what actually happens in school establishments. It is important to understand, at the micro level, how schools are functioning in practice as they implement educational policies for improving the quality of education.

At national and state level one must also be concerned with learning from schools toward a better understanding of the practical realities of teaching children from the perspective of the school establishment, within its community and its student population.

Therefore, it may be suggested that researches need to be undertaken not only at the state level but also at local level i.e. block and district level. Unless community, teachers, students and other stakeholders will be involved in exploring their own locale for identifying lacuna and strengths they may not be able to understand the need of reform to carry it forward.

Hence, a mechanism needs to be created for conducting researches in the areas of classroom processes, curricular choices, learning difficulties of the diverse groups of students, evaluation, and adolescents' educational needs at the ground level, impact of teacher training, etc. This will help policy makers and curriculum developers to understand the problems and difficulties in curricular areas and teacher education. Teachers need to be motivated by the school functionaries for undertaking action researches as a part of their teaching-learning activities for finding out the solution of content, pedagogy or adjustment related problems in the classroom and school.

There are three major quality inputs which need our urgent attention with regard to secondary education viz. Curriculum Reform, Reform in Assessment and Examination and Reform in Pre-

service and In-service teacher education. These three areas require in-depth studies, impact studies as well as action researches. Adequate mechanism of documentation for researches and best and innovative practices in secondary education needs to be evolved at various levels. Moreover, researches must not be limited to only providing research reports but there is also a need to evolve a mechanism for sharing of these researches with various stakeholders including curriculum developers and policy makers. For sharing and disseminating research reports, seminars, conferences and consultations at national, state and district levels need to be organized every year.

5.2 Monitoring and Evaluation

A panel of agencies both at the national and State level be put in place to carry out third party appraisals and evaluations of on-going schemes by identifying sectors/sub-sectors and developing appropriate tools for evaluation.

Managing quality interventions involves a continuous process of monitoring and follow-up of the programme progress in order to identify the strengths and weaknesses at various levels of programme implementation. The purpose is, therefore, to assess programme progress with reference to the objectives and achievable targets. Research, monitoring and evaluation need to be intrinsic part of many centrally sponsored schemes and has to be built into the total life cycle of the programme beginning with pre-planning to planning, implementation and assimilation. Managing for *quality* must be seen as a continuous process that enables and provides constructive feedback to achieve the set programme objectives.

There is a need to strengthen the mechanism of monitoring interventions provided at various levels on various aspects of the secondary education and also introducing a feedback loop to support the functionaries at all the levels if required. The monitoring of quality dimensions is proposed to be undertaken by using the monitoring formats being developed by NCERT which will provide authentic information about the progress of quality in education. The information will flow from bottom to top, i.e. from institutional level to the national level. At the national level, NCERT will be responsible for this activity. However, it is very important that the actual objective of monitoring will be introduced so that the corrective measures are taken at the institution and sub-district levels concerning quality. The actual beneficiaries i.e., the parents, community at large, etc. participate in the monitoring process. The experience of SSA prompts that a suitable mechanism is devised to ensure that follow up actions are initiated based on the findings of the monitoring.

Clear specification of the roles and functions at the hierarchical levels with adequate guidelines need to be done for the effective implementation of any programme or scheme. Conventionally, monitoring and supervision of any new scheme or programme, particularly in the area of school education, have been through authoritative and control system. Today also, monitoring of schools includes visit of a school inspector or a team constituted by state functionaries under their purview. These visits are usually few and far between. This reduces monitoring to a merely 'policing' function. Hence, it is important to carefully institutionalise the monitoring and evaluation mechanism to manage the quality concerns with quality in relation to its stated objectives, norms and practices.

Periodicity of supervision and monitoring plays a vital role in programme evaluation. An important requirement is the functionaries' capacity to design and use tools and interpret meaningfully the gathered information. In this effort the role of community assumes paramount significance. The community leaders and groups need to be sensitised on issues related to monitoring of children's progress and other quality related school activities. Existing PTA's, SDMC's etc., should be involved in this process by organising fortnightly/monthly meetings in the schools. States to give priority to develop and implement monitoring system to measure quality related outcomes: students learning outcomes, teacher performance, student and teacher attendance rates by gender and social categories, change in class room practices, impact of teacher training, efficacy of textbooks, and quality of academic supervision at different levels.

A school based Annual Information System, called SEMIS, is already being implemented throughout the country. Through the system, data on very important issues like physical infrastructure and facilities, availability of teachers, enrolment and academic performance of students, professional

development of teachers etc., are collected annually, with 30th September each year as the record date. A fairly large number of quality curriculum indicators will be generated for different levels that will reflect the wholesome educational scenario of the respective state. This will also promote micro-planning and the preparation of AWP&B of a district/state as well.

5.3 Accountability

The accountability to ensure the quality of secondary education lies with the teacher, teacher educators, educational administrators, and other supervisory staff.

The subject teachers should be accountable for the learning by adolescent learners in the concerned subjects. Proper planning for the transaction of the content areas should be made by the teachers beforehand and the content areas be transacted in the class accordingly. The Headmaster shall be responsible to monitor this approach of all the teachers in the school.

It is observed that teacher educators/Key resource persons provide pre-service and in-service education mostly through lecture method and then they hardly plan for monitoring of their training programmes. There is a need to involve national level institutions to build the capacity of teacher educators and resource persons in states/UTs and help them to evolve a mechanism for monitoring the introduction of the interventions in the classroom process which have been provided during the training programmes.

It is generally seen that educational administrators and the supervisory staff supervise the administration, management and other aspects of the school. They do not give proper emphasis to supervise the classroom transaction and other activities related to quality of education. It is necessary that they should be made equally responsible for enhancing the pedagogical aspects in the school. A proper check list/proforma should be developed at the NCERT for the purpose.

5.4 Database and Feedback Mechanisms

In the area of school education the responsibility of collection and management of educational data has been the responsibility of Department of Higher Education, Ministry of HRD. This organization disseminates all educational data through various publications that are brought out annually. Through the document Selected Educational Statistics (SES) the MHRD disseminates educational data every year on selected to school education.

In addition to the above mentioned sources, few other organizations also collect educational data occasionally. These organizations include National Sample Survey Organization (NSSO), National Council of Educational Research and Training (NCERT) which collect and disseminate educational data occasionally while National University of Educational Planning and Administration (NUEPA) is responsible to collect data on school education regularly on annual basis through state government and UT administration and also disseminate. These data on secondary education are collected under SEMIS and for elementary level under DISE.

It may be noted that data related to school education are collected by NUEPA under these two different systems for two levels of education i.e. elementary level (grades I to VII) and secondary level (grades IX to XII). However, the integrated school having both elementary level and secondary levels of education are expected to be covered by both DISE and SEMIS and the same school provides data in two formats one under DISE format for elementary classes and the other under SEMIS format for secondary and higher secondary classes.

Keeping in view that the same school has to fill up many formats for providing educational data it has been discussed at the national level in MHRD and resolved that we may explore the possibility of developing a unified data base for school education. The MHRD has constituted an expert group on creation of Unified System of Data Collection for School Education Statistics. The expert group constituted will look to (i) identify complete set of parameters on which data should be collected annually from every school, (ii) to examine the feasibility of generating a UID for all schools, (iii) examine the feasibility of creating a comprehensive school directory, (vi) draw a road map for the adoption of a unified system of school statistics across the country, (vii) recommend the outlines of a study to ascertain the sustainability of the new data architecture through a pilot study, and (viii)

recommend a framework for transparency and public involvement by holding Shiksha Gram Sabha where concerned school data would be shared with public. Though the expert group is still working on these issues related to unified system of school education statistics, it is expected that soon the group will submit its report.

5.5 Resource and Responsibility Centres for Quality

The establishment of the Resource and Responsibility centres at national, state, district and sub-district levels for enhancing the quality of secondary education is necessary. At the national level, NCERT and at the state level SCERT will assay the role of Resource and Responsible Centres for quality. The States will need to establish similar centres at the district and sub-district level. The Resource and Responsibility Centres should provide the technical support to the lower level Resource and Responsibility centres. The sub-district level Resource and Responsibility centres in turn should support the schools and provide onsite support to the teachers.

6. Overall financial requirement for secondary education in 12th Five Year Plan period

Based on deliberations in the previous sections, the financial projections for different schemes proposed for the 12th Plan is as follows:

S.No.	Name of the Programme	(in Crore)	
		(RMSA with full support to Aided schools)	
		Budget Estimate for 12th Plan with subsuming of 4 schemes under RMSA	GOI Share
1	National Means -cum- Merit Scholarship	1600	1600
2	National scheme of Incentive to Girls for Secondary Education	1500	1500
3	Appointment of Language Teachers	75	75
4	National Institute of Open schooling	360	360
5	Environmental Orientation to School Education (EOSE)	20	20
6	Model School	31658.96	25327.168
7	Girls Hostel	7849.654	7064.6886
8	ICT	11000.00	8800
19	IEDSS	6417.5	5134
10	Vocational Education	14186.78	12415.7
11	RMSA(with full support to aided schools)	242448.09	193958.47
12	National Leadership Development Programme in school Education	58.4	58.4
13	School Quality Assessment and Accreditation	330.09	330.09
14	NCERT proposals	889.9	889.9
	GRAND TOTAL	318394.37	257533.42

Component wise Budget Estimates for RMSA

S.No.	Activities	Proposed unit cost	Estimated requirement	Total Outlay
			Phy	Fin
A	Govt Secondary Schools			
1	New Schools	150.000	19946	29919.00
2	New Hostels	200.000	1828	3655.20
3	Teachers for new schools	3.000	134297	20019.38
4	Other staff for new school	1.500	43547	3097.59
5	Additional teachers for existing school	3.000	52097	16194.58
6	Strengthening of existing Secondary Schools			81110.98
7	Major repair	8.000	14000	1120.00
8	Teachers quarter	12.000	16332	2036.38
9	School grant	1.000		4062.38
10	Minor repair	0.250		978.89
11	Inservice teacher training	0.050		2396.17
12	Induction training for new teachers	0.100		986.25
13	Excursion trip for students	0.002		1033.14
14	Study tour for students outside State	0.020		1033.14
15	Study tour for teachers	0.005		59.90
16	Study tour for teachers outside State	0.200		958.47
17	Book Fair	1.000	639	31.95
18	Science exhibition	1.000	639	31.95
19	Special teaching	0.005		516.57
20	Guidance and counselling cell			128.46
21	Other quality and equity related activities	100.000	639	2811.60
22	MMER			12698.15
	SUB Total A			184880.14
B	Aided schools			
23	Recurring			15070.89
24	Non recurring			24750.00
	Sub total B			39820.89
C	Higher secondary schools (for 1yr)			
25	Recurring			5322.68
26	Non recurring			12424.37
	Sub Total C			17747.06
	GRAND TOTAL			242448.09

Vocationalisation of Secondary Education

Rs in Crores

No	Component s	2012-13		2013-14		2014-15		2015-16		2016-17		Total
		NR	Rec	NR	Rec	NR	Rec	NR	Rec	NR	Rec	
1	Opening of 600 new schools	360 00	292 50	450 00	6175 0	540 00	10075 0	630 00	14625 0	720 00	1982 50	806250
2	Strengthening of 3000 existing schools	550 0	231 00	880 0	3542 0	880 0	47740	770 0	58520	220 0	6160 0	259380
3	Assistance in PPP mode to 6000 private schools	-	950 0	-	2375 0	-	38000	-	51300	-	5700 0	179550
4	Assistance to 800 NGOs	550	668 5	550	1050 5	550	14325	275	16235	275	1814 5	68095
5	In service Training of 50000 teachers	-	100 0	-	1000	-	1000	-	1000	-	1000	5000
6	Induction training of 40000 teachers	-	400 0	-	4000	-	4000	-	2000	-	2000	16000
7	Development of 1200 competency based modules	-	900	-	900	-	900	-	600	-	300	3600
8	Establishment of MIS	-	100	-	100	-	100	-	100	-	100	500
9	TOTAL	420 50	745 35	543 50	1374 25	633 50	20681 5	709 75	27600 5	744 75	3383 95	133837 5
10	MME @ 6%											80302.5
11	GRAND TOTAL											14186.7 8

The central state share will be worked out as follows:

- 1 Civil construction 75:25
2. Teachers salary
90:10
3. Other expenses
100%

Open Schooling

Estimates for the Plan period:

Sl.No.	Head/ Item of Expenditure	Estimated Exp. Per Year (Rs.)	Total Exp. During XIIth Plan (Rs.)
1.	Strengthening & Setting up of State Open Schools (SOS)	42 corers	210 corers
2.	Developing Open Schooling Curriculum Framework based on NCF2005	1 corer	5 corer
3.	ICT for Open Schooling	6 corers	30 corers
4.	Examination Reforms	2 corers	10 corers
5.	Strengthening NIOS as Resource Institution		
5.1	Enriching Student Support Services Network	6 corers	30 corers
5.2	Setting up of Regional Centres of NIOS	9.5 corers	47.5 corers
5.3	Strengthening of the Resource Base		
5.3.1	Department of CapacityBuilding	1 corers	5 corers
5.3.2	Department of Research & Development	1 corers	5 corers
5.3.3	Department of ICT and Media	1.5 corers	7.5 corers
5.3.4	Open Adult Education Cell	.5 corer	2.5 corers
5.3.5	Cell for Teachers' Professional Development	.5 corer	2.5 corers
5.3.6	Strengthening of Academic & Vocational Departments	1 corers	5 corers
	TOTAL	72 corers	360 corers

NATIONAL LEADERSHIP DEVELOPMENT PROGRAMME IN SCHOOL EDUCATION

	Capital (Rs in lacs)	Recurring (Annual Cost) (Rs in lacs)	Recurring Expenditure in five years (Rs in Lacs)	Total (Rs in Lacs)
Programme Management at National level (approx 5 Executive meetings, Consultations etc per annum @ 2 lacs per meeting)		10	50	50
Overhead 10%		1	5	5
Sub Total (a)		11	55	55
NATIONAL CENTRE FOR SCHOOL LEADERSHIP				
Salaries for Professionals and other Staff (One Professor, One Associate Prof. 2 Computer operators, and 1 support staff)		30	150	150
Physical infrastructure, Equipments and Furnishing	40	4	20	60
Organization of Training Programmes (meetings, briefing sessions etc) (approx 5 progs@5 lacs covering TA/DA, Honorarium, Stationery, Miscellaneous expenditure)		25	125	125
Co ordination Activities, Communication and Maintenance (including web cameras, devices, Line Printers etc, pamphlets, web site development, publication of newsletter etc)	15	5	25	40
Cost Overrun	5	1	5	10
Sub Total (b)	60	65	325	385
LEADERSHIP ACADEMIES (Five LAs) (likely to increase to 25 with establishment of five LAs every year for five years)				
	Capital (Rs in lacs for 25 LAs)	Recurring (Annual Cost for 5 LAs in first year) (Rs in Lacs)	Recurring Expenditure in five years for 25 LAs (Rs in Lacs)	Total (Rs in Lacs)
(i) Salaries to Professionals and Administrative Staff (4 Academic Professionals, 2 Computer Operators, 1 Support Staff)		275 *	1375**	1375
(ii) Physical infrastructure , Equipments and Furnishing	2500	25	625	3125

(iii) Organization of Training Programmes (25 lacs for 5 training programmes for 1 year in 1 LA and 125 lacs for 5 LAs)		125	625***	625
Cost Overrun	250	5	25	275
Sub Total (c)	2750	430	2650	5400
Grand Total (a+b+c)	2810	506	3030	5840

* Estimated cost of one LA 55 Lacs

** Year 1 for 5 LAs = 275 Lacs *** Year 1 for 5 LAs = 125

Year 2 for 10 LAs = 550 Lacs Year 2 for 10 LAs = 250

Year 3 for 15 LAs = 825 Lacs Year 3 for 15 LAs = 375

Year 4 for 20 LAs = 1100 Lacs Year 4 for 20 LAs = 500

Year 5 for 25 LAs = 1375 Lacs Year 5 for 25 LAs = 625

Financial Estimates for the Scheme of Accreditation of Schools

It is targetted that at the end of 12th Plan Period 25% of all the Secondary Schools will be accredited

Number of Secondary Schools in the country	170000
Schools targetted to be accredited	25%
Number of schools targetted for accreditation	42500
Cost of Accreditation including cost of preparing the schools for Accreditation (Rs.,lakh)	0.75
Total cost of Accreditation (Rs.,lakh)	31875
Establishment cost for National Authority for School Assessment & Accreditation (NASAA)	
Rental per sq.ft. for office space (Rs.) per month	150
Rent for 5000 Sq.ft. of Area per month	750000
Rent for office space per annum (Rs.,lakh)	90
Rent for 5 years	450
Staff cost for NASAA (Rs.,lakh)	684
Total cost for Establishment of NASAA (Rs.,crore)	330.09

**A National Programme on Curriculum review at the secondary stage and
Institutional building to develop the capacity of states/UTs**

Region-wise orientation of the team on the conduct of programme by NIE departments	-	50 lakh
Development of Tools	-	50 lakh
Finalisation of tools at the national level	-	10 lakh
Collection of Data	-	50 lakh
Consultants (6) (for 12 months)	-	36 lakh
Junior Project Fellows (12) (for 12 months)	-	12 lakh
Accountant, Other staffs and equipments	-	15 lakh
Analysis of data and preparation region-wise report	-	50 lakh
Sharing of reports at the national level	-	25 lakh
Region-wise Capacity building of functionaries at the multi-level	-	5 crore
Institutional Attachment Programme	-	5 crore
		12.98 crore
Recurring (for the salaries of supporting staff)	-	7 crore
		20 crore (approx)

BUDGET FOR RESOURCE CENTRE FOR ARTS AND CRAFTS (ACRC) IN NCERT (NIE-1 AND RIE-5)

Sr. No.	Activities And Items	Recurring (Annual cost)	Total (Five Years)
1	Programmes at National Level Art and Craft Resource Center (ACRC), NIE (Meetings and workshops etc. 4 annually @ 02 lacs per prog.)	Rs.08,00,000/- (08 Lacs)	Rs.40,00,000/- (40 Lacs (2x4x5=40)
2	Programmes at Regional Level Art and Craft Resource Center (ACRC), RIE (Meetings and workshops etc. 4 annually @ 01 lac per prog. X 5)	Rs.20,00,000/- (20 Lacs) (1x4x5=20)	Rs.1,00,00,000/- (1 Crore) (20x5)
3	Salaries to Academic & Administrative staff Art and Craft Resource Center (ACRC), NIE, (Academic staff 2 + Administrative Staff 2)	Rs.18,00,000/- (18 Lacs)	Rs.90,00,000/- (90 Lacs) (18x5)
4	Salaries to Academic & Administrative staff Art and Craft Resource Center, RIEs, (Academic staff 2 + Administrative Staff 2) (4x5)	Rs.90,00,000/- (90 Lacs)	Rs.4,50,00,000/- (4 Crore 50 Lacs) (90x5)
5	*Physical infrastructure, Equipments, furniture and Furnishing ACRC, NIE(1) and RIEs (5) (1+6x 1.5 Crore)	Rs.9,00,00,000/ (9 Crore)	Rs.9,00,00,000/- (9 Crore) One time cost
6	Organization of capacity Building Programmes at NIE, ACRC (approx. 4 prog. @ 4 Lacs per prog.)	Rs.16,00,000/- (16 Lacs)	Rs.80,00,000/- (80 Lacs) (16x5)
7	Organization of Capacity Building and Development Programmes for States at RIEs, ACRC (approx. 4 prog. @ 2 Lacs per prog.) (4x2x5= 40)	Rs.40,00,000/- 40 Lacs	Rs.2,00,00,000/- 2 Crore (40x5)
8	Maintenance, Co-ordination Activities, Communication for All 6 ACRC	Rs.06,00,000/- (06 Lacs)	Rs.30,00,000/- (30 Lacs) (6x5)
9	Overhead	Rs.20,00,000/- (20 lacs)	Rs.1,00,00,000/- 1 Crore (20x5)

	Grand total	Rs.11,18,00,000/ - 11 Crore and 18 Lacs	Rs.19,10,00,000/- 19 Crore and 10 Lacs
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Note-1 : Budget for the **First Year is of approximately Rs. 11 Crore and 18 Lacs** as it has one time expenditure on Physical infrastructure, Equipments, furniture and Furnishing of ACRC, in NCERT (NIE-1 and RIEs-5) is of Approximately **Rs. 9 crore.**

For **Second , Third, Fourth and Fifth Year** the yearly expenditure will be approximately **Rs. 2 Crore 18 Lacs.**

Note - 2: Recommendation for ACRC in SCERTs/SIEs in all the States – To have similar posts, Infrastructure and programmes

(for DIETs and other teacher education Institutions) as in NIE and RIE ACRCs.

DETAIL OF FUNDS REQUIREMENT FOR UPGRADING FACILITIES IN THE NCERT DURING TWELFTH FIVE YEAR PLAN (2012-2017)

2012-17

(IN CRORES)

S.No	Name/Title of the Project	Year	Estimated expenditure
1	Remaining Construction Work at PSSCIVE, Bhopal.(Target year)	-do-	10.00
2	Remaining Construction work at NERIE, Shillong (Target year)	-do-	15.00
3	Land & Building including special renovation and upgradation of residential facilities at Hqr. Including Director and Joint Director, Bangalow)	-do-	25.00
4	Construction of four additional RIEs at Dharbanga, Pune, Chandigarh & Hyderabad	-do-	300.00
5	Construction of Humanities Block and Convention Hall at Hqrs.	-do-	90.00
6	Construction of Hostels in RIEs and NIE including PG Hostel and Guest House extension.	-do-	30.00
7	Construction of Buildings for early childhood education in DM School of RIEs.	-do-	30.00
8	Furnitures, fixtures, Machinery etc. (including four new RIEs and New courses at Hqrs.	-do-	50.00
	Total		550.00

SECTION – III

VOCATIONALISATION OF EDUCATION

1. Present Status of Vocational Education at the Secondary Stage

The national policy planners have considered higher secondary stage of school education as crucial as it is at this stage that necessary skills and competencies are acquired which enable the students to enter the world of work or to go for higher education. Vocational education has been accorded high priority in the National Policy on Education, 1986. The NPE, 1986 inter alia states “The introduction of systematic, well-planned and rigorously implemented programme of vocational education is crucial in the proposed educational re-organization.... Vocational education will be a distinct stream intended to prepare students for identified vocations spanning several areas of activity”. The NPE, 1986 set the target, to cover 10% higher secondary students under vocational courses by 1990 and 25% by 1995. The POA, 1992 reset the targets of diversification of students in vocational streams at + 2 level to 10% by 1995 and 25% by 2000. However an enrolment of only about 5% has been achieved.

Projected Population, 2008 (16-17 yrs)	48.6 million
Projected Population 2008, (14-17 yrs)	97.1 million
Children in secondary schools	28.9 million
Children in higher secondary schools	16.6 million
No. of high schools	123,265
No. of Higher Secondary Schools	60,383
GER Classes IX-X	59.82
GER Classes XI-XII	34.25

As evident from the above, education has to undergo a change to make it more relevant in the lives of the children, as perceived by parents. The drop out rate rises substantially after Class VIII and further more after Class X. Herein comes the relevance and role of vocational education, since that is one thing that will link education with employability. It would also retain more children in the secondary and higher secondary levels. The need for vocational education to be embedded in the education system also stems from the fact that 93% of our workforce is in the unorganised sector, most being illiterate or at a level below primary.

The National Mission on Skill Development, under the Chairmanship of Hon'ble Prime Minister of India has set a target of preparing 500 million skilled persons by 2022. On the other hand it is expected that approximately 75 to 80 million jobs will be created in India over the next 5 years; 75% of these new jobs will require vocational training to enhance the employability prospects. There is a pronounced 'skill gap' both in terms of quality and quantity; and current vocational education and training infrastructure is not geared to meet industry requirements (CII report on case for setting sector skill councils, 2009). This is a contradiction of scenarios – supply demand mismatch on the one hand and rising population

of educated unemployed. At present only 2% of the work force in the age group 15-29 has undergone formal vocational training and 8% have had non formal vocational training. 93% of the workforce is in the unorganised sector. Vocational education and training is provided in India by several educational institutions / organizations functioning under about 17 different Ministries of the Government of India. In spite of this, of the 12.8 million new entrants to the workforce every year, the existing skill development capacity is only 3.1 million.

The National Knowledge Commission (NKC) also recommended a focus on increasing the flexibility of VET within the main-stream education system. NKC has also emphasized the need to expand capacity through innovative delivery models, including robust public private partnerships. It is necessary to ensure a robust regulatory and accreditation framework, along with proper certification of vocational education and training. This would allow easier mobility into higher education streams seamlessly and enhance the value of such trainings. Considering the magnitude of the challenge in terms of the skilling approx. 500 million by 2022, the need of the hour is to pool all the resources and provide skill training in all the possible modes, be it face to face or through distance learning. The vocational education in schools should get off to a strong start so that these children can fulfil their aspirations of entering the work force or continue to higher levels of vocational education.

To achieve the knowledge based economy, India needs a flexible education system – imbued with basic education to provide the foundation for learning; secondary and tertiary education to develop core capabilities and core technical skills; and further means of achieving lifelong learning. The education system must therefore be attuned to the new global environment by promoting creativity and improving the quality of education and training at all levels.

In his address to the nation on the Independence Day (2007) the Prime Minister stated “The vast majority of our youth seek skilled employment after schooling. Last year I spoke the need for a Vocational Education Mission. Such a Mission is ready to be launched. We will soon launch a Mission on Vocational Education and Skill Development, through which we will open 1600 new industrial training institutes (ITIs) and polytechnics, 10,000 new vocational schools and 50,000 new Skill Development Centres. We will ensure that annually, over 100 lakh students get vocational training – which is a four-fold increase from today’s level. We will seek the active help of the private sector in this initiative so that they not only assist in the training but also lend a hand in providing employment opportunities”.

2. The Need for Change in Vocational Education

Changes in technologies and financial markets, emergence of global economies, products and services, growing international competition, new forms of business, and management practices are creating new paradigms for the workforce. India is referred to as a 'young nation', with a population of 28 million youth added every year. We have about a decade to fully reap the benefits of the oft spoken of demographic dividend. If India wants to develop a workforce which can meet skills demand of a growing economy and if it wants to give a competitive advantage to its workforce on the global front, it is imperative that its Vocational Education and Training system is restructured.

The maladies ailing vocational education in the country can be summarized as follows:

- i. **Training vs. Education.** Vocational Training is treated as distinct and separate from general education. However, to work in a professional environment and do many jobs effectively, one needs to have a certain minimum of both, i.e. theoretical knowledge of systems as well as the practical (skills) training. Pass outs of ITIs and even private vocational education are given certificates distinct from those of general education, making these dead ends. This causes uneven and incomplete preparation for work, also impeding progression of the students and leading to fewer takers for vocational training. These remain relegated to low end skills.
- ii. **Industry and Job Linkages:** The vocational training institutes, which purport to prepare students for jobs, often do not have close linkages to the employers and understanding of their needs. Hence they train based upon outdated perceptions of what is needed or on a centralised decision making process. Courses and curricula developed in conjunction with industry should have a local context and relevance.
- iii. **Redundant and inadequate curriculum and faculty:** Along the same lines as above, curriculum has remained static over years, not reflecting current requirements. Quality and robustness of curriculum varies and often leads to uneven delivery depending upon the teacher's interpretation and capability. Facilities and labs are often behind times, resulting in ill equipped pass outs.
- iv. **Poor Quality:** Lack of strong teachers and pedagogy as well as facilities lead to uneven quality. The teachers need to have regular refresher training courses.
- v. **Stigma/ Lack of Motivation.** Vocational education is considered the option of last choice – which one joins if he or she performs poorly in the general education stream and exhausts other options. It is also linked to economic compulsions to enter the work place at an early age. This results in vocational education and training leading to low end jobs mostly and a low esteem for vocational pass outs as well.
- vi. **Dead End.** There is a lack of vertical (or horizontal) mobility for many of these certificates into progressively gaining further qualification/ transferring into higher education. Aspiration to obtain school leaving certificates and degrees still persists in Indian society.
- vii. **Aspirational links to Higher Education and better Jobs progression.** The point about Vocational Education carrying a stigma is valid - even though it is more useful in preparing for productive jobs. This can be made more appealing by
 - a. Making learning fun. Using high quality, technology enabled training in an interactive, multi-media blended manner.
 - b. By providing a pathway to next level education (post-secondary, higher education) and higher NVEQF levels, rather than just a dead-end certificate.

- c. Demonstrate ready employment in good jobs (interesting, well-paying) - with the possibilities of career progression - going hand in hand with additional education pathways (part-time or full-time).
- d. The levels and linkages will happen better if the courses are made shorter-term and modular in nature - building upon each other with credits carry forward mechanisms.

3. Centrally Sponsored Scheme (CSS) Vocationalisation of Secondary Education

The scheme was launched in 1988, to be implemented by the States/UTs for the formal sector and by the Non-Government Organisations (NGOs)/Voluntary Organisations (VOs) in the non-formal sector. The objectives of the scheme were: (i) to provide diversification of educational opportunities so as to enhance individual employability; (ii) to reduce the mismatch between demand and supply of skilled human resource, and (iii) to provide an alternative for those pursuing higher education. Under the scheme vocational courses are provided in general schools with 2 years duration at the higher secondary stage. Since its inception, about 10,000 schools have been covered with an intake capacity of about 10 lakh students. As per the evaluation study carried out in 1995-96, about 4.8% students were diverted to vocational stream. 28% of Vocational pass outs were employed/self-employed and 38.3% vocational pass outs were pursuing higher studies.

The success of the CSS scheme has not been uniform all over the country. The evaluation studies conducted by the PSSCIVE in various States/UTs led to the identification of bottlenecks in the implementation of the scheme. Some of these include lack or absence of regular teachers and their training/retraining, insufficient financial allocation (which was only Rs. 2 lakh/trade), high financial implication on the part of States, non-flexible duration and delivery of courses which at times were not need based, no change in recruitment rules, poor linkage with industry, poor vertical mobility, absence of separate management structures, absence of long-term commitment from the Central Government and inadequate monitoring. The courses and curriculum were not reviewed, thus making them redundant in today's context. High quality skills training requires adequate infrastructure, tools, equipment, regular supply of training materials, expert practitioners, and practice by the learners on-the-job or off-the-job. At present, the quality of training is low due to undue emphasis on theory and certification rather than a blend of knowledge and skills and testing of competencies. The certificate does not indicate the competencies acquired by the learner. Lack of inputs from prospective employers and industry into course identification, design and training delivery are the major reasons for the mismatch between the demand and supply of skills.

3.1 Revisions in Scheme of "Vocationalisation of Secondary Education" in XI Plan

Keeping in view the recommendations of various committees and the new targets set for skilled manpower, MHRD initiated the process of revamping the Centrally Sponsored Scheme (CSS) of "Vocationalisation of Secondary Education". A need to develop a National Vocational Education Qualifications Framework (NVEQF) for establishing a system of clear educational pathways from school to higher education was proposed. It was also suggested that the revamped scheme should be flexible in nature so as to provide greater options to the students for choosing modules, keeping in view their aptitude and economic requirements. The proposed revisions in the scheme have been approved by CCEA for implementation in the remaining period of the XI Plan, i.e. 2011-12. It envisages strengthening of 1000 existing vocational schools and establishment of 100 new vocational schools through State Governments. Assistance will be provided to run 500 vocational schools under PPP mode. There is a provision for in-service training of 7 days for 2000 existing vocational education teachers and induction training of 30 days for 1000 new vocational education teachers. 250 competency based modules will be developed for each individual vocational course. It will be mandatory to revise the curriculum once in

three years to ensure that the curriculum is guided by needs of the industry. A separate vocational cell has been established within the Central Board of Secondary Education. Assistance will be provided to reputed NGOs to run short duration innovative vocational education programmes. All the components and activities would be guided by the National Vocational Education Qualifications Framework (NVEQF) being developed by the Ministry, including the provision for horizontal and vertical mobility to the students with multiple entry and exit options. Pilots for the NVEQF in Class IX are also to be launched in Haryana and West Bengal in 2011-12. A Management Information System and web portal on vocational education will be set up. There will be an Executive Council for the scheme under the Chairpersonship of Minister of Human Resource Development for policy, strategic and implementation issues.

4. National Vocational Education Qualifications Framework (NVEQF)

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

The implementation of NVEQF will make necessary provisions so that the vocational students pass outs of +2 level would have access to diploma programmes offered by the Polytechnics and first-degree level vocational courses at Universities/Colleges. Such an entry will facilitate their pathway up to the highest degree i.e., doctorate, if so desired. A change introduced, based on recommendations of the States and CABE is to commence vocational education from Class IX, as against Classes XI-XII at present. Pilots of the NVEQF have also been approved for launch in Class IX in Haryana and West Bengal under the Scheme "Vocationalisation of Secondary Education", experiences from which will be in good stead for scaling up in XI Plan.

4.1 Levels in NVEQF

The proposed NVEQF is organized as a series of levels of learning achievements, arranged in ascending order from 1 to 10 levels (Fig.1).

Fig. 1: Qualifications by levels across the NVEQF

Level	NVEQ	Case I		Case II	
		Qualification	Certifying Body	Qualification	Certifying Body
10	NCC 8	Degree	University and SSC	Degree	University and SSC
9	NCC 7	Degree	University and SSC	Degree	University and SSC
8	NCC 6	PG Diploma/ Degree	University and SSC	Degree	University and SSC
7	NCC 5	Advanced Diploma	Board of Technical Education and SSC	Degree	University and SSC
6	NCC 4				
5	NCC 3	Diploma	Board of Technical Education / NCVT and	Grade XII	School Board and SSC
4	NCC 2				
3	NCC 1				

			SSC		and SSC
2	NCWP 2	Grade X	School Board and SSC	Grade X	School Board and SSC
1	NCWP 1	Grade IX	School Board and SSC	Grade IX	School Board and SSC

NCWP: National Certificate for Work Preparation

NCC: National Competency Certificate

4.2 Strategy for NVEQ Levels 1-4

- Qualifications at NVEQ levels 1-4 will allow a learner to acquire entry level competencies (basic competencies) needed for “work preparation” (NVEQ levels 1-2) or “transition from an unskilled to a skilled person” (NVEQ levels 3-4).
- NVEQ levels 1-2 will prepare students for the work environment, generic competencies, understanding career options and pathways and develop positive attitude towards life, work and further education. National Certificate for Work Preparation 1 (NCWP 1) will be issued to those who have cleared NVEQ level 1, which would be equivalent to Class IX, opting for vocational course units along with general subjects. The National Certificate for Work Preparation 2 (NCWP 2) will be issued to those who have cleared NVEQ level 2, which will be equivalent to Class X, again with a combination of general subjects and vocational course units.
- During discussions on the NVEQF strategy, it has been felt that the exit levels into the work place would be trade specific. Some sectors like IT may not have a requirement of level 2 competency, but others, say retail, may employ youth after level 2 also. These would be guided by the NOS being developed for different sectors. These exit points would be useful not only for the students in the formal schooling, but also draw back school drop outs for achieving requisite levels of competency to enhance their employability. At the same time they could receive a school certificate also.
- The experience gained from the pilots of NVEQF in Class IX in Haryana and West Bengal will enable firming up the curriculum and courses in vocational education. The pilots have a provision of offering vocational courses both as an additional subject and in substitution.
- Learners will be able to acquire vocational qualifications in a particular occupation from level 3 onwards, i.e., Class XI and subsequently upgrade their qualifications through gradual acquisition of competencies.
- Sector Skill Councils will determine the minimum levels of competencies prescribed for that NVEQ level. For children seeking entry into level 1 of the NVEQF, this process will be in compliance with the Right to Education Act, 2009. If there are “competencies gaps” identified in a candidate, then the candidate will have to undertake the required units through a “bridge course” to acquire those competencies.
- Academic qualifications would be assessed and certified by educational bodies and NVEQ would be assessed and certified by respective Sector Skill Councils (SSCs).
- Guidance and counselling session will be an integral part of the admission procedure.

5. Introduction of NVEQF at Secondary and Higher Secondary Education (Classes IX – XII)

The student population that does not go beyond Class VIII forms a large pool of unskilled labour force and needs opportunities for skill development either in their traditional occupations or in new areas to enable them to take up gainful occupations. The Programme of Action (POA), 1992 formulated for implementation of the National Policy on Education 1986 stated that vocational programmes for students after Class VIII will be introduced on an experimental basis in different states. The Ramamurti Committee on Review of NPE 1986 inter alia recommended that there should be vocational education beyond Class VIII. The committee also recommended that the four-year secondary stage from Class IX to XII should be viewed together so that courses could be planned of varying duration from 1 to 4 years in the academic and vocational streams.

During the consultations held by the Ministry in the development of the NVEQF, there has also been a strong recommendation from the States as well as other stakeholders that vocational education needs to be introduced from Class IX, as against the present system of introduction of VE at Higher Secondary levels. The pilots of the NVEQF is also being launched in Class IX in Haryana and West Bengal in 2011-12, the experiences from which would be beneficial in country wide roll out of the NVEQF in the XII Plan.

The revised Centrally Sponsored Scheme Vocationalisation of Secondary Education has been approved for implementation in 2011-12, the last year of the XI Plan. This is primarily meant for offering vocational education in Classes XI-XII. The changes proposed in the revised scheme submitted for approval of Cabinet Committee on Economic Affairs (CCEA) has incorporated the nuances of the NVEQF. Permission has also been sought for funding of the pilots in Class IX from within the scheme. However the scheme during its revision in the XII Plan will need to assist vocational education from Class IX (level 1 of the NVEQF) across the country. Suitable test of the competencies in literacy and numeracy will have to be taken by all students on completion of compulsory education at the end of the 8th grade, which would be used as a selection criterion for further educational progression. The processes would be in compliance with the Right to Education Act, 2009 for students desirous of entering level 1. The introduction of VE from Class IX and the syllabi will have to be developed in consonance with the endorsement by CABE on 7.6.11 of extending the Right to Education to Class X.

5.1 Objectives

- To impart training in simple marketable skills to students in Class IX and X.
- To develop vocational interests and aptitudes.
- To facilitate the students in making choice of vocational courses at the higher secondary level.
- To prepare students for participation in work as a desired dimension of academic education
- To inculcate healthy values related to work culture.
- To provide link /pathways to higher education after completion of higher secondary education.

5.2 Introduction of Vocational Electives

National Occupational Standards (NOS) will be developed by the respective Sector Skill Councils set up by NSDC. Mapping will be done for a sector and occupations will be classified as per the qualifications and competencies needed for the job at that level. Mainly service oriented vocational electives (learning units) would be introduced together with internship programs in an industry/farm/medical hospital/veterinary hospital/organization, etc. Guidelines for development of competency based curricula and teaching-learning materials will be developed by the PSSCIVE, Bhopal in partnership with the respective Sector Skill Councils.

5.2 Assessment of Skill Needs

Assessment of human resource needs is the first step towards planning for human resource development locally or globally. It helps in identifying the trend of emerging vocations, levels of competence required, duration for which the demand is likely to subsist, quantum of requirement and the extent to which education and training facilities are needed. It is a sophisticated exercise and requires a great deal of expertise. Therefore, in order to have realistic national estimates of human resource needs on a long term and continued basis, this task would be assigned to bodies like Sector Skill Councils (SSCs) being set up by the National Skill Development Corporation (NSDC) in different sectors, e.g., Automobile, Health Care Services, Agriculture, Manufacturing, Health, Banking, Tourism, Electronics, Organized Retailing, Insurance, Food Processing, Information Technology, Textile, Entertainment, Construction, etc. In the initial stages, district development plan surveys would be utilized to assess sectoral manpower need and availability in the district.

5.3 Selection of Schools

Separate vocational schools are to be discouraged since the effort is to mainstream vocational education. Vocational schools in this context mean sections in existing schools offering vocational courses. The selection of schools and vocational electives should be based on assessment of skill needs, conducted nationally and locally; availability of required resources e.g. industry/business set-up for linkages, teachers/trainers, necessary raw material, electricity, water supply, and the prevailing and emerging employment opportunities. The proximity between the schools and industry/employer would be a major consideration in the selection of the vocational schools. A school will be required to have linkage with some related Enterprise/ Industry/ Farm/ Organization, etc., for specialized training or internship.

The schools will have to obtain recognition and get affiliation to the concerned State Board of Education or the Central Board of Secondary Education and the SSC for running vocational electives. Every selected school would offer need based modular vocational electives for preparing skilled manpower in identified occupations. The vocational electives would provide flexibility of choice to students.

The schools offering vocational electives for NVEQs 3 & 4 will also serve as accredited vocational education and training centres of National Institute of Open Schooling).

Model Vocational Schools (MVS) will be set up in each district to serve as a mentor for other schools. The quality of vocational education provided through the MVS will serve as a benchmark for setting standards. The MVS will have modern infrastructure and equipment, stronger teaching and monitoring teams and multiple linkages with industry. These schools will also serve as feeder schools for a cluster of schools in its periphery.

5.4 Curriculum

PSSCIVE, along with State Boards & CBSE and experts, will develop exemplar competency based curriculum with inputs from industry to allow contextualization and localization of content by the States. The competency based curricula will be adopted or adapted by the Central/State Boards of Education. Each curriculum will, however, have to meet national standards for competencies and other applicable norms set by the SSCs. For quality assurance and relevance, the vocational training packages will be reviewed and revised every 2-3 years or earlier as per the need. A component of 'on-the-job training' would be an integral part of the curriculum.

Besides technical skills, greater emphasis will be given on development of generic skills, which would include (i) Basic communication skills, (ii) Basic IT skills, (iii) Customer care services, (iv) Job seeking skills, (v) Team building skills, etc. The curriculum developed by NIOS, State Open Schools & IGNOU allow flexible delivery and can be included in the curriculum portfolio.

Considering the mammoth task involved in creating curriculum, it is suggested that during this plan period, a common curriculum be made available on the proposed portal to enable the States to bring in their own localization and language translations. This would also be an opportunity for the States to develop their capacities for designing their own curriculum in the next Plan. All material developed should be posted on the website for building up a national repository for common use.

This strategy will help overcome uneven quality across different schools and ensure uniform quality of implementation. A comprehensive curriculum should include:

- (i) Classroom Instructional material – presentations, texts and other material
- (ii) Teachers Kits - teaching Notes, worked example, detailed class-by-class-plans with time breakdown, key takeaways, pointers, etc
- (iii) Students Kits - student worksheets, brief notes, etc

Along with the above three components, it should also encompass a Teachers Training program which will cover domain, pedagogy, soft skills and other components of effective teaching.

Delivery of Curriculum will also be enhanced by strongly leveraging Technology – Learning Management Systems - to enable eLearning (asynchronous instruction) and distribution of the coursework. This should also enable delivery of training over

satellite (synchronous instruction). Technology can also help in efficient administration monitoring and even assessments of training so delivered

While designing the curriculum, no low hanging fruits should be left out. The low hanging fruits should be based on two factors. One factor is the investment required for the skills training and the second factor is employability. The low hanging fruits have high capacity and low investment. For instance, the CSS, ICT@Schools labs can be leveraged to impart training like multimedia and web based training. Occupational courses like Accountancy, Administration and desk top Publishing do not require any huge investment and the deployment of these are very high.

5.5 Faculty and Staff

The services of a Vocational Coordinator (Senior Teacher) would be obtained on a regular basis. The Principal of the school would be busy with regular administrative matters and hence the role of a Coordinator would be imperative and critical for proper focus to be given to vocational education.

One part time teacher per vocational elective will be appointed on contractual basis for 3 years in the first instance. Rest of the teachers/trainers will be engaged on a per hour payment basis as guest faculty, drawn from industry also. Industry would also provide Master trainers. The master trainers and the guest faculty for vocational courses can also be obtained from amongst master craftsperson/professionals in the concerned vocation even though they may not have formal qualification (degree/diploma or a teacher training certificate). The provision of Recognition of Prior Learning in the NVEQF would also provide opportunity to traditional craftsmen and others to achieve appropriate competencies for further honing their skills or engagement as master trainers. Other support staff will be hired on term appointment (contractual basis).

PSSCIVE will work out the details of qualification for appointing vocational teachers and would circulate the guidelines for the selection and recruitment of vocational teachers to all the States/UTs. Preference will be given to those people who have experience in the industry.

5.6 Teacher Training

NCTE should revise teacher education syllabi to include a separate paper on VE in B.Ed. & M.Ed. programmes for teacher preparation. Further, B.Ed. (Voc.) programmes may be expanded and strengthened. Students of B.Ed. and M.Ed. programme will be given hands-on practice through internship programme in work place/industry.

A component of induction and in service training is inbuilt in the revised scheme of Vocationalisation of Secondary Education. An induction training of 30 days duration will be organized by the State Coordination Cell for VE or District Education Office for all vocational teachers. Regular in-service teacher training programmes of 7 to 10 days on pedagogy, subject content and other related aspects of VE should be organized for all teachers every year.

The RIEs have excellent facilities. These should be strengthened further and dedicated vocational cells be opened, along with adequate budgetary support to test out new models and introduce Vocational Education Trainer's curriculum

A concise training package would be developed by PSSCIVE in teaching techniques, competency based training and assessment and communication skills for the full-time and contractual teachers from various fields. The PSSCIVE, Bhopal will act as the principal coordinating agency for organizing teachers training programmes. Pre-service teacher/ trainer programme would be developed by PSSCIVE in consultation with NCTE and would be offered in institutions like PSSCIVE, Regional Institute of Education (RIEs), State Teacher Training Colleges, National Institutes of Technical Teacher Training and Research (NITTTR), Universities, etc. for meeting the requirement of vocational teachers..

5.7 Infrastructure

Adequate tools, equipment and machinery for the development of soft and basic technical skills would be provided to the schools. The list of the tools and equipment would be mentioned in the curriculum and would form the basis for purchase of relevant machinery and equipment for the vocational electives. In addition, the requirements for modern tools and equipment should also be assessed taking the help of employers, relevant organizations, and professionals in the field. Linkages will have to be developed with industry and other organizations for specialized technical training using their work floor, equipment and expertise. Raw materials and consumable items like glassware, plastic-ware, chemicals, etc. would also be provided for each training package. A collaboration with the local polytechnics/ITIs/ technical institutions would be useful for availing already available infrastructure and faculty by the school systems. The focus should be to reuse the existing capacity instead of creating new capacity for skills work. A Public Private Partnership can be structured to leverage the existing capacity. There are a number of simulation systems available in the market. These would be an excellent option to enable an 'on site' feel in the absence of real industry in the vicinity.

5.8 Industries/User Organizations' Involvement

The success of vocational stream is dependent upon industries/user organizations' involvement in various activities e.g., need assessment, competency standardization, curriculum development, on-the-job training/internship, development of job profiles, assessment, joint certification, and quality assurance.

Each school should have linkages with industry/business establishment. Specialized practical work and training would be arranged in commercial and industrial establishments, hospitals, farms, etc. depending on the vocation and the nature and level of practical training required for the course.

Training arrangements should also be made in the unorganized sector on half or full day basis. Structural flexibilities in the timetable would be incorporated to arrange practical training according to the convenience of the trainer/industry.

5.9 Instructional/training materials

Competency based instructional and learning materials would be made available for the identified vocational electives to the learners, teachers and trainers. Teacher and trainer guides, practical manuals/workbooks, charts, multi-media packages would be developed on a large scale and would be made available to all the States/UTs for implementation, contextualization and translation. PSSCIVE will provide support in the development of exemplar instructional and learning materials. Worksheets Handouts, Kits, etc. would form an integral part of the package to keep the learner active during the learning process.

Guidelines for practical training in industry will be prepared by the PSSCIVE, Bhopal. MOUs will be signed between the school/institution and industries/user organizations. The Vocational Coordinators of schools offering vocational courses would approach industry and seek their cooperation for various possible aspects including practical training to vocational students. The State Directorate of Education/ Coordination Cell for VE would ensure that necessary instructions are issued to appropriate state authorities and concerned officers to ensure full cooperation of industries for imparting practical training to vocational students.

5.10 Examination and Evaluation

The Vocational Education Cell of the CBSE/State Boards would draw up a detailed scheme of evaluation, along with the respective SSCs, to enable competency based assessment of students by the recognized assessors appointed by the Vocational Education Cell in the CBSE/State Boards. The school should maintain 'student portfolio' and the same should be annexed with the evaluation sheet/certificate awarded by the Institution.

Both formative and summative assessments would be critical elements that need careful consideration in the development and design of any learning experience by the teacher or trainer. The summative assessment relies on the learner's ability to provide evidence of his or her ability to perform the skills. This assessment should have certain performance criteria attributed to it and therefore, speed; degree of accuracy, application under certain circumstances, etc. should be measured.

Formative assessment relates to the practice or rehearsal of the skill. Clearly this requires time for the learner to master more complex skills, especially if a range of performance criteria is a feature of the assessment process. Assessment of competence should therefore be conducted after a period of rehearsal and must measure the performance of the skill with respect to predetermined standards (performance criteria). A learner must demonstrate competence by successfully performing the practical skill. Feedback from the supervisor or workplace trainer or assessor at the training site is a useful measure in gathering evidence.

Since the vocational education is envisaged to be a multi entry and exit system, it is important that a digital database of credits be established from inception. This is imperative for flawless credit accumulation and transfer of credits. This would greatly benefit by being tagged in with the Unique Identification Numbers being developed. A group of experts should be set up for putting in place a system at the earliest.

5.11 Certification

Since preparing employable youth is the main objective of vocational education, it is important that standards are clearly laid down for the competencies required and that there should be an understanding regarding 'equivalence of certificate' issued by various State Governments, organizations within the Government by different Departments, etc. A suitable mechanism for the purpose would be developed, including that of accreditation and recognition of vocational courses. Getting international bench marking and recognition of the vocational competencies and qualification would also be imperative to ensure international equivalency of the Indian NVEQF.

A Credit Accumulation and Transfer (CAT) system will enable learners to accumulate certain number of credits of learning from various modules with a view to convert the accumulated credits into a recognized qualification. On completion of specified number of modules, a certificate of attainment would be awarded to the candidate.

The certificates for attainment of a qualification or vocational elective will be awarded by the concerned Central /State Boards of Education. Possibility of joint certification with Sector Skill Council or reputed Industry Association would also be explored and implemented to ensure acceptance by industry.

5.12 Coverage of Special Focus Groups

Efforts will be made by the States/UTs to mainstream children belonging to special focus groups i.e. SC, ST, OBC, person below poverty line, minority and children with special needs, with special attention to the girls belonging to these groups. Vocational education and skill development would be a potent tool for emancipation and empowerment.

Special priority would be given to open/strengthen vocational schools/model vocational schools in identified minority/SC/ST concentrated districts/blocks. States/UTs will develop suitable incentives for their participation for which funding provision has been made in the scheme. Enrolment drives, special campuses, provision of special facilities, working in close collaboration with parents and NGOs, etc. should be undertaken to ensure participation of special groups in vocational education. Monitoring attendance, organizing remedial classes and follow up of special groups will be done by vocational schools.

An inclusive approach on vocational education needs to be adopted. Special vocational training programmes in institutions like NIOS, IGNOU and such other institutions imparting education in the distant mode of education across the country should be promoted. The Governments should frame schemes for supporting the NGOs, DPOs, POs (Parents organizations) for supporting vocational training. The selection of trades for vocational training should be in such a way that vocational education should be employment oriented or adequate for ensuring self reliance of individuals. Such initiatives like Abilympics which have potential for promoting skill development should be supported and encouraged. Necessary support services e.g. special aids and appliances shall be provided for learners with special needs during the process of learning and training. Arrangements would also be made in schools for

removing architectural barriers for easy access of learners with special needs. Teacher preparation for giving due care and attention to such children also need to be ensured.

5.13 Guidance and Counseling

Student support system will be crucial for the success of the vocational education programme. These will include support in determining the equivalence of various courses and qualifications for lateral and vertical mobility. A Vocational Guidance and Counselling Cell will be established by the school offering vocational electives with the help of available faculty. The Vocational Coordinator should involve the vocational counsellors from time to time on an honorarium basis for providing necessary inputs to teachers and guidance to students and parents regarding market trends and suitable vocational choices. The Counsellor would also be responsible for informing students about the various job opportunities, vertical and horizontal mobility and also opportunities for self-employment. Specific counselling drives should be organized in the school and neighbourhood, involving suitable experts. Students from disadvantaged groups will be given specific attention.

5.14 Self-employment

Besides giving necessary guidance to the students for setting up their ventures, the Vocational Coordinator/ Vocational Teachers will provide technical support to them during the school-to-work transition period. The mandatory internship with industry would go a long way in preparing the students for the work place. Efforts will be made at appropriate levels to arrange soft loans and to devise marketing strategies for these young skilled entrepreneurs. Best practices in vocational education from the States/UTs should be documented and disseminated so that such practices could be replicated or emulated by others. Special classes on entrepreneurship would be conducted for those students who opt for self employment.

5.15 Recruitment Rules

Employability of vocational pass outs will determine the success of vocational courses. For this a thorough review of recruitment rules and procedure are a pre-requisite. Rules of recruitment in Government, quasi-Govt. institutions, and public and private sector industries /enterprise should be modified to provide preference to the vocational graduates, specifically with an NVEQ. The vocational education machinery created at the National and State level should take up this task in consultation with Industry Chambers and Associations. Further, the Department of Personnel in different States should be pursued to take up this matter on priority. In order to achieve this goal, efforts would be made by the management at the national and state level. Campus interviews would be organized by the Vocational Coordinator/District Vocational Education Officer for placement of vocational passouts in jobs

5.16 Production-cum-Training Centre

Establishment of Production-cum-Training Centres (PTC) is visualised as a methodology of providing a learning experience linking teaching learning process with the world of work, so that students not only gain relevant skills and attitudes but also

the necessary hands on experience to use skills in producing and marketing goods and services. The dichotomy between education and work could be reduced by establishing PTCs in schools, as the production processes become vehicles of learning, which is related to society's needs for goods and services. A large share of earnings through the PTC should be distributed amongst students as an incentive and support to them.

However, the PTCs should be established by industry, since the school would not have the expertise for establishment and running them. The major objectives of PTCs would be as follows: (i) provide educational experience relevant to market (ii) enhance self-support capabilities (iii) forge institute-community linkages through need based products and services (iv) inculcate the spirit of social accountability in educational institutions and (v) prepare students for gainful self/wage employment.

Hence, a PTC can be formed in each school considering the scope of the vocational courses offered in the school. Suitable linkages with Institutions like Jan Shikshan Sansthan could be established for collaboration. The guidelines for establishing and running PTCs in schools should be prepared. Training programmes for the key functionaries for establishment of PTCs should also be organized.

5.17 Apprenticeship Training

It has been consistently felt that students of the vocational courses at +2 level (Technician Vocational Apprentices) should be provided facilities for apprenticeship training under the Apprenticeship Act 1961 as an important catalyst for promoting vocational education. In 1986, the Apprentices Act was amended to provide training to vocational students of higher secondary level. This scheme is currently being implemented through the four Regional Boards of Apprenticeship Training (BOAT) at Mumbai, Kolkata, Chennai and Kanpur. This needs to be strengthened through industry, updation of courses and curriculum for improving the employability of the pass outs.

At present there are 96 vocational courses covered under the Apprentices Act 1961. Efforts would be made to cover vocational electives under the Apprentices Act. The State Coordination Cell for Vocational Education and District Vocational Education Office should liaise with the BOATs for apprenticeship training of the students.

5.18 Publicity, Awareness

A workshop should be conducted at the centre level along with the SSCs as well as the state level for the orientation of the administrators and educationists, as well from the Departments of Industry and Labour of the State Govt. This orientation would an important pre requisite for subsequent awareness generation among the recipients of the programmes.

Extensive publicity applying various print and electronic media (newspapers, magazines, newsletters, radio, television, internet, etc.) should be done for creating the right image of vocational courses and to attract the youth towards the vocational education. Specific publicity campaigns need to be designed at suitable levels. There is a need for increasing the awareness about the changes being brought about in VE among the students, parents/guardians, administrators and educators at all levels. Only then would it be possible to remove the low prestige that VE suffers from in the

country and there would be more takers, enabling achievement of the target of 25% children diversifying into the vocational stream in the XII Plan.

This is a huge change management initiative. The change management should be done at the two levels:

- (i) At the local level, all the stake holders, viz., industry, children, parents, NGOs and the state administration should be involved in the programme deployment
- (ii) Emphasis should be given on a separate training for Principals / Headmasters and Coordinators in Charge of Vocational Education. The training should cover review and monitoring aspects of this programme.

5.19 Programme Monitoring and Evaluation

Evaluation and monitoring will be a built-in feature. Monitoring of programme implementation will be done at various levels, viz., National, State, District and Institutional level. The feedback mechanism would ensure identification of deficiencies in instructions, administration, financial management, etc., so that the functionaries at each level are able to take timely decisions to fill in the gaps in policy-making, direction, budgeting, etc.

A system of Management Information System (MIS) should be created for proper monitoring and evaluation of the Scheme and for this purpose funding shall be provided from the scheme. The MIS will be developed by PSSCIVE in collaboration with agencies such as National Informatics Centre (NIC) and reputed Information and Technology Companies approved by Ministry of Information and Communication Technology. Besides this, monitoring teams will visit the selected schools for assessment of the performance. Community involvement will be ensured for this crucial and complex task. Efforts will be made to ensure that every school is inspected once a year. Monitoring/evaluation teams may be constituted at the district and/or state level to ensure real time monitoring and problem solving.

The success needs to be anchored on two metrics:

- (i) Number of Participating schools who offer this vocational programs and number of students enrolled in this option. This will indicate the uptake of the program which is the basic requirements for success.
- (ii) Employability of the end product – indicated by the students who get jobs/ employment when they graduate and productivity on the job. This will be the true measure of success. The latter is more difficult to track, but a strong attempt needs to be made by schools to track post-leaving status and performance of students.

5.20 School Advisory Committee on Vocational Education

Every school must set up School Advisory Committee (SAC) for smooth functioning of the vocational schools and courses within nationally set / approved standards and guidelines. The SAC will advise the school in selection of vocational electives, teachers, guest faculty, equipment etc. It will facilitate setting up of PTC, student support systems and help the school in forging linkages with the industry and student

placement for training and employment. The committee will monitor the implementation of the courses, fund utilization and the quality of the students coming out of the system.

The committee will be chaired by a person from the industry, business set up or association or a prominent entrepreneur from the offered vocation, with the vocational coordinator as its co-chairperson. It will have nominee of the DEO, nominee of the PRI and one member from industry for each of the vocations being offered by the school. The full time contractual faculty and guest faculty of the school and one student representative from each vocational course will also be the members of the committee.

6. Management Structure

A separate management structure should be set up at the national, State and district levels for the implementation and monitoring of the NVEQF at various levels.

6.1 Bureau of Vocational Education

A dedicated Bureau of Vocational Education (BVE) should be set up in MHRD, cutting across the Departments of School Education & Literacy and Higher Education to facilitate policy planning and implementation for seamless transition of vocational pass outs from school to higher education. This integration is essential for holistic development of curriculum, assessment and certification systems. The Bureau can handle both proposals from States/UTs under the scheme of Vocationalisation of Secondary Education as well as the skill development initiatives of Department of Higher Education. The Bureau will be responsible for evolving strategies for association of Public and Private sector, Industry, Civil Society Institutions, NGOs, etc. in implementation of NVEQF across the country. It would liaison with National Skill Development Council (NSDC) and other agencies to monitor and periodically review the implementation of NVEQF. The Bureau would also coordinate with other Ministries involved in skill development in various sectors.

The establishment of this cross cutting Bureau will be the corner stone for successful roll out of the NVEQF across the country and synergizing and assimilating the efforts of all stakeholders - Govt, Private and civil society in strengthening vocational education and improving the employability of the youth.

1	Joint Secretary	01
2	Director (1 each for school, higher /technical education and NVEQF)	03
3	Under Secretary	03
4	Section Officers	06
5	Consultants (subject expert)	03
6	Secretarial Staff	09

6.2 Vocational Cell in Central Board of Secondary Education (CBSE)

A dedicated vocational cell has been established in CBSE in 2011-12. Keeping in view the expansion in vocational education in the XII Plan, partnership with industry and Institutes in curriculum development, teacher training, credit accumulation and transfers, equivalency, recognition of prior learning, assessment and certification, this Cell needs to be strengthened in the XII Plan. The following composition of the Vocational Cell is recommended:

1.	Vice Chairman/Director (Vocational Education)	01
2.	Dy. Director (Finance)	01
3.	Dy. Controller of Examinations	01
4.	Vocational Education Officer (Subject Expert)	02
5.	Accounts Officer	01
6.	Accountant	01
7.	Section Officer	01
8.	Secretarial staff (Secretarial Assistant, Clerk, Computer Operator, Group D, etc on contract or outsourcing	16

6.3 State Coordination Cell for Vocational Education

Establishment of State Coordination Cell for Vocational Education in all the States/UTs should be taken up to enable holistic planning for the entire State. The establishment of a cross sectoral mechanism having representation from Departments of Education, Employment and Industries should be a pre requisite for implementation of vocational education in the States. The Cell would oversee the vocational education in schools as well as institutes of technical and higher education – a system best placed for providing counseling to the students desirous of pursuing vocational education. It will undertake skill need assessment in the State in collaboration with State Sector Skill Councils to enable industry relevant courses to be offered at various levels. It will work as an overall implementation and monitoring agency for VE in the state, including receiving, disbursing and monitoring of funds.

1	Director	01
2	Deputy Director	02
3	State Vocational Education Officer (Subject Expert)	01
4	State Employment Officer	01
5	State Industries Officer	01
6	Section Officer	03
7	Secretarial staff	12

6.4 District Vocational Education Office (DVEO)

Establishment/Strengthening of District Vocational Education Office (DVEO) in all districts of the States and UTs would be taken up in a phased manner for effective implementation and monitoring at the district level.

1	Director	01
2	District Vocational Education Officer	01
3	District Vocational Education Officer	01
4	District Employment Officer	01
5	District Industries Officer	01
6	Research Assistant	03
7	Secretarial staff	06

DVEO will liaise with local industries and other agencies for skill need assessment for different sectors of economy with the support of the Skill Development Centres, to be set up by NSDC, and identify locally relevant vocational electives that need to be offered in the district. It will monitor the programmes and adopt measures for providing quality assurance at the district level. It will facilitate placement of students for internship, on-the-job training, apprenticeship training and employment.

At the school level, a dedicated post of Coordinator Vocation Education should be created, whose Key Performance Area (KPA) is to implement the Vocational Education.

7. Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE)

The PSSCIVE would function as the national resource institution for providing necessary academic and technical support to the States in organization of NVEQ levels 1-4. It is also recommended that PSSCIVE should be strengthened for providing greater inputs for development of competency based curricula, teaching-learning and other support materials and organization of orientation and training programmes for key functionaries and teachers/trainers. The National Technical Teachers Training Institutes would be partners of PSSCIVE in building the capacity of the vocational teachers.

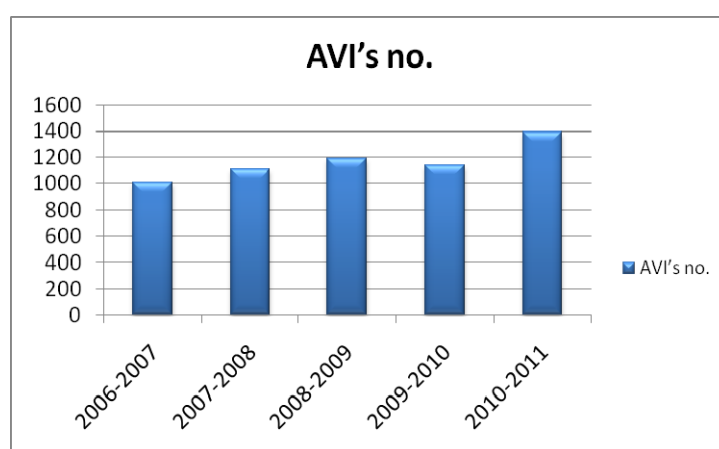
Composition of PSSCIVE

	Posts	Sanctioned	Additional	Total
1	Professor	06	05	11
2	Reader	12	05	17
3	Lecturer	12	13	21
4	Consultant (on contract)	03	03	06
5	Librarian	01	-	01
6	Deputy Secretary	01	02	03
7	Under Secretary	01	01	02
8	Sr. Accounts Officer	01	-	01
9	Accounts Officer	-	01	01
10	Section Officer	02	-	02
11	Asst. Programme Co-ord	01	02	03
12	PRO	-	01	01
13	Production Officer	01	-	01
14	Production Assistant	01	-	01
15	Guest House Manager	-	01	01
16	Personal Assistant	01	01	02
17	Animator	-	02	02
18	Computer Operator Gr. I	05	-	05
19	Computer Operator Gr II	05	-	05
20	Computer Operator Gr. III	06	03	09
21	Stenographer Gr. III	03	-	03
22	Assistant	-	01	01

23	Store Keeper Gr. I	-	01	01
24	U.D.C.	01	02	03
25	Laboratory Assistant	-	08	08
26	Laboratory Attendant	-	05	05
27	Caretaker (Hostel & Guest House)	-	02	02
28	Store Keeper Gr. II	01	-	01
29	EPBX Operator-cum-Receptionist	01	-	01
30	L.D.C.	05	-	05
31	Library Clerk	01	-	01
32	Hostel Attendant	-	02	02
33	Library Attendant	-	01	01
34	Peon/Class IV employee	03	03	06
35	Guest House Attendant	01	-	01
36	Driver	03	-	03
37	Security Personnel	03	09	12

8. National Institute of Open Schooling (NIOS)

NIOS vocational offers vocational courses through the open and distance learning (ODL) mode using a blended learning approach of both open distance learning methodologies and hands on training. During the XI Plan, the thrust was on (i) developing NIOS as a potential resource organization in open schooling at the national and international level, besides offering courses of study, (ii) up-scaling programmes of the existing 10 State Open Schools (SOSs), and (iii) setting up SOSs in the remaining 19 States. At present 15 States have open schools. In order to ensure quality in open schooling, there will be a full-time coordinator with ancillary staff on contract basis in each Study Centre under the open schooling system. NIOS imparts the Vocational Education and training through a network of its study-cum-training centres known as Accredited Vocational Institutions (AVI). More than 1400 Accredited Vocational Institutions (AVI) are operational throughout the country. During the XI Plan, NIOS established 511 AVIs in the country. Year wise growth of the AVI is as below:



The figures also include the 85 institutions which were disaccredited. The NIOS could only achieve its 51% of the target. However efforts are being made to expedited the process of accreditation and have more centers established

The vocational courses of NIOS are offered in Agriculture, Technology, Health and Paramedical, Home Science, Business & Commerce, Information Science and Technology and Teacher Training. The present courses relate to both urban and rural sectors. During the last five years NIOS has added about 30 new courses in totaling to about 80 courses. The range of courses has been expanding over the years depending upon learner needs and market demands.

The NIOS, State Open Schools and other open distance learning institutions may be linked with the state skills development centers to achieve the target of skilling approximately 15 million persons every year.

9. Role of Private Sector in Providing Vocational Education in XII Plan

It is recommended that private sector should be engaged under a comprehensive PPP model. The role of private sector players can be categorized as:

- (i) Academic partners
- (ii) Industrial partners
- (iii) NGOs and other local stakeholders

9.1 As Academic Partner

Academic participation shall be critical in the following key areas:-

- i. Teacher and Assessor Training- NSDC report on requirement of education and skill development services indicates a requirement of training 4,15,000 teachers and trainers annually. This large demand for trained vocational teachers can only be fulfilled by encouraging private academic participation in this field.
 - a. Private academic players, after appropriate accreditation and registration, can be associated in teacher training, orientation, refresher and development programs in pedagogical and skill enhancement training and development programs for faculty/teachers involved in vocational education. Skill training in collaboration with industry in 'live' environments can be arranged through private participation. These training programmes would form compulsory component of appraisals of teachers.
 - b. Training of assessors in competency based assessment based on NOS is another area where private participation can be sought.
- ii. Academic Content and Curricula development

The existing school education systems works on the basis of approved text books with the publishers. In the case of Vocational Education and Training, most of the courseware, content (including Multi-Media Titles) and Instructional Materials would be available with the Private sectors. On the line of IT courseware procurement under the "ICT@School" policy, the content /courseware can be entrusted to the private sector- the concerned courseware/ content provider should revise the courses as per the NOS.

- iii. Vocational Training Providers at secondary, higher secondary and tertiary level
- iv. RPL Mapping

Academic institutions may offer 'certificate of mapping' to persons in the informal sector for the skills obtained by them through informal means after conducting required assessment to measure skills , thus giving recognition of prior learning or pre-acquired skills of persons.

9.2 Role as Industrial Partner

The courses to be offered would be dictated always by the labour market research and needs analysis of industry. This would also lead to the development of the Labour Market Information System (LMIS). Industry would have an important role in defining

skills and competencies required for each occupation within their respective industry/sector within the NOS developed. Industry participation should be encouraged at all levels such as curricula design and specifying needs for various job roles, on-job training for students, contribution by way of equipment, production oriented labs, research labs etc., internships, apprenticeship and placements for students, participation in teacher training and skill upgradation.

It is recommended that the apprenticeship could be carried out by the same Vocational Training Provider as it ensures holistic planning, execution and accountability. Recruitment rules may be changed to make formal vocational certification a mandatory requirement for skill based employment. This would provide incentive for the workforce to obtain formal certification and thus increase the demand for vocational courses.

Industry/employers may be encouraged to be partners with educational institutions directly for skill development. Tax benefits may be considered for providing equipment, machinery, trainers etc to vocational institutions for setting up of production cum training centres.

9.3 Role of NGOs and Local Government Bodies

NGOs, local government bodies, social workers and other locally operating agencies or establishments should be actively involved in defining the needs of the community and designing vocational courses/programmes:

- (i) Orientation and awareness generation for motivating local population for undergoing skill training. Arranging special skilling or training programs for informal workforce through local trainers.
- (ii) Arranging local trainers such as craftsmen, artisans and other highly skilled persons who can train students and workforce in the local community.
- (iii) Creating Community Skill Development centers where local population can be skilled/trained and common infrastructure /equipment can be contributed by the local community and industry.
- (iv) Arranging workshops, seminars and counseling sessions with local experts for benefit of students and workers.

10. Physical and Cost Estimate for Different Components of the Scheme

10.1 Establishment of 6000 New Vocational Schools

Objective: To introduce vocational courses in secondary and higher secondary schools

- i. **No. of schools to be established:** 6000
- ii. **Target group:** Pass outs of Class VIII
- iii. **No. of vocational courses:** 02 per school
- iv. **No. of students per vocational course:** 50 (25 each in Class IX-XII)
- v. **No. of vocational students in each school:** 200
- vi. **No. of Sections in each School:** 4

Non-Recurring Expenditure

No.	Components	Expenditure (Rs. in lakhs)*
1.	Civil Work: (i) 04 Classrooms (each of 7 X 7 sq. meter) (ii) 02 Workshop/laboratory (each of 10 X 10 sq. m) (iii) 01 Office room (7 X 7 sq.m)	
	Sub-total	34.00
2.	Tools, Equipment and Furniture	6.0
3.	Computers	3.0
4.	Diesel Generator Set	2.0
	Sub-total	11.0
	Total	45.00

Note:

- (i) A suitable piece of land will be provided by the State Government for construction of classrooms, workshops and office room within the premises of the existing higher secondary school.
- (ii) Re-appropriation of funds among the heads would be allowed after due approval of the competent authority.
- (iii) The size of classroom, workshop and office room is as per the norms approved in the scheme of Rashtriya Madhyamik Shiksha Abhiyan (RMSA).
- (iv) Cost of construction may vary from place to place and quality of construction. Therefore, civil work should be done as per the CPWD / State PWD norms).

Recurring Expenditure

No.	Components	Monthly Expenditure (Rs in lakhs)	Annual expenditure (Rs in lakhs)

1.	Vocational Coordinator (regular) (01) @ Rs 35,000 p.m. (for 12 months)	35,000	4.20
2.	Vocational Teacher (04) (on contract) @ Rs 25,000 p.m. (for 12 months)	100,000	12.00
3.	Guest Faculty (honorarium @ Rs 200/- per hour) (on contract for 10 months)	As per norms	2.00
4.	Lab Assistant (02) @ Rs 15,000 p.m. each (on contract for 12 months)	30,000	3.6
5.	Secretarial Staff (On contract or by outsourcing) (i) Accountant-cum-clerk-01 @ Rs 12,000/- (ii) Helper-01 @ Rs 8,000/- (iii) Security personnel-01 @ Rs 5,000/-	25,000	3.0
Sub-total		--	24.8
6.	Raw Materials (including raw materials required for running PTC) @ Rs 75,000 per course (75,000X2)	--	3.0
7.	Books, Software, Educational CDs, etc.	--	0.3
8.	Seed money for running of Production cum Training Centres (PTCs)	--	2.0
9.	Office Expenses/ Contingencies (including expenditure on publicity, guidance and counselling, transport, field visits, postage, stationery, electricity, water etc.)	--	2.4
Sub-total			7.7
Total			32.5

10.2 Strengthening of 3000 Existing Vocational Schools

Since the inception of the Centrally Sponsored Scheme on Vocationalisation of Secondary Education (1988), about 10000 vocational schools have been sanctioned, out of which some of them need to be strengthened. Provision has been kept for some existing schools on per capita basis.

Objective: To strengthen the existing vocational schools

- i. No. of schools to be strengthened: 3000
- ii. Target group: Pass outs of Class VIII
- iii. No. of vocational courses: 02 per school
- iv. No. of students per vocational course: 50 (25 in each class i.e. Class IX-XII)
- v. No. of students in each school: 200
- vi. No. of section in each School: 4

Non-Recurring Expenditure

No.	Components	Expenditure (Rs in lakhs)*
1.	Tools, Equipment and Furniture	6.0
	Computers	3.0
	Diesel Generator Set	2.0
	Total	11.00

Note: Re-appropriation of the funds among the heads mentioned above would be allowed after due approval from the competent authority.

Recurring Expenditure

No.	Components	Monthly Expenditure (Rupees)	Annual expenditure (Rs in lakhs)
1.	Vocational Coordinator (regular) @ Rs 35000/- p.m. (for 12 months)	35,000	4.20
2.	Guest Faculty (honorarium @ Rs 200/- per hour) (for 10 months)	as per norms	2.00
	Sub-total	--	6.20
3.	Raw Material (including raw material required for running PTC) @ Rs 1.5 lakh per course	--	3.0
4.	Books, Software, Educational CDs, etc.	--	0.3
5.	Seed money for running Production-cum- Training Centres (PTCs)	--	2.00
6.	Minor repair and renovation of Classrooms (02), Workshops (02), Laboratory (01) and Office room (01) @ Rs 25,000/-	--	1.50
7.	Office Expenses/ Contingencies (including expenditure on publicity, guidance and counselling, transport, field visits, postage, stationery, electricity, water etc.)	--	2.4
	Sub-total	--	9.2
	Total	--	15.4

Note:

(i) Minor repair and renovation will be done as per the approved norms of CPWD/ State PWD. The civil work can be undertaken for the following: (a) classroom, (b) workshop, and (c) laboratory.

10.3 Reimbursement of Expenses to 6000 Vocational Schools under PPP

Objective:

Reimbursement will be made for 25% of the total no. students enrolled in vocational course / stream in a school to facilitate learning opportunities to EWS children.

- i. **No. of schools to be covered under PPP mode** : 6000
- ii. **No. of vocational courses** : 02
- iii. **No. of students per school** : 200
- iv. **Total students to be trained under PPP** : 9.45 lakh

Non-Recurring Expenditure: Will be met by the concerned school.

Recurring Expenditure

No.	Components	Monthly Expenditure (Rupees)	Annual expenditure (Rs in lakhs)
1.	Vocational Coordinator (regular) (01) @ Rs 35,000 p.m.	35,000	4.2
2.	Vocational Teacher (03) (on contract) @ Rs 25,000 p.m. (for 10 months)	75,000	7.5
3.	Guest Faculty (honorarium @ Rs 200/- per hour) (for 10 months)	As per norms	1.0
4.	Lab Assistant-cum-Storekeeper-02 @ Rs 15,000/-each (on contract) (for 10 months)	30,000	3.0
5.	Secretarial Staff (Accountant/Cashier - 01, Security Personnel - 01, Helper - 01, etc.) (on contract) (for 12 months)	30,000	3.6
Total			19.3

10.4 Grant-in-Aid to the NGOs/VOs

Objective: to assist NGOs for undertaking innovative programmes in vocational education

- i. **No. of NGOs to be covered:** 800
- ii. **No. of vocational courses in each NGO:** 02
- iii. **No. of trainees per NGO:** 200

Non-Recurring Expenditure

No	Components	Expenditure (Rs. in lakhs)
1.	Tools and equipment (including computers)	2.75*
Total		2.75*

* Actual cost will vary from course to course.

Recurring Expenditure

No	Components	Monthly Expenditure (Rupees)	Annual expenditure (lakhs)
1.	Vocational Coordinator - Rs 35,000/- (35,000X12)	35,000	4.2
2.	Vocational Teacher (02) Rs 25,000/- (50,000X12)	50,000	6.0
3.	Guest Faculty (honorarium @ Rs 200/- per hour)	As per norms	1.0
4.	Lab Assistant/Office Staff (02) Rs 15,000/- each (30,000X12)	30,000	3.6
			14.8
5.	Raw Material @ Rs 1.5 lakh per course	--	3.0
6.	Books, Software, Educational CDs, etc.	--	0.3
7.	Office expenses and contingencies (travelling allowance, field visits, etc.)		1.0
			4.3
	Total		19.1

Continuation of Funds for subsequent year will depend on the satisfactory performance of NGOs. Those NGOs whose performance will not meet benchmark, will not be eligible for subsequent funds. Tools and equipment will be transferred to eligible NGO of near by area.

10.5 Training of Teachers

In-Service Training

Unit costs

Batch of 30 Teachers (7 days In-service training)

1.	TA/DA to Teachers @ Rs. 5000/- per trainee (30 x 5000)	Rs. 1,50,000
2.	Local conveyance to 4 Resource Persons (limited to 1 DA @ Rs 500/-) (500 X 7X 4)	Rs. 14,000
3.	Honorarium to Resource Persons @ Rs. 1000/- per day for 4 persons per day (1000x4x7)	Rs. 28,000
4.	Honorarium to Honorary Director @ Rs. 1500/- per day (1500x1x7)	Rs.10,500
5.	Working lunch @ Rs. 100/- (100x30x7)+Tea @ Rs 50/- (50x30x7)	Rs. 31,500
6.	Institutional charges @ Rs. 1000/- per day	Rs. 7,000
7.	Stationery @ Rs 1200 (1200 X 30)	Rs 36,000
8.	Miscellaneous	Rs. 23,000

Total Rs. 3,00,000.00

Cost per teacher for 7 days = Rs. 10,000

Induction Training

Unit Costs for Batch of 30 Teachers

1.	TA/DA to Teachers @ Rs. 24,000/- per trainee (30 x 4000)-	Rs.7,20,000
2.	Local conveyance to 4 Resource Persons (limited to 1 DA @ Rs 500/-) (500 X 30X 4)	Rs. 60,000
3.	Honorarium to Resource Persons @ Rs. 1000/- per day for 4 persons per day (1000x4x30)	Rs. 1,20,000
4.	Honorarium to Honorary Director @ Rs. 1500/- per day (1.500x1x30)	Rs. 45,000
5.	Working lunch @ Rs. 100/- (100x30x30) + Tea @ Rs 50/- (50x30x30)	Rs.1,35,000
6.	Institutional charges @ Rs. 1000/- per day (30 days)	Rs. 30,000
7.	Study material and stationary @ Rs 2000 (2000 X 30)	Rs 60,000
8.	Miscellaneous on raw materials, daily wager, banner, field visit, photography, etc.)	Rs.30,000 (including expenditure
Total = Rs. 12,00,000.00		

Cost per trainee for 30 days = Rs. 40,000

10.6 Development of Competency Based Curriculum and Learning Materials

- (i) Number of Modules to be developed for the Vocational Courses: 1200
- (ii) Approx expenditure on development of curriculum and learning materials per course = 3.0 lakhs
- (iii) Training manuals and other learning materials would be distributed free of cost to the vocational students.

Total funds required = Rs 36.00 crore

Note : The training package will include the following materials:

1. Trainers Guide
2. Training Manual
3. Assessment Guidelines
4. Multi-media Packages
5. E-material

The work will be undertaken by PSSCIVE in consultation with CBSE/State Boards /NIOS/NITTTRs etc.

10.7 Establishment of Management Information System (MIS) And Web Portal on Vocational Education and Training

MIS and Web Portal will be developed at all level i.e. National, State, District and School levels. The requirement will be worked out on the basis of proposals received from States/UTs.

Total Funds required **Rs. 5.00 crore**

10.8 Management, Monitoring Evaluation and Research

Management Structure of Implementation of Vocational Scheme

An Executive Council for Vocational Education has been established under chairpersonship of HR in the XI Plan to execute policies & strategic decisions. A Bureau of Vocational Education in the Ministry for holistic planning for VE in schools and higher and technical education. A Coordination Cell for Vocational Education would be set up in phases in all the States for programme management & implementation. District Vocational Education Offices would be set up in a phased manner in all districts for district level programme management & implementation. School Advisory Committees on VE would be formed in each school implementing vocational education programme.

Monitoring and Evaluation

A Management Information System (MIS) would be developed for real time monitoring of the activities. Monitoring teams would also be constituted at various levels to visit the State & District Offices and to inspect schools. Efforts would be made to ensure that every school is inspected once in a year. Evaluation studies and sample surveys would be conducted regularly at district and school levels. Evaluation criteria would be evolved at Central & State levels. District level evaluation studies would be conducted by the States/UTs & school level studies would be conducted by the District Vocational Education Officer.

Research

Besides the above in built Monitoring & Evaluation mechanism, independent research on different activities along with industry associations will be encouraged. The findings of the research studies will clearly indicate proportionate share of vocational students at the higher secondary stage & the employment scenario of vocational pass-outs and tracking their further educational/training movement. This would also facilitate and advise on the future course corrections in vocational education.

In order to meet the expenditure on MMER, it is proposed that at least 6% of the project cost may be set aside for these activities.

11. Innovations in Vocational Education

Innovations

Establishment of Community Colleges

The introduction of the concept is being advocated in India to make way for industry ready students; shorter and cheaper courses, including a stipend in the final semester; enhanced accessibility and flexibility through ICT and with a provision of further progression, if desired. These would offer 2 Associate Degree programmes, transferable to existing degree programmes with an additional year of study. The Associate Degree would provide a mezzanine layer between shorter certificate/diploma courses provided by vocational training outfits and traditional degree colleges. The courses could be designed in a modular manner – each module enabling competence to a certain job capability and carrying over logically into the next module. Vertical mobility to the next levels, ultimately enabling lateral entry into third year of a degree program (perhaps after doing some required bridge courses) is a key design principle and the curriculum can be designed accordingly. The degree can be obtained from a corresponding state or central university to which the Skills (Community) College can have affiliation.

The program will also ground students in general educational and functional skills so as to give student broad grounding on fundamentals to prevent pigeonholing him into a very specific industry and to enable future lateral mobility across industries depending upon changing demand and opportunities. Hence the curriculum will have general skills courses as the foundations, professional and functional courses as the pillars and industry specific courses will round off the course.

MHRD can formalize the Associate Degree concept in NVEQF (National Vocational Educational Qualification Framework) with participation and input from other Ministries, Planning Commission and apex bodies as well as State Governments and industry. The incorporation of Associate Degree into the higher education in India may be considered. State Govts can adopt similar programmes in their Colleges and Universities, in partnership with private initiatives.

Model Vocational Education Schools

Model schools are recommended to be established in each district, offering a range of vocational courses. These would function as mandated under the NVEQF and ideal synergy with industry at the district level. These schools would serve as a mentor for the other schools in the district which are conducting vocational courses. Being at the district level would have an added advantage of showcasing seamless pathways for school leavers into the higher and technical education systems.

Accreditation of Schools

At present a plethora of courses are being offered by schools and various other vocational education and training institutes. There is no check on quality and relevance of education being imparted. Hence it is imperative that all vocational and education training providers, including schools, be accredited as per procedure laid down by the NVEQF. This is important for adhering to the national recognized standards, courses, curriculum, assessment and certification procedures.

Standardisation of TLM as per industry requirement

One of the major reasons for the weak TVET in the country is that the curriculum and the related teaching learning material are not in sync with industry requirements. The NVEQF lays down that all curriculum and TLM are developed in close coordination with industry/SSCs. This synergy would enable vocational education to address the needs of industry, enhancing employability of the youth at the same time.

Piloting of dual model of Germany

In Germany, the Secondary School prepares the student to enter into the Dual System. This model was derived from the Vocational Training Act of 1969 and it consists of three major partners: government, industry and labor unions. The Vocational Training Act specifies: How training and supervision is established; examination qualifications and requirements; legal responsibilities of all parties; rights and responsibilities of both the trainer and the apprentice; and, oversight for the program. The 400+ occupations include construction, business, banking, kindergarten teacher, mechanic, hairdresser, and baker, etc. When the student is near completion of the ninth grade they make an application to become an apprentice for a company. The company selects the number of apprentices needed from their pool of applications and give an employment contract; to those apprentices for the duration of the apprenticeship. This obliges the company to work the apprentice for the duration of the apprenticeship and obliges the apprentice to meet certain conditions while serving the apprenticeship. The apprentice then enters the vocational training center (Berufsschule) that trains in his/her selected field. The Berufsschule is the state sponsored vocational training center. The student works four days per week in the work-place and attends school for related classroom training one day per week. The idea is to integrate the theoretical aspects of the profession, math, science and language into the apprenticeship.

This approach should be piloted in India to further forge partnership with industry. This would offset the huge requirement of appropriate infrastructure to be established in schools and better prepare the youth for the work place. The links and the time spent in schools would enable a proper focus to be given to the theoretical knowledge, paving the way for vertical progression, if desired at any point of time.

12. Financial Estimates for the Centrally Sponsored Scheme “Vocationalisation of Secondary Education

No	Components	2012-13		2013-14		2014-15		2015-16		2016-17		Total
		NR	Recurring	NR	Recurring	NR	Recurring	NR	Recurring	NR	Recurring	
1	Opening of 600 new schools	36000	29250	45000	61750	54000	100750	63000	146250	72000	198250	806250
2	Strengthening of 3000 existing schools	5500	23100	8800	35420	8800	47740	7700	58520	2200	61600	259380
3	Assistance in PPP mode to 6000 private schools	-	9500	-	23750	-	38000	-	51300	-	57000	179550
4	Assistance to 800 NGOs	550	6685	550	10505	550	14325	275	16235	275	18145	68095
5	In service Training of 50000 teachers	-	1000	-	1000	-	1000	-	1000	-	1000	5000
6	Induction training of 40000 teachers	-	4000	-	4000	-	4000	-	2000	-	2000	16000
7	Development of 1200 competency based modules	-	900	-	900	-	900	-	600	-	300	3600
8	Establishment of MIS	-	100	-	100	-	100	-	100	-	100	500
9	TOTAL	42050	74535	54350	137425	63350	206815	70975	276005	74475	338395	1338375
10	MME @ 6%											80302.5
11	GRAND TOTAL											1418678

The central state share will be worked out as follows:

1. Civil construction 75:25
2. Teachers salary 90:10
3. Other expenses 100%

ACRONYMS

AICTE	All India Council of Technical Education
AVI	Accredited Vocational Institutes
CBSE	Central Board of Secondary Education
DGET	Director General of Employment & Training
ETP	Education Training Provider
GER	Gross Enrolment Ratio
ITI	Industrial Training Institute
MHRD	Ministry of Human Resource Development
NCERT	National Council of Educational Research & Training
NCVT	National Council for Vocational Training
NIOS	National Institute of Open Schooling
NITTR	National Institute of Technical Teachers Training
NOS	National Occupation Standards
NSDC	National Skill Development Corporation
NSS	National Sample Survey
NVEQF	National Vocational Education Qualifications Framework
ODL	Open and Distance Learning
PSSCIVE	Pandit Sunderlal Sharma Central Institute of Vocational Education
RPL	Recognition of Prior Learning
SDC	Skill Development Centre
SSC	Sector Skill Councils
TVET	Technical and Vocational Education and Training
UGC	University Grants Commission
VTP	Vocational Training Provider

SECTION – IV

Central Schools, Curricular Reforms and Examination System in Secondary Education

KEY RECOMMENDATIONS

This section contains only the key recommendations which require action to be taken in the immediate future. Recommendations of a more detailed nature in relation to the sub group assigned the task of working on the given TORs under the chairmanship of Prof. Krishna Kumar are mentioned throughout the report of the sub group.

1. A detailed study of KVS was done recently on implementation of NCF. The KVS needs to make an attempt to implement these recommendations during the XII Plan Period.
2. A study about the desirability of review of the charter of Kendriya Vidyalayas and Navodaya Vidyalayas may be done in view of increasing demand of such schools. Such a review should be carried out before the 12th Plan allocations are made available.
3. Kendriya Vidyalayas and Navodaya Vidyalayas should actively play their pace setting role, and guide schools in their neighbourhood. It is recommended that Kendriya Vidyalayas should develop a partnership with Navodaya Vidyalayas and CBSE in terms of infrastructure of Zonal Teacher Training Institutes as well as a common empanelment of resource persons and facilitators for maximum benefit. As pace setters, Kendriya Vidyalayas and Navodaya Vidyalayas should also share their teachers with neighbourhood schools to establish a tradition of community of practices.
4. KVS should also move towards creating Arts Departments which are comprehensive and have the capacity to deliver experience of all the art forms – Visual and Performing, that is, Painting, Sculpture, Drawing, Music, Theatre, Dance, Puppetry and other folk arts through collaboration rather than being islands of excellence.
5. The RTE alongwith the Universalisation of Secondary Education emphasize on quality in terms of curriculum, school infrastructure, strategies of learning, CCE and Capacity Building of teachers. The attempt to improve the quality of education will succeed only if it goes hand in hand with steps to promote each dimension of an organization.
6. Orientation and Capacity Building programmes need to be organized for all levels of officials of Boards to familiarize them with the NCF perspective and RTE implications for implementation. Such programmes are essential if quality initiatives have to be undertaken in schools. Moreover, In-service training programmes for capacity building, training of Teachers, Principals, Heads and Officials must be taken up on a massive scale. The kind of imaginative and innovative work that activity based teaching and learning and CCE as advocated by RTE requires teachers to be trained and supplemented with a highly supportive role from school authorities and higher level officers.

Over a period of time small, need based workshops should be organized for teachers which focus on experiential learning, enquiry-based learning, constructivism leading to connectivism in the classroom, drafting good test items, developing rubrics for assessment and action research. The five-part source book of assessment developed by the NCERT should also be made a part of the in-service capacity building programmes. The SCERTs and Boards should work in close collaboration.

7. The printing or adaptation of NCERT textbooks requires that Officers of the Board and the editorial staff involve actual grass root teachers in the process. Committees may be formed in each subject with the Head drawn from the university sector (a professor of national eminence) and a group of representative teachers drawn from various group of schools such as Kendriya Vidyalayas, Navodya Vidyalayas and private schools. Teacher's Manual as support material which includes pedagogy and assessment guidelines should also be prepared by the Board.
8. Strengthening of academic units within Boards is another move in a desirable direction. As of now, there is hardly any Board, except the CBSE, which has an Academic Unit which also needs to be re-enforced. In a few Boards, there are provisions for academic posts but they are more administrative in character. The use of IT within the Boards also needs to be strengthened in all their processes which include affiliation, academics and examination.
9. Inclusion of diverse learners including differently-abled and marginalized needs to be taken up with urgency to ensure that no child is left out of the education process at school level. An inclusive education policy needs to be evolved at the secondary level as well and teachers need to be trained in special needs. Collaborative partnerships need to be formed with appropriate agencies and institutions to fulfill the requirement of children with different kinds of special needs. Counselors and Special Educators must be appointed in every school and the Board must ensure that counselors are adequately trained to handle the physical, social and psychological dimensions of learners. Moreover, Boards also need to constantly update the skills of special educators to handle categories of differently-abled students such as those who are physically challenged, visually challenged or suffering from various degrees of MR or with varied degrees of learning difficulties such as dyslexia, dysgraphia or ADHD. Guidance and Counseling, both as an approach and a service can be an important strategy for promoting curricular and examination reforms in secondary education in terms of its proactive as well as remedial role. This should be also a part of KVS and NVS policy and implementation.
10. The Centre Teacher Eligibility Test which is a mandatory requirement for recruitment of all teachers appointed after August 2010 must also be taken seriously and implemented stringently for teacher recruitment. This step will ensure greater quality in terms of teacher entry and further have a washback effect on teacher training institutions.
11. Mentoring of schools ensures that implementation of policy reforms are followed up by teachers and school leaders. The mentoring program helps to build capacity within the schools through peer assessment. Each principal is assigned two to three schools in their neighbourhood and mentors them by objectively analyzing them using a set of instruments. Sahodaya School Clusters which as a concept means an informal networking of schools, to facilitate synergy of ideas aimed at excellence in education should also be taken up by the Board as an innovative practice for providing a platform for sharing best practices among schools affiliated to them. It can be implemented on the guidelines provided by CBSE which has been using this concept for the last two decades.

12. The different Boards can be networked informally through the CBSE under the aegis of a voluntary association. This would provide them a platform to interact appropriately on various agendas of reforms and policy implementation. The policy of considering a single Board within a State looking after both stages of secondary education must be implemented during the 12th Plan.
13. Health and fitness are an important component of the youth of the country. By setting up Health and Wellness Clubs in schools, ensuring infrastructure for sports and games, adequate space and time within the larger school curriculum for physical education, schools will help to create a generation of young, healthy adults. An awareness about growing up, food and nutrition and healthy balanced diet using school canteens as socially responsible outlets for healthy food, physical fitness activities including yoga, emphasizing life skills and personal hygiene and sanitation will go a long way in creating healthy practices. Positive health messages when reinforced from an early age will result in bringing up healthy adults. Health and Physical Education will be strengthened in KVs and NVs.
14. Regular interactions and intensive dialogue with the parents need to be undertaken to orient them towards the need for reform and change as well as the practices being followed by Boards and schools. Creation of Parent Advocates to lead reforms for change will ensure their participation in the process.

Summary of Financial Implications of the Recommendations of the Sub-Group is given at pages 170-172 of the Report. A total sum of Rs. 41465.525 crore has been recommended for various programmes/ schemes during the XII Plan period.

1. Introduction

1.1 Background and Objectives of the Working Group

The Ministry of Human Resource Development (MHRD), Department of School Education and Literacy, Government of India, vide its order no. 7-12/2011-sch I/CDN dated 12.07.2011 has set up a Sub Group on Central Schools, Curricular Reforms and Examination Systems in Secondary Education for the 12th five Year Plan (2012-17).

The Terms of reference of the Sub Group on Central Schools, Curricular Reforms and Examination System in Secondary Education require that the existing policy framework and quality of the above may be reviewed with the intention of suggesting suitable strategies and mechanisms to meet further challenges of equity, access and quality. The context of quality will run as the mainstay and overriding concern while framing recommendations for the 12th Five Year plan. The Terms of reference require a close networking between the Central and State Boards while reviewing the status of curricular reforms with special reference to NCF-2005 and its implementation. Assessing the CCE strategy holistically and recommending measures to further strengthen it so that it can be taken up by the state boards as mandated by Right to Free and Compulsory Education Act, will be another major focus.

The group has also studied the evaluation and assessment system adopted by different Boards and has suggested necessary reforms. The role of existing organizations which support Secondary Education namely NCERT, NUEPA, SCERT, NIOS and CBSE have been reviewed, examined and recommendations suggested.

Restructuring of Central and State Boards and measures to strengthen them as well as to eliminate unauthorized boards have also been taken up.

The **first** meeting of the sub group was held on 2nd September, 2011, followed by the **second** meeting on 14th September, 2011, the **third** meeting on 22nd September, 2011, and the **fourth** meeting on 29th September, 2011.

1.2 The Status of Curricular Reforms with Specific Reference to NCF, 2005 and measures needed to bring uniformity in syllabi and curricula in State and Central Boards –

The National Policy on Education 1986 as modified in 1992 recognized the need to develop the system of education which would reflect and promote development of holistic learners to meet global challenges. The National Curriculum Framework 2005 is another effort to address variety of issues in social education such as social justice, equity, equality, quality of education, respect for diversity, dignity and rights of children. The NCF 2005 and the position papers on Examination Reforms have while proposing Examination Reforms clearly stated that school examinations and School Based Assessment should replace a single end of the year external examination. The scheme for examination and curricular reforms as implemented by the Central Board of Secondary Education and some other State Boards has largely been drawn from these documents.

2. Scheme for Examination and Curricular Reforms

2.1 Background

Education influences and gets influenced by development. There is hardly any field of activity or sector of development which is not influenced by education in some form or another. Education provides broad guidelines to streamline educational processes and reflects the current needs and aspirations of society as its value system in the framework of broad human ideals. Mahatma Gandhi had visualized education as a means of awakening the national conscience to injustice, violence and inequality in the social order. The Secondary Education Commission (1952-53) and Education Commission (1964-66) also elaborated on the themes emerging out of Mahatma Gandhi's educational philosophy in the changed socio-political context with focus on national development.

School education helps in achieving the educational aims by undertaking different core educating activities. It also provides means and opportunities to enhance creative expression, construct knowledge and develop capacity for aesthetic appreciation. In recent times, school education has emerged as an important segment of the total educational system expected to contribute significantly to the individual as well as the national development processes. In order to be effective, school education needs to be continuously reviewed and updated. In fact school curriculum is the root of this renewal process. Renewal takes place on the basis of feedback provided by researches conducted from time to time.

NCERT in 2005 developed NCF with the help of National Steering Committee, twenty-one Focus Groups, and the position papers prepared by these groups. The NCF-2005 was approved by Central Advisory Board of Education (CABE) in September, 2005. As mentioned above, curriculum development is a cyclic process, it requires regular feedback through different sources including research studies for its revision and updation from time to time. A study was done by the NCERT to see the implementation of the ten-year school curriculum in the country. It was concluded that there are major variations in implementation of NCF-2005 in terms of structure, working hours, recess periods, teaching of different subjects, evaluation pattern etc. at primary, upper primary and secondary stages in different States/UTs.

2.2 Implications

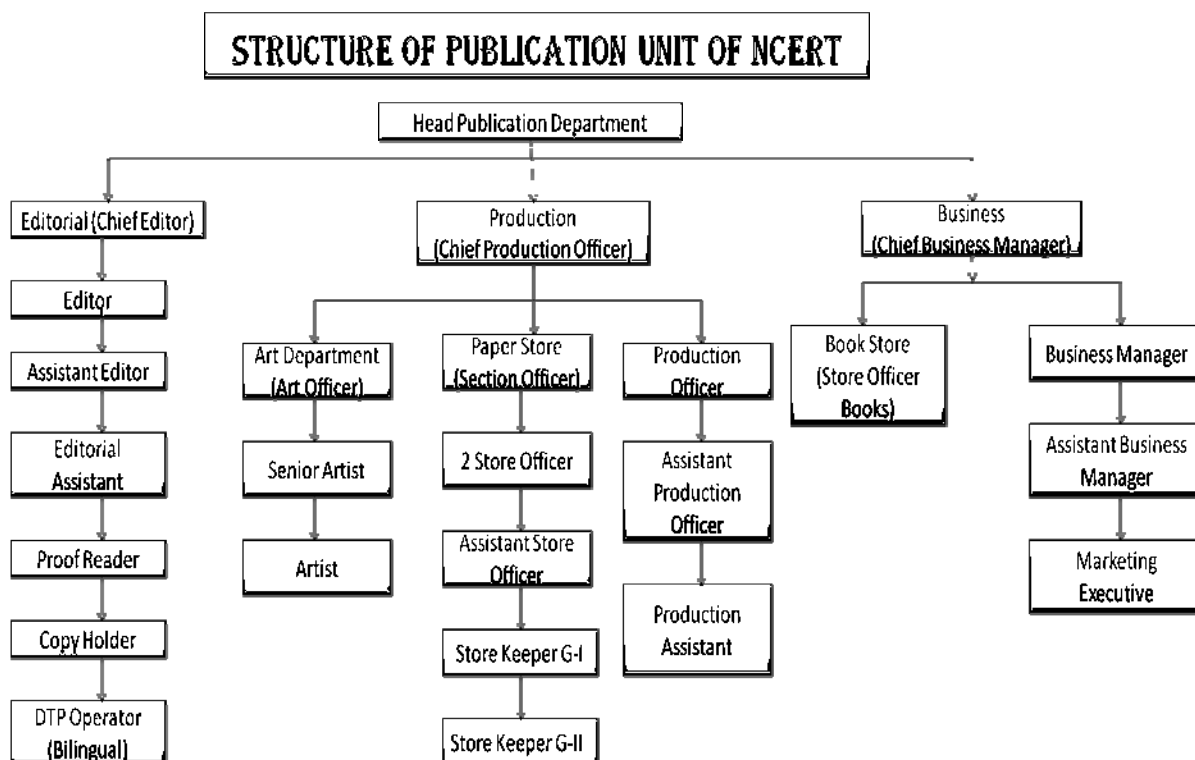
The following implications for further action are derived from the above findings of a study conducted by NCERT:

- States and UTs in which NCF-2005 is not being implemented at all or is being partially implemented need to be included in awareness building programmes. Such States/UTs are to be provided both academic and financial support on regular basis.
- Steps need to be taken to use a common structure of education for the first ten years of schooling as suggested in the NCF. It will help in implementing the Centrally Sponsored Scheme of Government of India and other educational policies.
- Integrated approach of teaching of social science and science should be promoted. The instructional materials for such approach should be prepared and training for teachers, teacher educators and resource persons should be organized by the states with leadership training.
- Efforts should be made for introduction of Continuous Comprehensive Evaluation (CCE) and grading system in evaluation by way of organizing meetings with policy planners, orienting teachers and teacher educators.
- Research studies need to be conducted to see the effectiveness of variations in terms of number of working days, periods in a week, duration of periods, number of recess periods on learning outcomes.

- A Research study needs to be undertaken to know the status of co-scholastic areas in actual practice.

2.3 Text Book Reforms and adopting/adapting NCERT text books:

The Publication Unit in every Text-book producing organization in the States needs to be created or strengthened. The head of the Publication Unit must be a professional equivalent to a professor. The department can be divided into the Editorial, Production and Business wings. The structure of Publication Unit of NCERT is reproduced below as model which can be replicated to some extent in the Boards depending upon the funds being allocated for the purpose.



Every Board may create at least 3-4 posts under the Editorial, Production and Business Units under the Advisor (on contractual basis).

Textbooks at the school level should ideally be written by school teachers operating at the appropriate levels. Others may also be invited to work with the teachers generally when school teachers with the required expertise are not available. Every textbook prescribed should be tested for its intellectual content and its pedagogic suitability both before and after its prescription. All textbooks should be reviewed by experts and these experts may be from the University Sector. Their opinion in regard to a book should be obtained in writing. Once a textbook has been prescribed and circulated, a second round of evaluation after a year should also be undertaken. However, it should be ensured that mainly practicing teachers from different institutions are involved in this job. They may be particularly chosen from amongst those who have distinguished themselves by winning national or State awards. Remuneration to those selected to undertake the assessment or reassessment of books should be reasonably adequate. Quite a few of the teachers are talented and capable of writing good books but their talent needs to be identified and projected. It is time to break with the tradition of the almost total disempowerment of teachers by involving them in the writing of textbooks. The CBSE in its curriculum renewal project in English at the secondary

level successfully engaged with 55 actual practitioners including grassroots teachers to prepare its textbooks, assessment rubrics and take up teacher training. The unique features of this project were that it was largely teacher led and teacher driven. Though this Curriculum Implementation project was initiated in the nineties, the model has been successful in future ventures as well.

The Academic division in Boards must be both strengthened and professionalized if these have to improve the resource input for improving the quality of school education. This is particularly necessary for the preparation of textbooks (Also see 7 and 7.1) .All this is being suggested to ensure that intensive attention is given to the quality of textbook writing. Use of professionals for text book adaptation/ writing, translation, editing, composing, designing and page making, and illustrators must be made. This will require creation of related posts in the organizations dealing with textbooks production in the states/CBSE. It is also recommended that the paper used for production of text books is of quality as used by the NCERT. Paper quality is a major determinant of the quality output of textbooks as well as their presentation.

An amount of Rs. 206.64 crore has been proposed for the same.

(Financial Implications at Annexure 1)

3. CCE Strategy and Measures to strengthen it:

The larger context of education is to prepare futuristic citizens for a meaningful and productive life in a globalized society. There is a need to strengthen the education system even more so in a pluralistic society.

There have been various Recommendations drawn from earlier committees *about introduction of Continuous and Comprehensive Evaluation (CCE) and reducing emphasis on external examinations*). The major thrust of secondary education as considered in Review of Education in India 1947-61 brought out by NCERT was the dominance of the written external examination at the end of the secondary course. Historically, this examination was first held by universities, who conducted it, not as a test of completing the secondary school, but as an admission test for higher education. The disadvantages of this position were obvious and it was only in the early years of this century that separate Boards began to be established to conduct the secondary school leaving examination in place of the former matriculation examination conducted by the universities.

The Indian University Commission (1902), which considered the matriculation examination and its effects, carried forward the recommendations of the Hunter Commission (1882) when it stated, *'It is beyond doubt that the greatest evil from which the system of Indian university education suffers is that teaching is subordinated to examination and not examination to teaching.'*

The Calcutta University Commission (1917-19) recommended the creation of Boards of Secondary Education so as to end the domination of school education by the universities. Intermediate classes were also introduced as a buffer between the universities and secondary education. They were of two years' duration after ten years of schooling and provided preparatory education for universities and professional education. This commission also identified several shortcomings in the examination system and specifically indicated its unhappiness about alternative questions, the mechanical system of marking, grace marks, frequency of examinations and so on.

The Hartog Committee Report (1929) criticized the academic bias of examinations at the school level which continued to be geared to the needs of university entrance and provided no opportunities for the majority of students to take up industrial, commercial, or technical courses as a preparation for life.

The report of the Central Advisory Board for Post-War Educational Development in India, known as the **Sargent Plan (1944)**, again criticized the subordination of the high school curriculum to the requirements of universities, particularly in view of the fact that only one out of ten or fifteen high school leavers went on to a university.

Committee on Secondary School Examination Council of India (1946)

The Committee suggested that there should be one examination at the end of the high school course as it could serve both the purposes; (i) the entry into universities; and (ii) employment on leaving school.

University Education Commission (1948-49)

The *University Education Commission (1948)* was equally vocal in its criticism of examinations, stating that, if members were asked to make just one recommendation for reforming education, they would identify the area of examinations as the one where greatest priority and urgency for introducing reforms should be applied.

Mudaliar Commission (1952-53)

In 1952-53, *Mudaliar Commission* made elaborate recommendations on exam reform, reduction in the number of external examinations, conduct of objective tests, assessment of attainments of the students through a proper system of school records, weightage for in-school tests, symbolic rather than numerical marking for purposes of evaluation and grading, etc.

The Secondary Education Commission, popularly known as the *Mudaliar Commission* (1952-53) made the following specific recommendations in regard to examination reform:

- The number of external examinations should be reduced, and the element of subjectivity in the essay-type tests should be minimized by introducing objective tests and also by changing the type of questions.
- In order to assess the pupil's all-round progress and to determine his future, a proper system of school records should be maintained for every pupil. These would indicate the work done by him during successive periods, and his attainments in each of the different spheres.
- In the final assessment of the pupils, due credit should be given to the 'internal' (in-school) tests and the school records of the pupils.
- A system of symbolic rather than numerical marking should be adopted for evaluating and grading the work of the pupils in external and internal examinations, and in maintaining the school records.
- There should be only one public examination at the completion of the secondary school course.
- The certificate awarded should contain, besides the results of the public examination in different subjects, results of the school tests in subjects not included in the public examination; as well as the gist of the school records.
- The final public examination should be transformed into a system of compartmental examinations. These were conceived as supplementary to the main public examination. They provided an opportunity for students who had secured the minimum qualifying marks in most subjects, but had failed in one or two subjects by a small margin, to retake the examinations in the deficient subjects.

The All India Council for Secondary Education

After the *Mudaliar Commission* submitted its report, the Union Ministry of Education appraised these recommendations and began seeking ways of implementing them. For this purpose, the All India Council for Secondary Education (AICSE) was established. The then Minister for Education, *Maulana Abdul Kalam Azad*, summarized the main functions of this body as '*an organization to advise the Government of India and state governments on the manner in which the recommendations of the commission could be effectively implemented*' .

The Education Commission (1964 – 66)

Evaluation at the lower primary stage should help pupils to improve their achievement in basic skills and the development of habits and attitude. Besides written examinations, should include oral tests as a part of internal assessment.

The examination reform movement was given strong impetus when the *Kothari Commission* was established in 1964 by the Government of India. This commission was different from the earlier ones as its terms of reference extended to all stages of education. It could, therefore, study India's education system as a whole and, *inter-alia*, give concrete recommendations on

examination reform for all stages of education. The programme now being pursued is largely based on the *Kothari* recommendations, which were as follows:

- The new approach to evaluation will attempt: (a) to improve the written examination so that it becomes a valid and reliable measure of educational achievement; and (b) to devise techniques for measuring those important aspects of the student's growth that cannot be measured by written examinations.
- Evaluation at the lower primary stage should help pupils to improve their achievement of basic skills, and in developing constructive habits and attitudes.
- It would be desirable to treat classes I to IV as an un-graded unit. This would enable children to advance at their own pace. Where this is not feasible, classes I and II may be treated as one block divided into two groups—one for slow and the other for fast learners. Teachers should be appropriately trained for the un-graded system.
- At the higher primary stage, in addition to written examinations, an appropriate weightage should be given to oral tests as a part of internal assessment. Diagnostic testing should be done through simple teacher made tests. Cumulative record cards are important in indicating pupils' growth and development. Even so, at this level they should be very simple and should be introduced in a phased manner.
- Although the first national standard of attainment is to be set at the end of the primary stage, it is not considered necessary or desirable to prescribe a rigid and uniform level of attainment tested by a compulsory external examination. However, for the proper maintenance of standards, periodic surveys of the levels of achievement in primary schools should be conducted by district school authorities, using refined tests prepared by state evaluation organizations.
- The certificate at the end of the primary course should be given by the school and should be accompanied by the cumulative record card and the statements of results of the common examinations, if any. In addition to the common examinations, special tests may be held at the end of the primary course for the award of scholarships or certificates of merit and for the purpose of identifying talent.
- External examinations should be improved by raising the technical competence of paper-setters; orienting question papers to objectives other than the simple acquisition of knowledge; improving the nature of questions; adopting scientific scoring procedures; and mechanizing the scoring of scripts and the processing of results.
- The certificate issued by the state board of school education on the basis of the results of the external examination should give the candidate's performance in different subjects for which she/he has appeared, and there should be no remark to the effect that he has passed or failed in the whole examination. The candidate should be permitted to appear again, if he so desires, for the entire examination or for separate subjects in order to improve his performance record.
- The student should receive a certificate also from the school, giving the record of his internal assessment as contained in his cumulative record card. This should be attached to the one given by the board.
- A few selected schools should be given the right to assess their students themselves. This would mean holding their own final examination at the end of class X ; one which will be regarded as equivalent to the external examinations of the state board of school

education. The latter body will issue certificates to the successful candidates of these schools on the recommendation of the schools. A committee set up by the state board of school education should develop carefully worked-out criteria for the selection of such schools. The schools should be permitted to frame their own textbooks, and conduct their educational activities without external restrictions.

- Internal assessment by the schools should be comprehensive enough to evaluate all aspects of student growth, including those not measured by the external examinations. It should be descriptive as well as quantified. Written examinations conducted by schools should be improved, and teachers trained appropriately. The internal assessment should be shown separately from the external examination marks.
- During the transition period, higher secondary students will have to appear for two successive external examinations (at the end of classes X and XI) within one year. Where, however, the courses in classes IX to XI are integrated, the examination at the end of class X need not be insisted upon.

The “**Learning without Burden**”- a Report of the National Advisory Committee appointed by the Ministry of Human Resource Development, Deptt. of Education , Govt. of India has stated that:

“Board examinations, taken at the end of Class X and XII, have remained rigid, bureaucratic, and essentially uneducative... and mainly a source of awe because of the amount of information they demand in a manner ready for instant recall.”

This aspect has been strongly taken care of in the National Policy on Education- 1986 which states that *“Continuous and Comprehensive Evaluation that incorporates both scholastic and non-scholastic aspects of evaluation, spread over the total span of instructional time”*{8.24 (iii)}.

Re-modeling of School Education Boards – a report on the Task Force on the role and the status of Boards of Secondary Education (1997) has explained the philosophy of CCE (4.39). It further states that no agency other than the Boards should promote CCE and that is why it is sought to be emphasized that the Boards have to play a pioneering role in this regard(4.40).

Even the National Curriculum Framework for the School Education – 2000 brought out by NCERT suggests *‘that comprehensive evaluation takes a holistic view of learners’ progress covering scholastic and co-scholastic aspects’* (1.4.17).

The *‘National Focus Group on Examination Reforms’* consisting of educationists and experts from central and state government organizations, private bodies and individuals has recommended that (i) Tenth Grade Board Examination be made optional forthwith, (ii) declare a grade *rather* than award marks and (iii) strengthen Continuous and Comprehensive Evaluation. This focus group deliberated on examination reforms at the time of formulation of NCF 2005. The Position Paper on *‘Examination Reforms’* by NCERT 2006, says.

“Indeed, it is our view that the tenth grade exam be made optional forthwith. Tenth-graders who intend continuing in the eleventh grade at the same school and do not need the board certificate for any immediate purpose, should be free to take a school-conducted exam instead of the board exam.”

Accordingly, **National Curriculum Framework - 2005** (NCF-05) proposing Examination Reforms stated - *“Indeed, boards should consider, as a long-term measure, making the Class X examination optional, thus permitting students continuing in the same school (and who do not need a board certificate) to take an internal school exam instead”*.

The National Steering Committee constituted to prepare the National Curriculum Framework under the Chairmanship of Prof. *Yash Pal*, (former Chairman, University Grants Commission) reached its present shape and form after a flurry of ideas were generated through a series of intensive deliberations by eminent scholars from different disciplines, Principals, Teachers and parents, representatives of NGOs, NCERT faculty and several other stakeholders at various levels. The **Central Advisory Board of Education (CABE)** set up by Central Government to play an effective role in education by building consensus on national issues in education among the States has also approved the NCF-2005.

The CABE in its meeting held on 31.08.2009 also resolved the following:

- a) "CABE noted the efforts of CBSE to introduce a grading system in lieu of marks for its Class X examination from next year with the objective of reducing unhealthy competition, and thereby reduce stress, and suggested to the States that they explore the possibility of following suit. "
- b) "CABE was unanimous that there is a need to reduce examination stress among students. CABE noted the attempt of CBSE to make class X examination optional for students who will continue in the same school in Class-XI while replacing the same with an efficient comprehensive and continuous evaluation (CCE) system so that standards of learning outcomes are not compromised.

The Report of **Acharya Ramamurti Committee** submitted to CABE (Central Advisory Board of Education) in January 1992 states

"It is necessary to reorganize the Boards and invest them with autonomy so as to enhance their ability to provide academic inputs to secondary education. The Boards should play an active role in curriculum design and up-gradation, updating textbooks and teaching-learning material, and examination reforms (Examination Reforms 11.5).

"The essentiality of examination reforms and call for coordinated efforts by the Central and State Governments on the following lines:

- i. Preparation of a status report of Examination Reforms undertaken by various Boards,
- ii. Preparation of a National Examination Reform Framework to serve as a set of guidelines to the examination bodies which would have the freedom to innovate and adapt the framework to suit the specific situation,
- iii. Introducing of Examination Reform in CBSE affiliated schools for a few years, and
- iv. Developing an effective mechanism for co-ordination and monitoring and evaluation of the implementation of examination reforms undertaken by the Boards (11.7).

This Committee also suggested "for removal of subjectivity in examinations, de-emphasis of memorization, continuous and comprehensive internal evaluation of the scholastic and non-scholastic achievements of students, improvement in the conduct of examinations, introduction of concomitant changes in instructional materials and methodology, introduction of semester system from the secondary stage in a phased manner and use of grades in place of marks" (Examination Reforms 16.8)

- (i) In the year 2000, the Board implemented the concept of an independent certificate of School-based Evaluation to be awarded by the school to all students who passed class X CBSE examination. This certificate was awarded in addition to the Board's regular certificate and marks statement. It carried a footnote that a certificate of CCE is also being issued by the school and should also be studied for judging the total personality of the student. Besides scholastic areas, co-scholastic areas were included for assessment over a continuous period of two years i.e. classes IX and X. A recommended format with detailed guidelines were prepared and disseminated to schools for adoption by the CBSE.

As the next first step, in 2004, CCE was implemented for classes I–V. Besides doing away with the concept pass/ fail system up to class V, the assessment focused on the positive aspects of the child's development during this stage. Accordingly achievement records for the primary classes – for

classes I & II and classes III to V were also developed and recommended to schools.

Following it up, the Board decided to extend to CCE to classes VI to VIII and also in a revised format for classes IX and X in 2009. The format and guidelines for this were circulated to schools.

In the above background, the Board introduced Examination Reforms and Continuous and Comprehensive Evaluation. The aim is to reduce stress and prepare futuristic citizen for a meaningful and productive life in a globalized society. There is a dire need to strengthen the education system in a pluralistic society which addresses itself to heterogeneous group. Since evaluation is an indispensable part of educational process, some form of assessment is necessary to determine the effectiveness of teaching learning processes.

3.1 Scheme of the Board

Therefore, in the light of the recommendations by various Committees/Commissions, surveys and consultations with various stakeholders across the country and the given mandate of CBSE, the Board, on the advice of the Ministry of Human Resource Development, Government of India decided to introduce the following Scheme:-

- There will be no class X Board Examination w.e.f.2011 for students studying in CBSE's Senior Secondary Schools and who do not wish to move out of the CBSE system after Class X.
- The students studying in CBSE's Secondary Schools will, however, be required to appear in Board's external examination because they will be leaving the Secondary School after Class X.
- The Continuous and Comprehensive Evaluation (CCE) has been strengthened in all CBSE affiliated schools w.e.f. October, 2009 in Class IX.

The above scheme which is based on stakeholders views; emphasizes on the holistic development of students without compromising any academic vigor and makes learning joyful can be adopted/adapted by the other State Boards also.

3.2 Introduction of Grading at Secondary Classes (Classes IX and X)

The examinations provide an essential yard stick to judge the quality of students. They play an important role in the education system. They provide motivation and a sense of purpose to both teachers and students to achieve set goals. Though all out efforts are made to enhance the reliability of examination, however the human error cannot be avoided. Presently, the evaluation is carried out in 101 point scale and human nature lacks in true evaluation on such a large scale. It is experimentally established that the error of measurement in terms of marks is between 5 to 15% and that in more than 50 percent cases it is more than 5%. This shortcoming can be overcome if the students are placed in ability bands that represent range of scores.

3.3 Historical Perspective:

- The introduction and implementation of 'Grades' in the examinations remains a long standing recommendation.
- Education Commission (1964-66) underlined a number of shortcomings in the external examination at the level of schools and Boards.
- The National Policy of Education (1986) too contains a directive for introduction of Grades.
- NCERT's National Conference on Grading (1987) recommends the use of Nine-point scale in grading.
- 17th Conference of COBSE held at Mysore (1988) also endorsed the use of nine-point scale for grading.
- 9th Conference of Chairmen and Secretaries of Boards of School Education organised by the NCERT (1990) supported the use of grades in examinations.
- The Plan of Action (1992) envisaged the recasting of the examination system to make it an integral part of any process of learning and teaching.
- The defects and inadequacies of the present system of certification at the school and university level have also been highlighted by Jacques Delor in his report " Learning: The Treasure Within".
-

3.4 Objectives:

During the past, various measures of examination reforms have been introduced by several Boards in the country to enhance the reliability and validity of public examinations. The reforms introduced are improvement in paper setting, introduction of continuous and comprehensive evaluation (CCE) and centralised evaluation of answer scripts for making the marking more objective.

However, the reliability factor remains a concern. To overcome this problem, the proposal of declaring results in terms

of Grades instead of marks has been one of the important measures recommended by various committees including National Policy on Education (NPE) 1986 and has been under consideration by various Boards in the country, but so far not much progress has been made in adoption of Grading system by the Boards.

3.2 Philosophy behind CCE

CCE needs to be looked upon as an integral component of the teaching learning process. A three hour test conducted at the end of the scholastic year (in fact two years) cannot be fully reliable and valid test of a student's ability. It tells us a good deal about the student but not everything. Coupled with this is the fact that the co-scholastic areas cannot be assessed through the kind of public examination which is conducted at the end of the school career. While scholastic achievement is important, co-scholastic areas are equally important and need to be identified so as to get a total picture of the student's ability. At the same time it has to be recognized that there are difficulties of all kinds, both financial and human, in practicing CCE. Nonetheless it is time to promote CCE, convince both parents and teachers of its advantages and so go about things that more and more schools adopt this system.

In our scheme of things, it is the School Boards which are expected to play the central role in the academic renovation of the school system. In other words, leadership has to come from the Boards. Once the Boards get committed to this vital and supplementary form of evaluation and push it vigorously as the CBSE has done in its implementation of CCE and School Based Evaluation there will be a marked difference in carrying the path breaking initiatives proposed by NCF 2005 and the RTE Act.

Within a few years, this innovation will come to be accepted by more and more schools. No agency other than the Boards can promote CCE and that is why it is sought to be emphasized that the Boards have to play a pioneering role in this regard. In addition to redesigning and promoting in-service education, this area of work can be given special importance. The Boards can also take up this matter with training colleges and departments of education in different universities so that it is included in the pre-service training of teachers. Indeed, a campaign has to be launched and, no one other than the Boards can do so with a greater sense of commitment.

The Boards would be well advised to survey how every single school goes about the job when it undertakes to introduce CCE. At the same time, it must guide them. To start with, there is bound to be resistance, but with help and guidance from the Boards, within a couple of years, the system can be adopted by all schools. On the basis of the information provided by the schools, the Board should issue a certificate under its own seal. This will formalize the whole system and this has also been a recommendation of the Amrik Singh Report on the 'Restructuring of Boards'.

If it is done consistently over the years, it will gradually generate a fund of information about students which, when analysed by the Examination and Research divisions, will convince the public that this system is not a luxury which is to be introduced only when it is possible or convenient to do so, but an academic necessity and indeed an integral part of education at that level.

At the university level, there has been a good deal of talk of what has been loosely described as the system of internal assessment. The system is working mainly in technical and agricultural universities and a few other institutions where admissions are selective and the student-teacher ratio is favourable. As recognized widely, not many teachers in mainstream Universities and colleges have felt committed to the system. One can even say that, in certain cases, organized groups of academicians have even opposed it. This is not to suggest that school teachers would be more enthusiastic than their counterparts in the colleges. But, going by past precedent, school teachers are more likely to fall in line with the CCE scheme system than college teachers.

For instance, redesigning of question papers has worked at the school level but not in the universities. On the whole, therefore, we are inclined to think that CCE can be successfully promoted, at least to some extent despite some of the misgivings that a number of people have.

The biggest impediment is likely to be lack of a similar system at the time of admission to colleges. Subsequent development too would have to play a role and, to that extent, would determine how far the system of CCE would generally get accepted. But before that stage is reached, there must be some understanding between the Boards and the Universities more precisely the colleges-so as to ensure that the assessment done at the Board level is given due weightage. Unless some such thing is done, schools will not feel strongly motivated to institute the system. (*Amrik Singh Report*)

3.3 Grades in place of marks

Grading is a method of communicating measurements of student achievement by using a set of symbols that ought to be clearly defined and understood by all concerned i.e. students, teachers, parents and all other stake holders. In grading, subjects are classified on the basis of pre-defined standards. It is of utmost significance that the meaning of each grading symbol is clearly spelt out.

The different grading systems in use are:

- ❖ Direct Grading
- ❖ Indirect Grading - Absolute Grading
- Relative Grading

Advantages of Grading are:

- It will minimize misclassification of students on the basis of unreliable marks
- It will eliminate unhealthy cut-throat competition among high achievers.
- It will be a greater relief to low achievers when the system of declaring pass/ fail is abolished. Failure in a single stroke examination should not convey the message that a student is a failure in life and thus affect self esteem.
- It will provide a chance to improve upon his/her grade in any subject over a period of time without carrying the stigma attached with failure.
- It will reduce societal pressure and will make the learner more comfortable.

In relative grading students are ranked and assigned grades according to rank i.e. placing students in direct competition with one another.

It is observed that when rank-based systems are used in education or in any employment situation, cut-throat behaviour and cheating becomes rampant. It only measures performance in a given group, but not the real potential abilities of a given student. One of the major criticisms of this scheme is that the percentage of students receiving different grades is preconceived.

As far as Absolute Grading is concerned it is simple and straightforward to use. Student has the freedom to strive for the attainment of the higher possible grade. However following are the limitations of this scheme

- the distribution of scores is taken on its face value regardless of the errors of measurement creeping in due to various types of subjectivity
- arbitrariness in cut-off for different ranges

The following are the limitations of Grading:

- It is not free from some criticism
- It is not possible to get single indicator like 'Total Marks'.
- Merit List/ Toppers/ Rank Holders cannot be identified.
- There can be some mis-classification in border line cases

Under Absolute Grading only subject-wise grades may be awarded with no cumulative or overall grade. Also all the subjects can have the same weightage and the scheme would be easy to implement at school as well as at Board level, i.e., it should be valid for small as well as large student population. The scheme should also take into account the important fact that in a highly heterogeneous population, distribution of student performance (scores) is far from the normal curve or bell-shaped curve.

While recommending a grading system in use, the factors to be kept in mind are that it should be:

- Easy to compile
- Easy to understand
- Easy to implement in large as well as small populations
- Comparable between School and Board examinations
- Comparable among different kind of Schools

There are many State Boards who are giving Grades at Class X level. They however also give marks. The result is that the Grades are not looked at seriously. The Central Board of Secondary Education (CBSE) arrived at a nine point grading system (with the last grade as 'Needs Improvement' grade) with the help of extensive analysis of Board's data containing the distribution of marks in the past CBSE examinations of class X. It makes use of indirect grading in which student performance is assessed using conventional numerical marking mode and subsequently marks so awarded are converted into letter grades. Conversion of marks into grades will be carried out by using absolute grading methods. No marks are mentioned by the CBSE in the final certificate.

The adoption of Grading in place of Marks is a positive and a powerful directive of NPE for all levels of education. It is time to accept the concept without any reservation and work for its implementation.

Putting a system of Grading in place which replaces marks with grades has found support of various research studies as well as Committees and Commissions including NPE and has been under active consideration by the CBSE.

Thus it remains imperative that we take up this challenge at the earliest and create awareness as well as advocacy of all stake-holders including students, teachers, heads of institutes, parents, educators and university officials. Its successful implementation by the CBSE should finally find wider acceptance in other Boards as well.

4. Evaluation And Assessment Systems Adopted By Different Boards

With the advent of 'Right To Free And Compulsory Education' and its implications and in the light of the broader implications of *National Curriculum Reforms* as well as the examination reforms initiated by the CBSE, the different Boards across the country need to take up reforms in assessment of scholastic and co-scholastic areas. These reforms will address the following issues-

4.1 Reforms in Board's Examination Design

- Development of policy statement (designs) for each question paper
- Appointment of paper setters from among those trained in evaluation
- Appointment of panels of paper setters
- Allocation of definite proportionate percentages of marks in question papers for testing different abilities.
- Ensuring an effective coverage of the syllabus through question papers
- Introduction of specific pinpointed questions in the question paper
- Inclusion of short-answer questions in the question papers, besides the essay-type ones
- Introduction of objective type questions (multiple choice) in the question papers
- Use of question banks for setting question papers
- Abolition of overall options in the question papers
- Development of marking scheme along with each question paper by the setter himself.
- Division of question papers into two separate sections for fixed response and free response questions with fixed separate time limit
- Introduction of Centralised spot evaluation of scripts
- Introduction of mechanical processing of examination results
- Scaling of subject wise results for making them comparable
- Allowing students to clear the examination in parts
- Permitting students to improve their grades by appearing at subsequent examinations
- Reckoning both the product and performance in evaluation of practical work in science subject examinations
- Incorporation of both academic and non-academic areas of pupil growth in the scheme
- Issue of separate certificate of internal assessment along with that of external examination
- Analysis of question papers in detail as feedback for paper setters
- Analysis of answer-scripts of the examination locating common errors, correlation in score and functional value of item, etc.
- Autonomy to schools in curriculum teaching, textbooks, evaluation, etc.

An amount of Rs. 164 crore has been proposed for this activity.

(Financial Implications at Annexure 2)

4.2 Students Assessment and Examination Reforms:

Establishment of a National Institute for Assessment, Evaluation and Research

Short –term and long-term Vision for the Centre

The immediate vision of the Centre would be to share the expertise and experience with/of the Boards and the partner organisation to create improved resources for better quality of learning assessment, research and professional development.

This includes

- Creative curricular designing
- Productive pedagogical techniques
- Progressive assessment practices
- Multidimensional assessment techniques
- Action research studies for improved learning
- Development of support materials
- Empowerment of educational personnel.

Every effort will be made to achieve the pre-decided short-term goals within a span of three years. The priority areas of immediate concern will be identified in advance and focused efforts will be made to meet the targets.

The long-term vision of the Centre envisages overall improvement and strengthening of student learning, teacher effectiveness, sharing of international best practices and monitoring of educational standards in the schools.

Some of the long term targets include:-

- generating expert educational human resources
- creating learning institutions
- promoting research based educational practices
- monitoring quality educational parameters

The long term vision is proposed to be realized in a time span of about five years. The Centre is expected to acquire a truly National character with expansion and support to all other systems of education in the country.

Specific Objectives

The proposed Centre is expected to :

- create research capability and assessment resources of international quality
- establish mechanism to provide feedback and input to the Board regarding levels of students' learning
- provide professional development and leadership training
- conduct research into policies and programs that can improve student learning and teaching quality
- provide insight and support to study existing school based assessment practices and strengthen the same
- develop support materials and research based materials to strengthen school stage procedures and practices.

The Central Board of Secondary Education (CBSE) is in the process of establishing one such centre in Public Private Partnership model. The character of the Centre is not-for –profit kind.

The general operational elements for establishment of the Centre are:

- The required infrastructure will be provided by the Board.
- A joint working committee will be constituted to make the centre operational.
- The selection of staff including Head of the Centre will be done by Joint working committee.
- Academic expertise and capacity building expertise will be provided jointly by CBSE and the partner organisation with major contributions from partner organisations.

- Both the partner organisation and the Board will equally share the initial expenditure incurred in making the centre function effectively. The Centre is expected to generate its own financial resources through publications, projects and empowerment programmes etc. at a later stage.
- All major decisions such as projects to be undertaken, collaborating with national and international agencies, research activities, identifying the growth path for the Centre etc. will be taken by Joint Working Committee.

This centre, upon becoming operational, will be converted into National Institute for Assessment, Evaluation and Research during the 12th Plan Period. **An outlay of Rs. 210 crore has been proposed for this purpose.** (*Financial Implications at Annexure 2*)

5. Role of KVs, NVs and Model Schools in improving standards of Secondary Education

5.1 Kendriya Vidyalayas

Kendriya Vidyalaya Sangathan is considered as role model in the field of School Education imparting education to more than 10.5 lakh students. In fact Kendriya Vidyalaya Sangathan was established in the year 1962 starting with 20 Central Schools all over the country. Now in the year 2011 KVS has expanded to the level of 1088 Kendriya Vidyalayas spread all over the country including 03 abroad.

The Kendriya Vidyalaya Sangathan caters primarily to the needs of children of transferable Central Govt. employees. It started with 20 Regimental schools as “Central Schools” during 1963-64 and was registered as Kendriya Vidyalaya Sangathan on 15.12.1965. It is an autonomous body under Ministry of Human Resource Development. The schools were set up to pursue excellence and set the pace in the field of school education, to provide a common programme of education for children of transferable Central Government employees, to initiate and promote experimentation and innovations in education in collaboration with other bodies like CBSE, NCERT etc and to develop the spirit of national integration and create a sense of ‘Indianness’ among children.

With its Head Quarters at New Delhi, it has 18 Regional offices, 1085 Kendriya Vidyalayas and 05 ZIETs Zonal Institutes of Education & Training at Mumbai, Gwalior, Mysore, Bhubaneswar and Chandigarh.

5.1.1 Opening of 500 new Kendriya Vidyalayas during 12th Plan:

Kendriya Vidyalaya Sangathan is considered as role model in the field of School Education imparting education to more than 10.5 lakh students. In fact Kendriya Vidyalaya Sangathan was established in the year 1962 starting with 20 Central Schools all over the country. Now in the year 2011 KVS has expanded to the level of 1088 Kendriya Vidyalayas spread all over the country including 03 abroad. Opening of new Kendriya Vidyalayas is a continuous process in KVS based on the demand from various Ministries and State Governments. As on date there is huge demand for opening of new Kendriya Vidyalayas as may be seen from below:

- (i) Presently KVS has received as many as 120 proposals from various sponsoring agencies which are under examination which includes 13 proposals already found feasible.
- (ii) In addition on 16.02.2010 the Ministry of Railways and Ministry of HRD have signed Memorandum of Understanding for opening 50 new Kendriya Vidyalayas in the establishments of Railways all over the country during the last year of 11th plan as well as 12th plan, for which approval of Govt. of India is awaited.
- (iii) Also KVS has identified 223 such districts which do not have any Kendriya Vidyalaya under civil / defence / project sector which includes 154 such districts which do not have any Kendriya Vidyalaya. In the event of availability of proposals in prescribed proforma from the respective State Governments, KVS would prefer to open new Kendriya Vidyalayas in each of these districts.

Govt. of India has identified 34 Naxal affected districts in 08 States. These districts are both socially and educationally backward. Opening of educational Institution like Kendriya Vidyalayas in these backward districts will help development of educational and economic status of these Regions. Sangathan would like to open more Kendriya Vidyalayas in these districts on receipt of the proposals from State Govt. concerned.

Keeping in view the continuous demand for opening new KVs from the sponsors i.e Ministry of Defence/Ministry of Home Affairs/Ministry of Railways/State Government, the Sangathan intend to open at least 100 new KVs in each financial year of 12th Plan. An amount of Rs.1048.89 crore for pay and allowances, other recurring and non-recurring expenses is projected for 500¹¹ new KVs proposed to be opened during 12th plan with the provision to carry forward and spilled over amount of Rs.1200/-crore to 13th Financial Plan.

5.1.2 Construction of School Building and Staff Quarters

Soon after transfer of title of adequate and suitable plot land free of cost to KVS as per norms, preliminary drawings and estimates for the construction of school building and staff quarters works are invited from the agencies for the approval and sanction of funds.

As on the prevailing CPWD Schedule of Rates (DSR – 2007) with cost index 149 as on 01.07.2011 (basis 100) notified by CPWD, cost of a school building with Class 1st to 12th (two sections in each class) & 09 units of staff quarters works out to Rs.1071.00 Lakh under normal site conditions. This cost may vary from place to place & time to time depending upon requirement of site. Besides, provision for escalation in cost of material & labour @10% for each year has been added over the above cost of construction worked out as on 01.07.2011.

The tentative requirement of funds for the construction works for 12th Five Year Plan period has been worked out for the following:-

Backlog of building for schools opened up to 2011-12: 279

- i. As on date in 215 KVs, construction of school building is yet to be sanctioned by KVS. Out of it Sangathan has already planned to sanction 25 new school buildings during the current Finance Year. **The backlog of remaining (190+64)=254 KVs will be sanctioned in the 12th Five Year Plan.**
- ii. 100 new Kendriya Vidyalayas will be opened every year during 12th Five Year Plan period except the last year during which 50 will be opened. Therefore, total 450 new KVs will be sanctioned in 12th Five Year Plan.
- iii. With the available skeleton engineering set up, 100 new school buildings and 9 units of Staff Quarters will be sanctioned in each year during the 12th Five Year Plan.

Even after sanction of 500 new school buildings during 12th Five Year Plan, the left out backlog of 204 school buildings will be considered for sanction in 13th Five Year Plan.

Accordingly, total requirement of funds for construction of new school buildings & staff quarters, to honour committed liability in hand of the works already sanctioned and new school buildings works to be sanctioned during the remaining period of 11th Five Year Plan

¹¹ Some of the members were of the opinion that this number should be restricted to the places where there is direct demand from the KVSs stakeholders.

and other ancillaries developmental works for construction during 12th Five Year Plan **works out to Rs.6312.00 crore.**

5.1.3 Extension of Services to State Government Schools by Kendriya Vidyalaya Sangathan

Considering special status of the Kendriya Vidyalayas and Navodaya Vidyalayas in Indian school education system, it was felt that KVs and NVs have moral responsibility to provide extension services to the Government schools located in the vicinity of these Vidyalayas. The scheme proposed by the Kendriya Vidyalaya Sangathan is as under :-

A. Extension Services (to State Govt. School Teachers)

1. The Kendriya Vidyalayas located at district and sub-divisional levels will collaborate with local Government schools in the areas like -
 - (a) Sharing of best practices especially in the implementation of NCF - 2005.
 - (b) Developing a platform where teachers from both the institutions put share their experiences and problems
 - (c) Collaborative action, research projects could also be undertaken for mutual benefits
 - (d) Demonstration lessons, sharing manually developed teaching aids, lesson plans and other teaching learning resources
 - (e) Help in developing question papers, CCE activities and dissemination of good practices adopted in evaluation
 - (f) Share library and laboratory resources with proper arrangements and mutual agreements.
2. It would be difficult to invite teachers during the working days for obvious reasons. The proposed activities however, may be arranged just at the closure and opening of Kendriya Vidyalayas for summer vacation and long breaks. The teachers will be called on duty for 06 days in a year and suitable compensation in terms of leave and pecuniary benefits be worked out to sustain modification and ensure accountability of both the groups of the teachers.

B. Extension services to State Govt. school students

1. KVs have stabilized system of co-curricular activities like cultural activities, games and sports. They will encourage local government schools to participate in various competitions organized by them.
2. Similarly Kendriya Vidyalayas will invite local schools to participate, witness at school level Science Exhibition, Annual Function, Sports meet, etc. Suitable prizes, shields will be distributed in competitions.

A. A total sum of Rs. 800 crore will be required for **Extension of services to teachers.**

B. Also, Rs. 5 crore will be required for **Extension of services to students.**

5.1.4 Strengthening Art & Craft Education in KVs:

Further there is a need to strengthen art education in KVs particularly in middle and secondary classes, both in visual and performing arts. The present art education is mainly confined to the talents of the TGT (Art Education) and there is minimal collaboration with local artists and artisans. Similarly performing art (theatre, dance, etc.) is confined to primary classes which needs to be upgraded to middle and secondary classes. The following steps may be taken in this direction :-

- (i) Invite local artists to expose children to the rich cultural of country.
- (i) Hiring the services of music experts to take care of performing art in middle and secondary classes.
- (ii) Hiring of services of local artists will require a sum of Rs. 20 crore.
- (iii) Hiring of services of 1000 local artists each for 3 activities for middle and senior secondary classes for 10 months @Rs.25000/- per month (1.Dance, 2. theater & 3. local art & heritage craft) will require Rs. 375 crore.

5.1.5 Computerization of Kendriya Vidyalayas

(i) Enhancing Pupil PC ratio:

Till October 2005, the Pupil PC ratio in KVS was 53:1. To promote ICT in Kendriya Vidyalayas, sincere efforts are on since November 2005 and in the meanwhile additional computer labs have been setup and new computers have been procured. During the last 5 years and 3 months as many as 30699 new computers have been installed increasing the total number to 43985. Consequently the Pupil PC ratio has improved from 53:1 to 23:1 as on 31.03.2011. Efforts will be made during the 12th Plan to build up the computer infrastructure in KVS and to further improve the Pupil PC ratio in the best interest of the students.

KVS aims to achieve the target of computer pupil ratio 15:1, no. of students will be approximately 12 lakh. Now the number of computer available in Kendriya Vidyalayas is 43985. Hence the approx. 40,000 computer are required to achieve the target of 15:1.

Total fund required to achieve the target of computer pupil ratio = 15:1 during five year plan has been estimated to be Rs.140 crore.

(ii) Computerization of new Kendriya Vidyalayas & replacement of old computers:

The programme focuses on enhancing the IT abilities of students especially from Class VI onwards. This facilitates teachers in their role as a planner teacher and analyze and also as supervisor of the progress made by them. It also aims at making students able to learn by giving exposure for various platforms including project based learning. KVS has consciously not exposed the ICT to Class I & II children. For classes III to V, computers are provided for the teachers to make their lesson plans and use of the students is limited to rudimentary knowledge of hard work and activities like paint & brush etc showing video programmes on stories, animations etc.

Total funds required for computerization of the 500¹² new KVs and replacement of old computers @20% per year will be Rs. 198.75 crore.

¹² Some of the members were of the opinion that this number should be restricted to the places where there is direct demand from the KVSs stakeholders.

(iii) Fund required for E-classroom for one year:

KVS promotes computer Aided Learning (CAL) and Technology aided Teaching (TAL) amongst students and teachers respectively. However, a need is felt to develop e-class rooms to facilitate teacher in 'Technology aided teaching' (TAL). It enhance the (i) effectiveness of teaching (ii) better learning outcome & (iii) student friendly learning

To begin with it is proposed to start equipping the classrooms of 100 schools (Class VI-XII) thus a total 700 classrooms as e-classrooms. These classrooms will have projection device, interactive board and electronic response alongwith necessary computer peripherals. Over the plan period it is anticipated that 35000 class rooms will be converted into e-classrooms. These classrooms will be preferably used for secondary and senior secondary classes.

Total fund 3500 classes required = Rs. 61.25

(iv) School Management system i.e. Student management, fee management, time-table, library management, etc.

For effective decision making, an effective MIS is planned for all the KVs during the next Plan. A sum of Rs. 79.15 crore will be required for this purpose.

Total fund required for five years (i) to (iv) = Rs.479.15 Crore

5.1.6 Development of Sports Infrastructure

Requirement of fund for development of sports and games infrastructural facilities in 18 Regional Offices

Games and sports is an integral part/education. In order to develop holistic personality and to develop sports-culture, special attention will be given to nurture sports talent as well as to encourage more number of students to take part in sports and games. For development of sporting culture and identification of sports talent, sports infrastructure is proposed to be strengthened. It will also be used by the schools on rotation basis. In every region 10 Multipurpose Halls, 10 synthetic 400m tracks, and 10 Synthetic Basketball Courts will be created.

A total of Rs.288 crore has been earmarked for the same.

5.1.7 Training of Teachers and other staff

Training of Teachers, Principals and other Staff is an essential component of any teaching learning activity in any educational institution. KVS has four operational training institutes and one more is likely to be opened shortly to conduct the training of existing staff.

Further as envisaged in 12th Five Year Plan 450 more KVs are likely to be opened, as such additional staff will be recruited and trained to manage the schools.

It is also proposed to strengthen the existing ZIETs and to establish 10 Regional Training Institutes to provide extension services to the government schools. One Training Institute for training of senior officers and training of trainers is also proposed to be established. There is need to arrange recurrent training of Principals to update their knowledge in educational

administrative and financial areas. The financial need therefore, would arise to finance the activities.

Being a pace setting Institution, it is the moral responsibility of the Kendriya Vidyalayas to extend their facilities to the local government schools and involve their children in the academic and co-curricular activities. Further there is a need to strengthen art education in KVs particularly in middle and secondary classes, both in visual and performing arts. The present art education is mainly confined to the talents of the TGT (Art Education) and there is minimal collaboration with local artists and artisans. Similarly performing art (theatre, dance, etc. is confined to primary classes which needs to be upgraded to middle and secondary classes). The following steps may be taken in this direction :-

1. Invite local artists to expose children to the rich cultural of country.
2. Train the existing PRT(Music) and TGT (AE) in pre-determined areas like theatres, regional and folk dances.
3. Hiring the services of music experts to take care of performing art in middle and secondary classes.

The financial implication of training of teachers, Principals and other staff is as under :-

A. Expenditure on training programmes of Existing staff

Training plays a crucial role in capacity building of the staff of organization.

The various level of teachers imparting education to the students have vivid training needs. It is also true for non teaching staff. According to annual report 2010 the staff strength is as under :

Officers	Teaching	Non-teaching	Grand total
Group 'A' 1227 Group 'B' 1200	PRT 15047 TGT 16046 PGT 9042	Group 'C' 13600	56162

According to ASTD study in 2002 the average spending on training by more than 375 major corporations and companies each about 3% of their total pay roll. On a per person basis the average spent on training is 35000 per annum. During the period 2010-11 KVS incurred an expenditure of Rs. 18.10.59 crore on salary head, while the expenditure on training during the same period was 2.18 crore which is only 0.12% of the total expenditure on payroll.

In-house Training Programme will include the following:

1. Induction Training programme for newly recruited Teachers/Officers & staff (excluding principals) about 50 batches of 30 participants each for 10-15 days during each year at ZIETs and other venues
2. In-service Training programme – About 250 programmes of 30 participants each for 21 days during each year
3. workshops & other short Training programmes - About 100 courses for 5 or more days at ZIETs/ROs for 30 participants each = 15000 Training Days.

The fund requirement for the same is Rs.45 crore during the Plan period:

B. Training of existing TGT (Art Education), PHE, WE and PRT (Music)

The TGT (Art) and PRT (Music) working with the system have specialization in certain field of Art & Music respectively. However, there are various art forms and types of music (for example painting, sculpture, ceramics, mural, animation etc. in visual art form and vocal/instrument, Hindustani/Karnataka, theatre, dance etc., in performing Art forms). We, therefore, need to sensitize our teachers in different areas of visual art & Performing Art so that the appreciation for other forms of Art, Music, drama is inculcated in them. It is also required, as we feel that at school level students need to be given a broad idea of rich cultural heritage of the country.

The proposed budget, therefore, also incorporates the planning to depute teachers to the best institutes of art, theatre and music such as National School of Drama (NSD), National school of Art (NSA), Sahitya Kala Academy, etc., for best exposure and orientation for a duration of 2-3 weeks.

Similar programmes can also be conducted for TGT (PHE) and TGT (WE)

TGT (Art Education)

1. No. of Art Teachers - 1000
2. Training fee @Rs.25000/- per head - Rs. 25000/- X 1000
3. TA/DA expenditure @Rs.10000 per head - Rs. 10000/- X 1000

PRT (Music)

4. No. of Music Teachers - 1000
5. Training fee @Rs.25000/- per head - Rs. 25000/- X 1000
6. TA/DA expenditure @Rs.10000 per head - Rs. 10000/- X 1000

TGT (PHE)

7. No. of TGT (PHE) - 1000
8. Training fee @Rs.25000/- per head - Rs. 25000/- X 1000
9. TA/DA expenditure @Rs.10000 per head - Rs. 10000/- X 1000

TGT (WE)

10. No. of TGT (PHE) - 1000
11. Training fee @Rs.25000/- per head - Rs. 25000/- X 1000
12. TA/DA expenditure @Rs.10000 per head - Rs. 10000/- X 1000

S. N.	Item	Expenditure (in Rs.) for training of TGT (Art)	Expenditure (in Rs.) for training of PRT (Music)	Expenditure (in Rs.) for training of TGT (PHE)	Expenditure (in Rs.) for training of TGT (WE)
1	Training fee for 1000 teachers – 1000x25000	2.50 crore	2.50 crore	2.50 crore	2.50 crore
2	TA/DA expenses @Rs.10000/- 1000x10000 =1,00,00,000	1 crore	1 crore	1 crore	1 crore
	Total	3.50 crore	3.50 crore	3.50 crore	3.50 crore
Grand Total		Rs. 14 crore			

C Training of Principals and other Officers in Premier Management Institutes

We recognize the limitation of in house training mechanism to impart quality training to this important group that provides the leadership to the Vidyalaya and Organization. Therefore, there is a need to collaborate with institutions of high repute (such as IIM, XLRI, TISSR. etc.) to provide best available training to our Principals and Officers. These trainings will mainly focus on leadership, team building, governance improvement and other similar areas. This will help the Principals and supervising Officers to get acquainted with new management strategies. The proposed budget has been planned for these trainings for 1000 Principals and Officers in entire plan period.

1)	No. of Principals/Officers	1000
2)	Training fee per head	Rs. 30,000
3)	No. of Trainings to be arranged in a cycle of five year for each Principal	02
4)	Total cost of training	Rs. 6,00,00,000 (six crore)

D. Induction Course for Principals

We anticipate new appointment of Principal on account of direct recruitment and also promotion to the post due to opening of new schools and also retirement of existing Principals.

As the demand and challenges of the post are multi-dimensional it is extremely important to orient the Principals in basic office management, finance and administration related issue, besides cosre academic domain. These orientation programmes will also address the new changes in school management and academic planning.

		Cost	
1)	No. of Principals	500	
2)	Training material	@ Rs. 1000 per head	
	500000		
3)	Teaching leaning material	@ Rs. 500 per head	250000
4)	No. of Training days	45	300x500x45=7500000(75 lakh)

- | | | |
|----|--------------------------|---|
| 5) | Working Lunch | @ Rs. 300 per head per day |
| 6) | TA/DA expenses | @ Rs. 15,000/- per head 15000x500 = 75,00,000 (75 lakh) |
| 7) | Total Expenditure | Rs.1,57,50,000 (1.575 crore) |

E Training of Principals and Officers abroad

KVS being a pace setting organization that envisages world class education as its vision to all the clintale. At the present we have quite a few system in place where student and teacher exchanges are taking place but we lack systemic exposure of Principals and Officers in this area. It is essential that we should plan a systematic design to explore our Principal & Officers to have first hand experience of world class institutes in the field of education. This would not only wide the vision of Principals officers but also help in strengthening & obtaining the pace setting status of the organization. The proposed abroad training would mainly focus on new trends in education leadership and management.

The proposed budget for two weeks training abroad for 100 Principals/Officers per year is as under:

1.	Cost of Training	2.5 lakh
2.	Cost of TA & other expenses	2.5 lakh
3.	No. of Principals	100 each year
	Total Cost	5 crore per year
	Total cost during 5 years	25 crore

F. Training of other Group 'A' Officers

The proposed training would address the training of Education Officers, Senior Admin Officers and other such Officers in the field of office management and supervision & monitoring. The proposed budget has been planned for 100 officers' training for 15 days in the plan period. These trainings will be coordinated with the help of institution like ISTM, TTTI etc.

1)	No. of Officers	100
2)	Training material	@ Rs. 1000 per head.
3)	Teaching learning material	@ Rs. 500
4)	Working Lunch	@ Rs. 300 per head per day
5)	No. of Training days	15
6)	TA/DA expenses	@ Rs. 15,000/- per head
7)	Total Expenditure	Rs.21,00,000 per year
	Total cost during 5 years	1.05crore

G. Strengthening of ZIETS

Equipping ZIETs with the best facilities in terms of infrastructure and equipments will ensure its optimal and quality utilization. The five Zonal Institutes will be provided with the best technological and infrastructural support so that these institutions emerge as premier training institutes during the plan period.

No of ZIETS	05
Additional fund required for strengthening the ZIETs	Rs.5 Crore
Total funds required during five year plan period	Rs.25 Crore

H. Establishment of Regional Training Institutes

The Kendriya Vidyalayas are located in the entire length & breadth of the country and have emerged as valuable centres of learning providing quality education. Similarly the state schools are also doing some exemplary work including innovation in the fields of education. There is a need for creating a sharing platform for both the systems. Keeping this in view establishment of ten Regional Training Institutes has been proposed. These institutes will be developed as resource centres during the plan period and would provide training to KV as well as State Govt. teachers on Common and core issues.

1.	No of training institutes proposed	10
2.	Cost of construction for each Institute	Rs 5 crore
	Sub Total	10x5 = 50 Crore
3.	Cost on furnishing/equipping the Institute and salary of proposed staff for one year	Rs 10 crore
	Total Cost during five year plan	Rs 50+10 = 60 crore

I. Establishment of Training Institutes for training of Senior Officers

A need has been to develop a national level institution for 'Planning and Administration' related training to exclusively Group 'A' Officers including Principals. That would develop a core programme and certificate courses to equip the Group 'A' officers in the field of governance, administration and planning. The location of the institution should be such that countrywide accessibility should be easy. The proposed institute will earn the need of other organization like JNU, CTSA or on request from other state institutions.

No of training institute	01
Cost of establishment of new institute	Rs.25 Crore

Thus total fund requirement for KVS for the abovementioned activities is Rs. 9530.775 crore. (*Financial Implications at Annexure 3*)

5.2. Navodaya Vidyalaya Samiti

5.2.1. Genesis:

In pursuance of the National Policy on Education (NPE) – 1986, modified in 1992 ; residential schools were set up, where good quality of education could be imparted to the talented children from rural areas. A Central Scheme (namely setting up of Model Schools-Navodaya Vidyalayas) was launched by the Government of India in 1986 to set up a Jawahar Navodaya Vidyalaya (JNV) in each district of the country. The total sanctioned JNVs as on date is 595 Nos., out of which 584 JNVs are functional.

1. Need to transfer the plan funds to non-plan for ongoing activities of recurring nature:

In accordance with the guidelines for the classification of Plan & Non-Plan expenditure, issued by Planning Commission vide its communication No. 11016/5(1)/2006-PC dated 13.9.2006 regarding formulation of XI Plan (2007-2012) and Annual Plan (2007-08) proposals in respect of Centrally Sponsored Schemes, all Grants-in-aid up to the level attained at the end of the year 2006-07 will get transferred to the Non-Plan side of the expenditure of budget for 2007-08 except for grants on capital works and the following items of expenditure/outlays incurred in the X Plan are to be treated as committed Non-Plan expenditure :-

- i) All expenditure connected with operation and maintenance of development schemes completed during the five- year period ending 31.3.2007;
- ii) All expenditure connected with maintenance of existing institutions & establishments and
- iii) The expenditure on staff in position as on 31.3.2007.

1.1 Though the above guidelines inter-alia stipulates that the recurring expenditure under Plan upto the period of Xth Plan can be treated as committed Non-Plan expenditure, yet while providing the budgetary support to NVS, the above guidelines are not taken into account. Hence, the Samiti is left with no other alternative except to meet its committed Non-Plan expenditure upto the level of Grant-in-aid provided under Non-Plan on year to year basis and the additional requirement on this account is met from the Plan budget.

1.2 Thus, there exists an urgent need for transferring the recurring expenditure in respect of units established/anticipated till the end of XIth Plan period (i.e. 31.03.2012) from Plan to Non-Plan side of budget so as to enable NVS to meet its committed expenditure under Non-Plan provisions from the year 2012-13 onwards. Keeping in view the pace of expenditure for the financial year 2011-12, the requirement for a sum of Rs.835.00 crore (approx.) is anticipated as committed recurring expenditure to be transferred from Plan to Non-Plan side. Hence, the total requirement of Non-Plan budget during 2012-13 will be about Rs.1318.00 crore.

5.2.2 Financial Requirement for Continuation of the Scheme

Navodaya Vidyalaya Scheme is a continuing scheme with a mandate to open one JNV in each district of the country. It is, therefore, proposed to continue this scheme during the XIIth Plan with the existing mandate alongwith programmes & activities undertaken/being taken up during the XIth Plan Period. **As on date, this scheme is functioning with 595 Nos. of sanctioned JNVs, (out of which 584 are functional), 8 Regional Offices, 5 Training Centres (NLIs) and Hqrs.' Office of NVS. At the end of the XIth Plan period (i.e upto 31.3.2012), the number of sanctioned/ functional JNVs is anticipated to 596.**

Keeping in view the **existing pattern of expenditure and norms of Operational expenditure–recurring & non-recurring & Capital expenditure -Construction of Buildings** being followed during the XIth Plan period, the financial requirement towards continuation of Navodaya Vidyalaya Scheme during the XIIth Five Year Plan period is **Rs.8804.6 crore.**

5.2.3 **Financial requirement for expansion and New Initiatives of the Scheme: Opening of new additional JNVs in districts having rural population more than ten lakhs**

The existing mandate of Navodaya Vidyalaya Scheme is to open one JNV in each district of the country. However, the size and population of district vary from State to State and even within the State. Therefore, with a view to make optimal use of the Navodaya Scheme, a need is felt to establish additional JNVs in each district of the country with reference to the size of their population during the XIIth Plan period. It is, therefore, proposed to establish one additional JNV in 349 districts¹³ (each having a rural population more than 10 lacs) in the country (Rs.14469.17 crore), besides establishment of JNVs in 27 uncovered districts (Rs.1391.06 crore) and 2 special JNVs for the Manipur State (Rs.111.9 crore). Further, in respect of Tamil Nadu State, the Ministry of HRD and the Samiti have been requesting the Tamil Nadu State Government for accepting the Navodaya Vidyalaya Scheme. But the State Government has not so far accepted the Scheme. There are no JNV in the State-Tamil Nadu as on date. It is, therefore, proposed to open one JNV in each of 31 existing districts of Tamilnadu State during the XIIth Five Year Plan period (Rs.1575.78 crore).

In this context, it is also proposed to increase the annual intake of students from the existing 80 students to 160 students in each class from VI to XII, in the above proposed JNVs. Thus, there will be a total intake of 1120 students in each additional JNV proposed to be established during the XIIth Plan period.

5.2.4 **Details of Proposals Submitted by NVS during the 11th Plan and kept pending for want of the approval/funds from the Ministry of HRD**

With a view to make effective control on various activities of JNVs, a need is felt to establish more Regional Offices, Training Centres (NLIs) and also to augment the administrative structure of existing Regional Offices. Therefore, apart from continuation of Navodaya Vidyalaya Scheme with the units established/anticipated till the end of XIth Plan period (i.e upto 31.3.2012), the following proposals **which were initiated during the XIth Plan period and kept pending for want of the approval/funds from the Ministry of HRD, are also proposed to be taken up during the XIIth Plan period:**

Setting up of Science Magnet School as a part of the existing Navodaya Vidyalaya Scheme (10 Numbers)¹⁴

On 31-8-10, the draft EFC Memo for setting up of 10 Science Magnet Schools as a part of the existing Navodaya Vidyalaya Scheme was submitted to the Ministry of HRD. A total of Rs.**416.20 crore** is required for these.

Setting up of additional Regional Offices (08 Nos) and to augment the administrative structure for the existing Regional Offices (08 Nos.)

On 23-12-10, the draft SFC Memo for Setting up of additional Regional Offices (12 Nos) and to augment the administrative structure for the existing Regional Offices (08 Nos.) was submitted to the Ministry of HRD. The sub-group was of the view that 8 regional

¹³ Some of the members were of the opinion that before taking this decision a review of NVS' charter must be done.

¹⁴ Some of the members were of the opinion that before taking this decision a review of NVS' charter must be done.

offices will be sufficient for this purpose and hence recommended that a total of Rs. **61.12 crore** will be required for these activities.

Opening of 07 Navodaya Leadership Institutes (NLIs) and 25 State Resource Centres (SRCs)

The Standing Finance Committee of Ministry of HRD in its meeting held on 6.12.2010 has accorded approval for establishment of 07 Navodaya Leadership Institutes (NLIs) and 25 State Resource Centres (SRCs). A total of Rs. **40.24 crore** is required for these.

Construction of permanent buildings of 07 existing Regional Offices together with staff quarters/Guest house and construction of staff quarters for 01 Regional Office

The SFC of Ministry of HRD in its meeting held on 3.2.2011 has accorded approval for construction of permanent buildings of 07 existing Regional Offices together with staff quarters/Guest house C/o staff quarters for 01 Regional Office. A total of Rs. **36.57 crore** is required for these.

Construction of additional accommodation in existing JNVs (i.e. additional classrooms, Maths Labs, Storeroom, Geo. Lab, Art room, multi gym and music room

The draft EFC Memo for Construction of additional accommodation (Classrooms, Labs, Store) in existing JNVs was submitted in the Ministry of HRD on 15.11.2010. A total of Rs. **671.81 crore** is required for these.

5.2.5 Pace Setting activities in JNVs

The Navodaya Vidyalayas have been envisaged as pace-setting institutions, centres of education excellence providing opportunities for development not only to Navodaya Vidyalaya students, but also to the children of neighbouring rural area schools through sharing of facilities. Leadership qualities and other educational concerns that are linked to community and National development are also supposed to be inculcated through pace-setting activities. Interactions of staff and students of Navodaya Vidyalayas with their counterparts in neighbouring schools, participation in joint community efforts, adoption of a village for awareness programmes and sharing of educational facilities are some of the pace-setting activities undertaken by Navodaya Vidyalayas.

In order to act as pace setting institutions in the district, the Samiti proposes to undertake following activities in each Vidyalaya during the 12th Five Year Plan.

- (i) To provide training to the teachers of neighboring schools in a district to make use of resources available with JNVs to upgrade their teaching skill every year.
- (ii) To share the facilities available in the Jawahar Navodaya Vidyalaya i.e. Library, Laboratories (Physics, Chemistry, Biology & Humanities) and Computer Lab etc. with the staff and students of neighbouring schools (in the districts in order to give exposure of modern facilities/equipments available with the JNVs.
- (iii) To share facilities available in the campus like multipurpose halls, play fields etc. with the neighbouring institutions for upliftment of Games, Sports & Cultural activities in the district in general and all-round development of personality of the child in particular.
- (iv) To conduct workshops by engaging the Master Craftsmen & experts for areas such as drama, dance, music theatre, art and craft etc. for Vidyalaya students as well as for the students from neighbourhood schools.

However, with a view to develop and conduct pace-setting activities more effectively, the Samiti proposes to expand the sphere of pace-setting activities in JNVs and also to fix the norms for incurring expenditure on these activities, as per details mentioned below :

S.No.	Activity	Per JNV/per Annum (Rs.)
i)	Training of teachers of neighbouring schools. (i.e TA/DA, Stationery, Hospitality, Course Material, etc.)	2.00 lacs
ii)	Training of children from neighbouring schools in the filed ICT and to give exposure to other facilities available in the JNV like library, labs, Multi purpose hall, play fields by way of conducting the development activities for growth of child etc. (Provision for payment of remuneration to the contract teachers during vacation for ICT teaching to & fro expenditure involved in conveyance, stationery, consumables & hospitality, etc. on local students).	1.60 lac
iii)	To conduct workshop for Music, Art & Crafts, Visual Art, Dance & Drama & theater etc by engaging 2-3 experts master craftsmen on contract basis for all-round development of the child. (Efforts will be made to pick up such activities on which the area is well known in the State/country. These activities will be undertaken keeping in view the recommendations made in the NCF-2005 for the all-round development of the child. Samiti proposed to engage 02 teachers @ Rs.20,000/- per month per person for 12 months on contract basis for their activities and their services will be used during vacations & break period by the Jawahar Navodaya Vidyalayas.	4.80 lacs
iv)	Provision for having standby teacher in order to manage the Vidyalaya teaching working when the teacher proceeds on training and/or the female teacher avails of CCL (i.e 02 teachers for 09 months @ Rs. 20,000/- per month per person(excluding vacation period)	3.60 lacs
v)	Construction of hall/auditorium for the purpose of conducting of training for the teachers from neighbouring schools in each Jawahar Navodaya Vidyalaya.	22.88 lacs per JNV

A total of Rs. 754.7 crore has been recommended for the same.

5.2.6 Computerization in JNVs

At present, the Computer Student ratio in JNVs is about 1:12. The JNVs covered under the Computer Education Programme are well equipped with needed Computer Hardware & Software, Colour TV, Multimedia Projector, Laptop and Photocopier, etc. 33 JNVs have been developed as 'Smart Schools' and as pace setters in ICT Programme. Each Smart School has more than 40 Computer Systems and other necessary peripherals, LCD Projectors, etc. These JNVs are also acting as nodal centre for e-content development. The Internet/Broad Band connectivity is available in most of the JNVs. Further, 11 JNVs (including 9 Smart Schools) are being used as Computer Training Centres to provide computer training to the staff and teachers of JNVs.

Keeping pace with the above, the Samiti proposes to expand the ICT programme in JNVs with the following propositions:

- i) Providing of 40 computers alongwith two printers for one Computer lab in a JNV, to achieve the target of Computer Student ratio 1: 14.
- ii) Setting up of one computer lab on 560 students and two computer labs having the student strength of 1120 Nos. in a JNV alongwith the required facility of Air conditioning, carpet flooring, curtains, etc.
- iii) Provision for providing of Projector Device, Interactive Board, Computer with UPS & Electric Response System, for the e.class rooms in JNVs(i.e 7 class rooms for JNVs having 560 students and 14 class rooms for JNVs having 1120 students in a JNV).
- iv) Implementation of Management Information System (MIS) in each JNV.
- v) Replacement of old Computers and Printers in a phased manner over a span of 7 years(i.e. @ 20% in each year commencing from 2012-13 onwards.

Providing of 40 computers along with two printers for one Computer Lab in one JNV to achieve the target of Computer Student ration 1:14. Setting up of one Computer Lab on 560 students and two computer labs having the student strength of 1120 Nos. in a JNV along with the required facility of air conditioning, carpet flooring, curtains, etc. Provision for providing of Projector Device, Interactive Board, Computer with UPS & Electric Response System, for the e-class rooms in JNVs. (i.e. 7 class rooms for 560 students and 14 class rooms for 1120 students in a JNV. Implementation of Management Information System (MIS) in each JNV. Replacement of old computers and printers in a phased manner over a span of 7 years (i.e. @ 20% in each year commencing from 2012-13 onwards.

A total sum of Rs. 28754.51 crore has been proposed for the NVS during the XII Plan period. *(Financial Implications at Annexure 4)*

5.3 Central Tibetan Schools Administration (CTSA)

CTSA is an autonomous organization under Ministry of Human Resource Development, Government of India established in 1961 with the objective to establish, manage and assist schools in India for the education of Tibetan Children living in India while preserving and promoting their culture and heritage. The administration is running 71 schools spread all over India in the area of concentration of Tibetan population. About 10,000 students are on roll from pre-primary to class XII with 554 teaching and 239 sanctioned Non Teaching Staff. The schools are affiliated to CBSE and follow NCERT curriculum. The medium of instruction at Primary level is Tibetan and thereafter English. The classes and labs are well equipped and all efforts are made for overall development of Children by giving them opportunities of participating in various co-curricular activities viz. sports/cultural/art and adventure activities.

Central Schools for Tibetans are located at places that have a sizeable population of Tibetans. Most of these schools are located in hilly and far-flung areas. They prepare students for All India Secondary School Examination (X) and All India Senior School Certificate Examination (XII) conducted by Central Board of Secondary Education, Delhi. CTSA has six Residential schools upto +2 stage at Mussoorie, Dalhousie, Shimla, Darjeeling, Kalimpong and Mundgod with hostel facility for both boys and girls. Free education is imparted to the Tibetan students right from Pre-Primary to Class XII. A Common Annual Examination for Class V, VIII, IX, and XI are conducted to ensure uniformity in educational achievements. Students compulsorily get training in Tibetan music and folk dance. Co-curricular activities for all the students from Class I to XII are conducted compulsorily. Tailoring is compulsory for girls and woodcraft is compulsory for boys from class VI to X in Secondary and Senior Secondary Schools. Vocational Education at the +2 stage is imparted at Central School for Tibetans, Mundgod. Presently, three Commerce based Vocational Courses i.e. Stenography (English), Auditing & Accountancy and Purchasing & Store Keeping are available in this school.

CTSA New Delhi publishes Annual trilingual journal (English, Tibetan & Hindi) inter-alia with Writings on Tibetan culture, tradition and heritage. Various infrastructural facilities have been provided to all CTSA schools under Plan Budget in order to provide quality education to Tibetan children. These assets are being put to best use by all the CTSA schools for all round development of children. Activity based teaching has been introduced at Primary level in all CTSA schools in order to teach small kids through play way method and also to make classroom teaching meaningful for tiny tots.

5.3.1 It is proposed to undertake construction, repair and maintenance of school Buildings and staff quarters for **Rs.35.00 crores & to develop academic activities for Rs.10.00 crores.**

5.3.2 Improvement of CTSA Hostels

Six of the CTSA schools are residential with intake capacity as mentioned below:

Sl. No.	School	Capacity
1.	Mussoorie	550
2.	Shimla	440
3.	Dalhousie	500
4.	Kalimpong	300
5.	Mundgod	160
6.	Darjeeling	270
Total		2220 students

Most of these hostels were opened in old and dilapidated buildings donated by erstwhile rulers and non govt. Organisations. Many of these were without proper sanitation/drainage and proper residential facilities. Efforts are being made to convert the same into new buildings and to renovate old buildings but for want of sufficient funds, the same could not be taken up at desired level. Mainly, the following works need to be taken up urgently:

a.) Civil and Electrical Works

Sl. No	Works	Est.Expenditure (Rs. In Cr.)
1.	Conversion of long dormitories into 3-4 beded rooms for proper academic environment and better lighting arrangements	3.00
2.	Renovation of kitchens and equipment	0.75
3.	Renovation of toilets/baths	2.00
4.	Replacement of two tier old beds purchased in 1961-65	1.00
5.	Replacement of mattresses	0.50
6.	Replacement of quilts and linen	0.50
TOTAL		7.75

b.) Recurring Expenditure

Presently CTSA is incurring expenditure on hosters at the following rates, lastly revised in 2007. Since most of the schools are located in highly expensive areas and prices of commodities have substantially risen, it is proposed to increase the rates as given in the table in next page.

Sl. No.	Item	Existing Rates (per month)	Proposed Rates (Per month)
1.	Ration:	Rs. 580	Rs. 1200
2.	Daily necessities:	Rs.60/-	Rs. 120/-
3.	Uniform:	Rs. 200/-	Rs. 2500/- per year in Winter schools and Rs.1800/- Per year in summer schools
4.	Hostel contingency	Rs. 60/-	Rs. 100/-
	Total	Rs. 900/-	Rs.1620/-

Total annual financial implications will be as follows:

Free Boarders(100% sponsored by CTSA) @Existing: 260 studentsX10monthsXRs.900= Rs. 2340000/-

@ Proposed rates 260X10monthsXRs.1620=Rs.4212000/-
Difference: Rs.

1872000/-

Paid Boarders (40% paid by CTSA) @Existing: 1860 studentsX10monthsXRs.360= Rs. 6696000/-

@ Proposed rates

1860X10monthsXRs.744=Rs.13838400/-

Difference: Rs.

7142400/-

Total annual financial implications= Rs.9014400 (Ninety lakh fourteen thousand four hundred only)

Therefore, requirement for the XII Five Year Plan = Rs.5 x .90 = Rs.4.5 crore.

Grand total for improvement of CTSA hostels = Rs.(7.75 + 4.5) crore = Rs.12.25 crore.

Thus, a total sum of Rs. 57.25 crore is recommended for the CTSA.

(Financial Implications at Annexure 5)

6. The Role of Existing institution which support Secondary Education

6.1 National Institute Of Open Schooling

National Institute of Open Schooling (NIOS), is the largest open school in the world in terms of enrolment, programmes & the courses offered and the geographical areas under its operation. Over the year, NIOS has been unfolding through its innovation in many ways to become a learner- centred system of school education. The ICT is being used as major strategy towards reaching the unreached and management of NIOS. As a major strategic use of ICT in the Examination Reforms, NIOS has introduced On Demand Examination System (ODES) at Secondary and Senior Secondary Level. At present, the On Demand Examinations are conducted around 16 Regional Centres located all over the Country.

NIOS is planning to expand these facilities all over the country by opening new Centers during the 12th Five Year Plan, the following is proposed for NIOS:-

1.	Development of On Demand Examination System and supporting ICT for Examination Reforms	Rs. 30 crore
2.	Improving of Examination and Academic Departments at Secondary and Senior Secondary Levels	Rs. 20 crore
	Total	Rs. 50 crore

(Financial Implications at Annexure 6)

7. Restructuring Of Central And State Board And Elimination Of Unauthorized Boards:

7.1 Repositioning of Boards of School Examinations

The Boards need to remodel themselves in such a way that they have strong academic and IT division closely coordinating with examination and administration divisions. For this purpose, the following may be done for the Boards during 12th Plan Period.

- A} Strengthening of Academic Units within Boards
- B} Strengthening of IT use in Boards
- C} Online Network for Strengthening the Boards' Role in Educational transformation through Capacity Building
- D} Capacity building of all stakeholders (Principals, Heads, Teachers, Parents, Board Employees and Officers)

A} Strengthening of Academic Units within Boards

The Academic Unit may follow a division into Academic and Vocational Units. Each may be headed by an eminent educator and competent professional with a deep understanding of concerns and issues related to curriculum planning, teaching learning strategies, learning theories and assessment and evaluation. The Academic and Vocational Advisors may be drawn from Universities and institutes of Higher Education on a contractual and rotation basis. The permanent staff may include Academic Heads (equivalent to Professor Scale) with at least eight posts for Academic Units (three in Sciences, one in Maths, three in social sciences, one in Languages and one for Capacity Building). For vocational there may be four heads for Agriculture, Manufacturing, Services and Capacity building.

However these should be people with experience at school level as well as administrative capabilities of collaboration and team work.

The Academic Unit should have two different units, one focused on Academics second on Vocational.

These may be supported by Sections and Clerical staff. These Heads will work under the Academic Supervisor. The Heads will co-ordinate with Universities as well as schools and work in the area of Curriculum development, updating, support material, production, capacity building of teachers in content, pedagogy and assessment and leadership for principals.

Although many Boards have computerized their work, yet there is a need to train the staff further in the use of computers not merely for the processing of examination-related work but also for improving the management of the Boards, it is therefore suggested that there should be a full fledged Computer & Information Unit in each Board. This will enable the staff in position to perform better than they are doing at present.

In order to handle large numbers of examinees and to meet rising expectations of stakeholders in terms of transparency etc. in the Boards functioning, it will be well advised that officers and staff of the Board are given adequate training involving regular exchange with international examining/curriculum setting bodies.

- The Academic Division must be headed by a competent professional, preferably in the rank of a University professor with a deep understanding of various problems and issues in curriculum making, teaching-learning methodology, contemporary advances in cognitive learning and all such related matters.
- In the Academic committee, while some people with University background may be included, they should not be allowed to dominate decision making at the school level .
- A separate division of In-service Training has been suggested in order to facilitate up gradation of the teaching skills of teachers. The In-service division would naturally interact closely with the Academic and Research divisions.
- A strong and well staffed Academic division would be a source of strength to the In-service Training division. The professional training imparted by this division will, in the long run, help to strengthen the academic functioning of the Boards
- In order to ensure that the Boards maintain high standards of professional efficiency; they should follow the system of promotion through merit and not be guided merely by seniority. This is particularly applicable to the academic division.
- The Research division of the Board needs to be properly staffed. In order to achieve this objective, it has to be ensured that people well-versed in research and also conversant with the realities of the field situation are located and appointed to this division.
- The Research division may undertake analysis of examination data and pupil's performance with a view to help improve the level of achievement of the students as well as the proficiency of teachers.
- It should be feasible for the Research division to sponsor some research work, farm out projects to others and, in general, create an atmosphere of enquiry and serious investigation.
- A Resource Centre may be established which will work in close collaboration with the Academic Unit for Capacity Building of teachers.
- Although many Boards have computerized their work, yet there is a need to train the staff further in the use of computers not merely for the processing of examination-related work but also for improving the management of the Boards, it is therefore suggested that there should be a full fledged Computer & Information Unit in each Board. This will enable the staff in position to perform better than they are doing at present.

In order to handle large numbers of examinees and to meet rising expectations of stakeholders in terms of transparency etc. in the Boards functioning, it will be well advised that officers and staff of the Board are given adequate training involving regular exchange with international examining/curriculum setting bodies.

B) Strengthening of IT use in Boards

NCF-2005 treats ICT within the encompassing concept of ET, as an enabling resource which has considerable potential to serve pedagogic goals like nurturing the child's ability to construct knowledge as a means to solve problems. The emphasis is on the pedagogic opportunity to reflect on one's experience of the real world. No virtual reality can substitute the lived-in reality of the child, and hands-on experience provided inside or outside the classroom has no substitute either. Where ICT has a role is in enhancing the child's exposure and the capacity to situate a problem in a wider web of information. In order to assist the child in these two contexts, ICT training of teachers must enlighten them about the positive uses as well as the risks involved.

A distinction must be made between the primary school years and the later years. The former require plentiful time and resources to provide direct experiences and, hands-on activities. Therefore, it may be best to invest in ICT at the secondary stage. Even at the secondary stage, it is important to remember that ICT is an enabling tool in education, not an object of education during the school years. The National Focus Group position paper on Educational Technology warns us in no uncertain terms that technology cannot be viewed in isolation from the overall educational process. It is not a substitute for intellectually stimulating teaching.

If teachers are being pressed to ensure that students must obtain the highest possible marks in a conventional examination system, neither television nor ICT can widen the scope of such teaching. Boards must, therefore, take a meticulous view of its real priorities in order to avoid getting drowned in what the National Focus Group calls the 'technology onslaught'. While introducing secondary level students to computers, Schools must focus on the teacher's ability to use computers to widen the scope of teaching in a constructivist paradigm, not merely to enliven teaching. Computers can also enable students and teachers to form learning networks. Any such use of ICT depends on teacher orientation in the direction that NCF charts in terms of its broader philosophy and vision.

C) Online Network for Strengthening the Boards' Role in Educational transformation through Capacity Building-

The Role of Boards of Secondary Education is to participate in the curricular process, enhance synergy between Boards and other agencies in education and institutionalise the examination reforms agenda. Proposed activities leading to the design of the network are :

- A technological interface – a web portal which would evolve continuously support the varied activities that will emerge in the different languages and media.
- A cell in each of the Boards of Secondary Education, mandated with and technologically prepared to take on the task.
- An initiative to involve and mandate the University Departments of Education, Colleges of Teacher Education and other professionals to participate in the process of strengthening the activities of the Boards
- An initiative to create an open repository of data (examination data, survey data), print resources (books, monographs), research (online journals), media resources (audio, video and multimedia), and courses.

Set up a core academic unit in the Boards and a network of academic professionals across the State and Nation, particularly from the higher education sector. The provision for funds are:

- For access to a wide range of online journals relevant to school teachers – a national subscription arrangement as done by the UGC, rights to translate and repurpose portions;
- For initiating publication of online journals focussing on issues of school education in India, hosted at Indian institutions, catalysing the participation of Indian teachers in their self development;
- For setting up and management of the teacher education portal and appropriate R&D facilities; facilitation of participation of a wide variety of technology and educational institutions; evolving and popularising appropriate technological interfaces, open standards and open access to content;; includes setting up a small technical team at CBSE or NCERT, salaries, infrastructure, sourcing of content, hosting, etc.]
- For digitisation of data – examination results, survey results etc. and its online deployment; For online publication of books and monographs for school education by Indian educators in a range of educational institutions [1.00 lakhs grant for individuals – faculty from higher education or teachers or principals – to be managed by CBSE or NCERT upto 100 publications per year = 5 crore
- For digitisation and translation of existing resources; evolving mechanisms and building capacities for creating open digital content; [
- For design, development and deployment of online courses; [2.00 lakhs grant for each faculty team (typically from teacher education institutions or University departments) for development and management of courses in content and pedagogical issues x 100 courses each year = 10.00 crores]
- For design, development and management of online professional teacher networks and their activities – including webinars, conferences and counselling;

D) Capacity building of all stakeholders (Principals, Heads, Teachers, Parents, Board Employees and Officers)

Conferences and seminars focused in and around teachers and Board officials are going to lay the foundation for successful reform, therefore, national level workshops, capacity development programmes as well as international exchange programmes for teachers and Board officials are proposed during the 12th Plan.

A total sum of Rs.344.44 crores for the Board and Rs.25.95 crore for CBSE/NCERT has been proposed for the abovementioned activities.

(Financial Implications at Annexure 7)

7.2 Networking of Schools

Sahodaya School Clusters replicated in Boards other than CBSE

Sahodaya, a concept literally meaning ‘Rising Together’ came into being in the year 1986, to facilitate synergy of ideas among the schools of CBSE family aimed at excellence in education. A Sahodaya School Cluster is a group of neighbourhood schools voluntarily coming together to share their innovative practices in all aspects of school education including curriculum design, evaluation and pedagogy and also providing support services for teachers and students. It is indeed an interactive platform for schools to deliberate upon the different policies and guidelines of the Board and provide effective feedback on their implementation to establish new benchmarks of quality. There is no doubt that much more knowledge is generated when a team

or group committed to a common goal undertakes the task of re-modelling and re-fashioning in a spirit of caring and sharing. Thus Sahodaya introduces the relevance of co-operative learning and collaborative networking. This is further facilitated by the annual Sahodaya Conference held every year to critically examine the relevant issues and evolve a viable and effective framework of action.

The diverse array of activities carried out by SSC's include the following:

- (a) Orientation programmes, seminars and workshops for teachers/students/Principals on various themes.
- (b) Joint programmes for home examinations, sports and cultural activities, inter school competitions, exhibitions etc.
- (c) Discussion on implementation of circulars and guidelines issued by the Board from time to time.
- (d) Taking up community development projects on adolescence education programme, road safety, consumer awareness, peace education etc.

It is necessary to strengthen the Sahodaya Movement by taking it to remote and unrepresented areas. To facilitate the creation of new Sahodaya School Cluster the procedure to be followed is outlined below in easy steps:

- STEP 1: 5-10 schools which are located geographically close to each other can come together. The Principal of any one school may convene a meeting of the Principals of all member schools to elect a President, Secretary, Treasurer and other office bearers on a rotation basis. They may give a name to their Sahodaya Cluster. In one district, there could be more than one Sahodaya Cluster depending on the number of schools and geographical locations.
- STEP 2: The members may draw up a set of bye-laws for the Sahodaya School Cluster delineating the aims of the voluntary body, the functions, duration of office etc. of office bearers, list of main activities, periodicity of meetings, subscription etc.
- STEP 3: An account in a local bank may be opened in the name of the Sahodaya School Cluster to be operated jointly by any two office bearers. The account should be audited annually and details circulated to all the members.
- STEP 4: An action plan for the whole year may be prepared in consultation with all the members. Duties for carrying out different programmes may be allocated among members. The members should meet at least once a month to review the activities and to take up for discussion any issue of academic nature.

A sum of Rs.102.5 crore has been proposed for Networking of schools.

(Financial Implication at Annexure 7)

7.3 Strengthening of networking of Boards through CBSE

If the Schools Boards are to be repositioned as educational organizations and the reforms conceptualized by NCF 2005 and Right to Free and Compulsory Education implemented, the CBSE as a pace setting Board needs to take the lead to network the Boards through an informal association of the Boards themselves.

A voluntary association of School Boards, needs to be strengthened and made much more effective. No one other than the Boards can be responsible for its establishment, upkeep and running expenditure.

Since the Boards have to interact with one another, the issue of comparability does arise and their relative standards of performance have to be appropriately assessed. In other words, the issue of equivalence gets put on the agenda. This is the right agency for doing this job, a certain degree of help from NCERT on the professional plane would be useful as well as welcome.

For this purpose, the CBSE can act as the nodal board till the time the organisation is restructured. Therefore, an amount of Rs.150 crore can be earmarked for the CBSE for the above purpose.

7.4 Guidance & Counseling

Guidance and Counseling, both as an approach and as a service, can be an important strategy for promoting curricular and examination reforms in secondary education in terms of its pro-active as well as remedial role. Guidance and Counseling services can help in promoting students' retention and better scholastic performance in curricular areas, facilitating adjustment and career development of students, developing right attitudes towards studies, self, work and others.

Certain Imperatives

1. Full time school counsellors may be appointed at school/cluster /block/district level in every state.
2. Every school should have at least one teacher and preferably two (one male and one female) teacher trained in guidance and counselling in the interim period till a full time counselor is not possible. Teachers – Counsellors already trained should be utilized for extending training further at state level. In order to meet the growing demand, the states should be given funds to start in-service training programmes.
3. Every state department of education/state bureau of guidance should ensure creating a cadre of trained guidance personnel as guidance officers.
4. Sensitization programmes for principals/heads of schools at state level and enrichment programmes for trained guidance personnel should be a regular feature.
5. Component of guidance and counseling in pre-service teacher education needs to be strengthened.
6. Aptitude Testing will need to be encouraged to ensure learners built on their innate potential
7. Improving access to health and wellness in schools by reinforcing positive health messages from an early age. This can be taken up by:-
 - Setting up of Health and Wellness Clubs in schools
 - Provision of part time doctor/ nurse in schools

Guidance Resource Centres would need to be created/further strengthened, under the guidance of the NCERT, for providing aforementioned services at cluster/block/school levels.

A sum of Rs.180 crore has been proposed.

(Financial Implications at Annexure 7)

7.5 Environment Building for Reforms

An important parameter for planning of examination reforms is environment building and generating public opinion in favour of the same. There are critics with myopic vision who question the wisdom of these reforms. Given the emerging scenario of ever increasing globalization and India's emerging role as an important global player, it is necessary to undertake the examination reforms and focus on CCE seriously at the secondary level. There would further be an osmotic effect at the elementary stage and the quality of education at this stage will also improve. It is only through environment building that the community can be mobilized. This is particularly necessary to ensure participation of girls, scheduled castes, scheduled tribes; other backward classes, cultural and linguistic minorities and the differently abled. Without involving all of them, examination reforms will remain just an elusive dream. It is therefore necessary to have Parent Advocacy Programmes across the country.

Parent Advocacy funds for using Mass Media such as print & electronic including channels on TV during Prime Time need to be earmarked.

A sum of Rs.180 crore has been proposed.

(Financial Implication at Annexure 7)

8. National Council of Educational Research & Training

The National Council of Educational Research and Training (NCERT) is an apex resource organization to assist and advise the central and the state governments on academic matters related to school education. It provides academic and technical support for qualitative improvement of school education through its various constituents viz., the departments at National Institute of Education, New Delhi; Central Institute of Educational Technology, New Delhi; Pandit Sunderlal Sharma Central Institute of Vocational Education, Bhopal and five Regional Institutes of Education located at Ajmer, Bhopal, Bhubaneswar, Mysore and Shillong. To achieve its goals, the NCERT:

- Conducts, promotes and coordinates research in all branches of school and teacher education;
- Organizes pre-service and in-service training of teachers;
- Organizes extension services for institutions, organizations and agencies engaged in educational reconstruction;
- Develops and experiments with improved educational techniques, practices and innovations;
- Collects, compiles, processes and disseminates educational information; and
- Collaborates with international organizations and national-level educational institutions of other countries.

NCERT undertakes programmes related to research, development, training, extension, international cooperation, publication and dissemination of educational information. It functions in almost all aspects and stages of school education and teacher education viz., Early Childhood Care and Education; Universalization of Elementary Education; Education of Groups with Special Needs such as SC,ST and minorities, girls, physically challenged; pre-service and in-service teacher education; vocational education; examination reforms; educational technology; environmental education; population education; guidance and counselling; identification and nurturance of talent; development of curriculum and instructional material; content and processes of education; in-service innovative courses at graduate and post-graduate level; production of print and non-print material; etc. It works in close collaboration with states; central and state level educational organizations; and international organizations. Its programmes are formulated based on the educational needs of states; national priorities and commitments; and international inputs.

Under the 12th Five Year Plan, the following programmes/activities on various themes are proposed for the NCERT:

8.1 Elementary Education

The Department of Elementary Education of NCERT is functioning as the nodal centre for improving the quality of education at the elementary stage under Sarva Shiksha Abhiyan. With the recent enforcement of the Right to Education Act, 2009, the department has been assigned the responsibility to coordinate various activities being performed in the Council in this regard.

The Department proposes on paying greater attention to various issues emerging out of RTE Act-2009. Research on various aspects of elementary education emerging from the context of RTE Act-2009 will be carried out. A bridge course for age appropriate placement of out of school children will be developed. Research studies on other priority area of the Department, i.e. of Early Childhood Care and Education (ECCE) will be conducted. Audio-visual and other non print material for advocacy of ECCE will be developed. Capacity building of state functionaries in ECCE will be taken up. Publication of the journal '*Prathamik Shikshak*' and '*The Primary Teacher*' and the updating and maintenance of the National Documentation unit of pre-primary and elementary education will be continued.

8.2 Secondary Education

In the light of the Rashtriya Madhyamic Shiksha Abhiyan (RMSA) the secondary education has assumed greater significance. The Department of Secondary Education proposes to undertake researches on effective pedagogical impact of use of ICT in Mathematics education at secondary stage and on various aspects of quality for academic improvement in Science, Mathematics, Social Sciences and Languages and also on the status of curriculum reform and practices in states/UT at secondary stage. It also proposes to develop resource material such as proto-type kit, activity book, and professional development packages in Science, Mathematics and Social Science with the focus on research-based pedagogical approaches. It will also develop quality parameters on various aspects such as curriculum, pedagogy and CCE in content areas. Capacity building programmes on different content areas will also be taken up for KRPs and master trainers.

8.3 Art Education

Implementing integration of arts as a tool of experiential learning across the primary school curriculum and 'meeting the newly created demand of separate art teachers for teaching art education in classes VI to VIII will be taken up. Following the Norms and Standards, of 'The Right of Children to Free and Compulsory Education Act 2009, by planning and providing quality pre-service and in-service teacher education to millions of teachers and capacity building of the states for the need based training of teachers of different level in the field of arts education, will be an intensive programme to ensure quality elementary education to every child.

Also capacity building of States for a functional Arts and Crafts Resource Center in every school and teacher education institutes at every level under RMSA for educating the young adults through engendering a range of cross cutting skills and abilities, and identifying and nurturing the artistic talent for promotion and conservation of our artistic and cultural heritage.

8.4 Education of Groups with Special Needs

Education of children with special needs assumes greater significance in the context of RTE Act. Included under this category are children belonging to schedule castes (SC), schedule tribes (ST) and rural children. Also, children suffering from various disabilities are included under this category. The Department of Education of Children with Special Needs (DEGSN) proposes to undertake the following programmes.

- Undertake researches to review the existing activities in the field of inclusion of children with disabilities and suggest initiatives to improve the quality of education for this special group. This is important as with more and more children with disabilities are now being enrolled in schools.
- Organize training programmes both face to face and through EDUSAT for teachers, teacher educators and policy makers to sensitize and train them in strategies for providing quality education and equal educational opportunities to children with special needs. The Department will also network with the SCERTS, RIEs, SIEs, CTEs and DIETs to achieve this goal.
- Promote and support the development of inclusive curriculum at the National and State levels, providing inputs for development of inclusive textbooks and suggesting reforms in the examination procedures especially under the comprehensive and continuous evaluation scheme.
- Would also be involved in developing teaching learning materials like teachers' guides, manuals etc. and also provide resource support to the Centre, States, NGOs and international and national level agencies for inclusion of children with special needs in education.

- Network and draw linkages between various Departments, organizations and people involved in the education of special focus groups and also provide resource support for activities under the SSA's and RMSA component for special focus groups.

8.5 Education of the Girl Child

It is proposed to undertake research studies to evaluate the curriculum, syllabus, textbooks, etc. from gender perspectives. Diagnostic studies on lesser participation of girls from SC, ST, OBC and minority communities will be given priority. Evaluation of schemes and programmes on girl's education, capacity-building and empowerment will be taken up. Good practices on empowerment in the area of girls' education will be documented. Modules and handbooks for teachers and teacher educators on gender issues will be developed and training programmes will be carried out for them. Networking will be established with state, national and international organizations working on promoting girls education. It is also proposed to start a one-year diploma course in gender education and development.

8.6 Science and Mathematics Education

In the areas of Science and Mathematics education capacity building programmes will be conducted for the functionaries of SCERTs, SIEs and others with use of EDUSAT and ICT. In the areas of Environmental Education and Disaster Management and Mitigation, the capacity building programmes will also be conducted and networking with the state and other organizations will be made. A one-year PG Diploma Course in Physics, Chemistry, Biology and Mathematics Education will be conducted. Implementation of Frame-work of EOSE-2010 will be carried out.

8.7 Educational Evaluation

With the expansion of elementary education and the implementation of RTE Act 2009, assessment is viewed as an important tool to promote quality of education. With the de-emphasis on external examination as envisaged in NPE-1986 and further reiteration under RTE Act for elementary stage, it is desirable to evolve and promote school based assessment system. This calls for a massive orientation and training programme of teachers both for pre-service and in-service. Training programmes will be conducted for implementing school based Continuous and Comprehensive Evaluation. A national centre for assessment and evaluation will be established. National innovation scholarship scheme in school sector will be developed and implemented. The National Talent Search Scheme is a flagship programme of the NCERT. The purpose of the scheme is to identify and nurture talented students every year. Efforts will be made to expand the number and quality of NTS scholarship.

8.8 Strengthening Guidance and Counselling Services in Schools

Strengthening of the guidance and counseling services in schools across the country has assumed importance in the context of Rashtriya Madhyamik Shiksha Abhiyan (RMSA). These are particularly important at secondary and senior secondary stages of school education which coincides with the adolescent stage. Such services can help promote student's retention and better scholastic performance in curricular areas, facilitate educational and career development as well as adjustment of students. NCERT would continue to provide academic resources and consultancy to facilitate implementation of guidance and counselling across the states.

8.9 Value Education

Nurturing values enshrined in the Constitution and the human values that are important for living harmoniously with oneself and others has assumed greater significance in view of the increasing conflicts and violence in the society. Teachers occupy centre stage to enable students develop proper attitudes and values through various educational experiences provided in the school. Efforts will be made for making peace and value education an integral part of all teacher education programmes at elementary and secondary stages for both pre-service and in service training programme.

8.10 Vocational Education

Training programmes for key functionaries in implementing vocational education and programme evaluation will be carried out. Career guidance programmes for vocational students through EDUSAT will be conducted. Modular competency based curriculum and instructional material will be developed. Also database in TV directory of TV institute, Audio-Video programmes, instructional material for special group children, modular vocational courses and guidelines for VEP projects implementation will be prepared.

8.11 Teacher Education

One of the major concerns of NCERT is the development and operationalisation of innovative pre-service teacher education courses. In this connection some new courses will be introduced like one-year B.Ed (Higher Secondary), four-year B.Sc.B.Ed in Biotechnology and IT, two-year M.A.M.Ed (English), three-year M.Com.B.Ed and six-year integrated M.Sc.M.Ed., two-year M.Sc.Ed./M.A.Ed. A few short term diploma/ certificate courses in educational research, pre-primary teacher education, secondary education, CCE, ET, ICT, Vocational guidance, ECCE, Children with special needs, Programme Evaluation, Poultry Farming and Environmental Education are also planned to be organized. M.Ed in different vocational areas is also planned to be introduced. M. Phil. and Ph.D. courses will also be started.

In-service training programme on content and pedagogies in different subjects will be organized for master trainers of DIETs, CTEs, IASEs and other teacher training institutions. In-service training programmes for untrained school teachers of North-Eastern states will also be organized. Documentation of innovative practices in teacher education and other training packages will be developed. Research studies will be conducted in the areas of teacher education curriculum, programmes and practices, case studies of innovative programme evaluation.

8.12 Promotion of Educational Research and Innovations

NCERT will continue to promote educational research through Educational Research and Innovations Committee (ERIC) by providing financial support. A regional research centre for promoting inter-disciplinary research in education will be established. Dissemination of research will be continued through publication of various journals.

8.13 International Cooperation

The NCERT continued working as a major agency for implementing the bilateral Cultural Educational Exchange Programmes (CEEPs) in the field of school education and teacher education. Several delegations from different countries visit NCERT and interact with faculty and authorities. India's contribution in APEID will be enhanced by reviving NDG and revitalizing network and exchange of information with Associated Centres.

Major thrust of work and the areas of work during 12th Plan will be:

Programme Activities

NCERT has been engaged in conducting new Annual Programmes in different areas of School Education at all constituent units duly approved by Programme Advisory Committee. The major areas of concern are:

- Monitoring of the implementation of NCF(2005) in the States and Collaboration with the states who have not yet implemented NCF (2005)
- Creating network of institutions/ agencies involved in the dissemination of NCF.
- Short-term training for Key functionaries; Advocacy targeting community, parents, teachers, teacher educators, planners and stakeholders.
- In-service training/capacity building of teachers and teacher educators.
- Studies on Career Aspirations among Rural Girls.
- Evaluation of the Curriculum of Madrasas and Maktabas from a Gender Perspective.
- Focus on Continuous and Comprehensive Evaluation; Introduction of Grading System and Achievement Surveys at school stage.
- Conducting research in priority areas of school education.
- Promoting educational research in the country by providing financial support.
- Bringing out Educational Research surveys.
- Capacity building for Action Research and training of DIET faculty for educational research.
- Strengthening International Cooperation in the field of school education and teacher education.
- Development of teaching learning material in content specific areas and other curricular resources.

QIS Programmes

Four such programmes are being carried out by the Council. The thrust areas are Yoga, Environment, Population Education and Science Olympiad. These programmes are undertaken on the initiative of MHRD and one more programmes on values from Higher Education Department has recently been added.

New Schemes

- A National Innovation Scholarship is being created to identify the talented children at the Secondary Level for promoting creativity and innovation by award of Scholarship.
- Based upon the discussion and deliberation in the Executive Committee of NCERT and at other forums, it was agreed to open four additional RIEs in the country in Andhra Pradesh, Bihar, Maharashtra (Hyderabad, Darbhanga, Pune) and Chandigarh.
- It was also felt that the Council should take up some courses of innovative nature and also to cater the need of implementation of RTE and keeping in view already running major schemes like SSA and RMSA in addition to the existing courses. Such programmes are being developed by the Council and will be carried out by all constituents including NIE Departments. Some of the identified areas are:

- Pre-Primary education in four Demonstration Schools attached to the RIEs at Ajmer, Bhopal, Bhubaneswar and Mysore.
- Diploma Course in ECCE at NIE.
- Diploma Course in Guidance and Counselling (face to face mode) for inservice personnel from other countries in Africa and Asia including SAARC countries.
- Diploma Course in Guidance and counselling through Distance/ Online mode.
- New degree courses at Graduate/Post Graduate level and Diploma courses in Science and Mathematic/Social Science and Humanities/Language and Teacher Education, Curriculum Development, Evaluation and Women Studies at NIE and RIEs.

A total sum of Rs.1450 crore has been recommended during the XII Plan for the NCERT.

(Financial Details are at Annexure -8)

Summary of Financial Implications of Recommendations of the Sub-Group			
		XII Plan	2012-13
Central Sector Scheme		Rs. Crore	Rs. Crore
Kendriya Vidyalaya Sangathan(KVS)			
	Opening of 500 new Kendriya Vidyalayas during 12 th Plan.	1049	209.8
	Construction of 500 School building and staff quarters.	6312	1262.4
	Extension of Services to State Government Students(2.5 lakh) and Teachers (10 lakh) by KVS	805	161
	Hiring of services of local artists for 20 days a year per school	20	4
	Hiring of services of 1000 local artists each for 3 activities for middle and senior secondary classes for 10 months @Rs.25000/- per month (1.Dance, 2. theater & 3. local art & heritage craft)	375	75
	Computerization of existing KVs (40000 computers)	140	28
	Computerization of new Kendriya Vidyalayas & replacement of old computers.	198.75	39.75
	Fund required for 3500 E-classrooms	61.25	12.25
	School Management system i.e. Student management, fee management, time-table, library management, etc.	79.15	15.83
	Development of sports and games infrastructure under 18 Regional Office Jurisdictions	288	57.6
	Training of Teachers and other staff		
	Expenditure on training programmes of Existing staff	45	9
	Training of existing TGT (Art Education), PHE and WE and PRT (Music)	14	2.8
	Training of Principals and other Officers in Premier Management Institutes	6	1.2
	Induction Course for Principals	1.575	0.315
	Training of Principals and Officers abroad	25	5
	Training of other Group 'A' Officers	1.05	0.21
	Strengthening of 5 ZIETS	25	5
	Establishment of 10 Regional Training Institutes	60	12
	Establishment of 1 Training Institutes for training of Senior Officer	25	5
	TOTAL KVS	9530.775	1906.155

Navodaya Vidyalaya Samiti (NVS)			
	Continuation of Navodaya Vidyalaya Scheme(viz.596 Vidyalayas, 8 Regional Offices, 5 NLI's and Hqrs.' Office of NVS)	8804.6	1481.5
	For Expansion and New Initiatives of the Scheme		
	Establishment of new JNVs in uncovered districts -27 Nos.	1391.06	1391.06
	Establishment of two Special JNVs in the State of Manipur-2 Nos.	111.9	111.9
	Setting up of Science Magnet Schools as part of the existing Navodaya Vidyalaya Scheme(10 Nos.)	416.2	416.2
	Opening of additional JNVs in the Districts having population more than 10 lacs as per 2001 Census of the Country-349 Nos.	14469.17	2893.834
	Opening of one JNV in each of 31 districts of Tamilnadu state	1575.78	
	Setting up of additional Regional Offices (i.e 12 Nos.) and to augment the administrative structure for the existing Regional Offices(8 Nos.).	61.12	12.224
	Opening of 7 Navodaya Leadership Institutes(NLIs) and 25 State Resource Centres(SRCs)	40.24	8.048
	Construction of permanent buildings of 7 existing Regional Offices together with Staff Quarters & Guest House and Construction of Staff Quarters for one Regional Office.	36.57	7.314
	Construction of additional accommodation in existing JNVs (i.e. additional Classrooms, Maths Lab., Store Room, Geog. Lab., Art room, Multi Gym and Music Room).	671.81	134.362
	Development of Pace Setting Activities in JNVs.	754.7	150.94
	Expansion of Integration on Computer Technology (ICT) Programmes in JNVs.	421.36	84.272
	Sub Total for Expansion and New Initiatives	19949.91	5210.154
	TOTAL NVS	28754.51	6691.654
Central Tibetan Schools Administration		57.25	11.45
National Institute Of Open Schooling		50	10
Curricular and Examination Reforms			
	Text Book Reforms and adopting/adapting NCERT text books	206.64	41.328
	CCE Strategy and Measures to strengthen it		
	Reforms in Board's Question Paper Design	164	32.8
	Establishment of a National Institute for Assessment, Evaluation and Research	210	70
	Repositioning of Boards of School Examinations	369.85	73.97

	Strengthening of Networking of Boards through CBSE	150	30
	Networking of Schools	102.5	20.5
	Guidance & Counseling	240	48
	Environment Building for Reforms	180	36
	TOTAL REFORMS	1622.99	352.598
National Council of Educational Research and Training (NCERT)		1450	200
GRAND TOTAL		41465.525	9171.857

Text Book Reforms and Adapting NCERT Text Books

An amount of Rs $41 \times (8.4 \times 12) \times 5 / 100 =$ Rs. 206.64 crore may be earmarked for this purpose. On an average, every Board/State/ UT will be eligible to receive upto Rs. $(8.4 \times 12) =$ Rs. 100.8 lakh= 1.008 crore per year for this purpose for using professionals.

Reforms in Board's Question Paper Design

On an average, there are 20 major question papers in a Board Examination, and 10 experts are used for each subject, for about 20 days workshop.

TA/DA for experts per day = Rs. 1000

Honorarium per day = Rs. 1000

Therefore, requirement for 5 years= Rs. $20 \times 10 \times 20 \times (1000 + 1000) \times 41 \times 5 / 10000000 =$ Rs. 164 crore

Student Assessment and Examination Reforms: Establishment of National Institute for Assessment, Evaluation and Research**Estimated Expenditure:**

- | | | |
|------|---|----------------|
| (i) | Establishment of National Institute for Assessment, Evaluation and Research | : Rs.100 crore |
| (ii) | Workshops and preparation of Support material Training Centres | : Rs.110 |

Total : Rs.210 crore

**EXPANSION PLAN
FOR
KVS IN 12TH FIVE YEAR PLAN**

CONSTRUCTION OF SCHOOL BUILDING AND STAFF QUARTERS FUTURE PLANNING

- 215 of existing schools yet to construct building.
- For 25 schools buildings to be sanctioned in this year
- For 190 schools sanction will be given in the 13th plan
- 500 new schools with 9 units of staff accommodation for each school to be constructed in 12th plan (100 schools each year from 2012-13)
- Total projected fund requirement in 12th plan will be 6312 Crores

EXTENSION SERVICES FOR TEACHERS BY KENDRIYA VIDYALAYAS

- Sharing of best practices especially in the implementation of NCF - 2005.
- Developing a platform where teachers from both the institutions share their experiences and problems
- Collaborative action, research projects could also be undertaken for mutual benefits
- Teachers of KVs could arrange demonstration lessons, share manually developed teaching aids, lesson plans and other teaching learning resources
- KV teachers can help developing question papers, CCE activities and disseminate good practices adopted in evaluation
- KVs can share library and laboratory resources with proper arrangements and mutual agreements.

EXTENSION SERVICES FOR TEACHERS BY KENDRIYA VIDYALAYAS

A. Extension of services for teachers

1. No. of KVs which will give extension services 500
2. No. of teachers to be covered from local schools by each KV 400 (in 4 batches of 100)
3. Total no of teachers covered from local Govt. Schools 500 X 400 = 2 Lakhs
4. Total no of teachers covered from local Govt. Schools 2 Lacs X 5 = 10 Lakhs (in plan period).
5. No. of days in a year for extension services 3 daysX4 batches =12 days
6. .No. of teachers/staff to be involved from each KV for each Programme 20

S.N.	Item	Expenditure (in Rs.)
1	Honorarium for each teacher @Rs.500 per day 20x500x12=Rs. 1,20,000.00 (1.20 lakh)	1.20 lakh X 500 = 6 Crores
2	Working lunch for KV teachers and teachers from State schools @Rs.100 per day per head - 480x100x12 =Rs. 5,76,000.00 (5.76 lakh)	5.76 lakh X 500 = 28.80 Crores

3	TA/DA expenses of participating teachers from State schools @Rs.5000 per head 400x5000 = Rs. 20,00,000.00 (20 lakh)	20 lakhs X 500 = 100 Crores
4	Teaching learning material 500x400 = Rs. 2 lakh	2 lakhs X 500 = 10 Crores
5	Misc. expenditure on contingencies,experts,stationary etc.	3.04 lakh X 500 = 15.20 Crores
Total		160 Crores
Total Cost during the 5 year plan period		160 X 5 = 800 Crores

EXTENSION SERVICES FOR STUDENTS BY KENDRIYA VIDYALAYAS

- Participation in co-curricular activities
- Platform to share various KVS competitions at different levels
- Invitation to local participants

EXTENSION SERVICES SUMMARY

S.N.	Item	Expenditure (in Rs.)
1	Extension of services for teachers (2012-17)	800.0 Crore
2	Extension of services for students (2012-17)	5.0 Crore
3	Hiring of services of local artists (2012-17)	20.0 Crore
4	Hiring of services of 1000 local artists for middle and senior secondary classes for 10 months @Rs.25000/- per month (2012-17)	137.5 Crore
Total Cost during the 5 year plan period		962.5 Crore

COMPUTERIZATION IN KVS

Year	Purpose/Justification of fund for computer	Required fund
2012-13	(i) Requirement of computer = 40000 (ii) Cost of one computer =Rs.35,000 (iii) Fund required = 40000 x Rs.35000 = Rs 140 crore.	Rs. 140 Crore.
Total fund required to achieve the target of computer pupil ratio = 15:1 during five year plan		Rs. 140 Crore

COMPUTERIZATION IN KVS SETTING UP OF E CLASS ROOMS

Year	Purpose/Justification of fund for E-classroom	Required fund
2012-13 (i) E-class Room per School 7 classes (ii) Total schools to be covered 100 (iii) Total E-class Rooms 700 classes	Projection Device - Rs.50,000/- Interactive Board - Rs.60,000/- Computer with UPS System-Rs.35,000/- Electronic Response SystemRs.30,000/- Total - Rs.1,75,000 Total fund required Rs.1,75,000 x 700	Rs.12.25 crore
2013-14	-do-	Rs.12.25 crore
2014-15	-do-	Rs.12.25 crore
2015-16	-do-	Rs.12.25 crore
2016-17	-do-	Rs.12.25 crore
Total fund required = 3500 classes		Rs.61.25 crore

COMPUTERIZATION IN KVS SETTING UP OF SCHOOL MANAGEMENT SYSTEM

Functional Kendriya Vidyalayas	Year	Proposed KVs during the next five year (2012-2016)	Fund required for school management system for each KV @ Rs.5 lac
1083 (till date)	2012-13	100	1083+100 =1183xRs. 5 lac =Rs.59,15,00,000 = 59.15 Crore
1183	2013-14	100	(1183 + 100) X 5 lac = 64.15 Crore
1283	2014-15	100	(1283 + 100) X 5 lac = 69.15 Crore
1383	2015-16	100	(1383 +100) X 5 lac = Rs. 74.15 Crore
1483	2016-17	100	(1483 +100) X 5 lac = Rs. 79.15 Crore
Total fund required for 05 years of the plan			Rs. 345.75 crore

SUMMARY

S. N.	Items	Expenditure
1	(A) COMPUTERIZATION Computerization of existing KVs	140 Crore
2	Computerization of new Kendriya Vidyalayas & replacement of old computers.	198.75 Crore
3	Fund required for E-classroom for one year	61.25 Crore
4	School Management system i.e. Student management, fee management, time-table, library management, etc.	345.75 Crore
5	(A) Requirement of fund for development of sports and games infrastructural facilities in 18 Regional Offices	288 Crore
	Total	1033.75 Crore

Training of Teachers and other staff:

10 Regional Training Institutes to provide extension services to the government schools.

One Training Institute for training of senior officers and training of trainers is also proposed to be established.

Recurrent training of Principals to update their knowledge in educational administrative and financial areas.

Invite local artists to expose children to the rich cultural of country.

- Train the existing PRT(Music) and TGT (AE) in pre-determined areas like theatres, regional and folk dances.
- Hiring the services of music experts to take care of performing art in middle and secondary classes.
- Induction Training programme for newly recruited Teachers/Officers & staff (excluding principals) about 50 batches of 30 participants each for 10-15 days during each year at ZIETs and other venues.
- In-service Training programme – About 250 programmes of 30 participants each for 21 days during each year
- workshops & other short Training programmes - About 100 courses for 5 or more days at ZIETs/ROs for 30 participants each = 15000 Training Days.

Year	Expenditure
2012-13	7,00,00,000 (7 Crore)
2013-14	8,00,00,000 (8 Crore)
2014-15	9,00,00,000 (9 Crore)
2015-16	10,00,00,000 (10 Crore)
2017-18	11,00,00,000 (11 Crore)
Total	45,00,00,000 (45 Crore)

TRAINING OF OTHER TEACHERS

TGT (Art Education)

1. No. of Art Teachers - 1000
2. Training fee @Rs.25000/- per head (For 22 days) Rs. 25000/- X 1000 = 2.5 Crore
3. TA/DA expenditure @Rs.10000 per head Rs. 10000/- X 1000 = 1.0 Crore

PRT (Music)

4. No. of Music Teachers - 1000
5. Training fee @Rs.25000/- per head (for 22 days) Rs. 25000/- X 1000 = 2.5 Crore
6. TA/DA expenditure @Rs.10000 per head Rs. 10000/- X 1000 = 1.0 Crore

TGT (PHE)

7. No. of TGT (PHE) - 1000
8. Training fee @Rs.25000/- per head (for 22 days)Rs. 25000/- X 1000 = 2.5 Crore
9. TA/DA expenditure @Rs.10000 per head Rs. 10000/- X 1000 = 1.0 Crore

TGT (WE)

10. No. of TGT (PHE) - 1000
11. Training fee @Rs.25000/- per head (for 22 days)Rs. 25000/- X 1000 = 2.5 Crore
12. TA/DA expenditure @Rs.10000 per head - Rs. 10000/- X 1000 = 1.0 Crore

Total Expenditure during the 12th Plan = 14.0 Crore

TRAINING OF PRINCIPALS AND OTHER OFFICERS IN PROFESSIONAL ORGANIZATIONS

- 1) No. of Principals/Officers 1000
- 2) Training fee (per head) Rs. 30,000/-
- 3) No. of Trainings to be arranged 02
in a cycle of five year for each Principal

Total cost of training Rs. 6,00,00,000 = 6 (six) Crore

The proposed budget for two weeks training abroad for 100 Principals/Officers per year is as under:

1. Cost of Training 2.5 lakh
 2. Cost of TA & other expenses 2.5 lakh
 3. No. of Principals 100 each year
- Total Cost 5 crore per year

Total cost during 5 years of 12th Plan = 25 crore

Training of other Group 'A' Officers

- 1) No. of Officers 100
- 2) Training material @ Rs. 1000 per head
- 3) Teaching learning material @ Rs. 500
- 4) Working Lunch @ Rs. 300 per head per day
- 5) No. of Training days 15
- 6) TA/DA expenses @ Rs. 15,000/- per head
- 7) Total Expenditure Rs.21,00,000 per year

Total cost during 5 years of the 12th Plan = 1.05 crore

Strengthening of ZIETS

No of ZIETS 05

Additional fund required for strengthening the ZIETs **Rs. 5 Crore**

Total funds required during five year of 12th plan period 5 X 5 = 25 (Twenty Five) Crore

Establishment of Regional Training Institutes

1. No of training institutes proposed: 10
2. Cost of construction for each Institute: Rs 5 crore

Sub Total 10x5 = 50 Crore

3. Cost on furnishing/equipping the Institute:
and salary of proposed staff for one yearRs 10 crore

Total Cost during five year plan Rs 50+10 = 60 Crore

SUMMARY OF FUND REQUIREMENT TOWARD TRAINING

S.N.	Proposed Programme	Funds required
1.	Expenditure on Training of existing teachers	45 Crore
2	Training of existing TGT (Art Education), TGT (PHE), TGT (WE) & PRT (Music)	14 Crore
3	Training of Principals	6 Crore
4	Induction Course for Principals	1.575 crore
5	Training of Principals and Officers aborad	25 Crore
6	Training of other Group 'A' Officers	1.05 crore
7	Strengthening of ZIETs	25 Crore
8	Establishment of Regional Training Institutes	60 Crore
9	Establishment of Training Institutes for training of Senior Officer	25 Crore
Grand Total		202.625 Crore

NAVODAYA VIDYALAYA SCHEME

Expenditure on Continuation of Navodaya Vidyalaya Scheme :

Units established/anticipated till the end of XIth Plan period :

- NVS (Hqrs.) Office & 8 Regional Offices
- 5 NLI and 596 JNVs Hqrs.' Office of NVS)

Year	ANTICIPATED REQUIREMENT (Amount-in-crore)				
	Operational Expenditure (i.e. Recurring & Non-recurring)			Capital Expenditure (i.e. Construction of Buildings)	Total
	Non-Plan	Plan	Total	Plan	(Non-Plan & Plan)
2012-13	483.00	1028.50	1511.50	453.00	1964.50
2013-14	531.30	1176.00	1707.30	400.00	2107.30
2014-15	584.50	1345.20	1929.70	400.00	2329.70
2015-16	642.95	1539.40	2182.35	400.00	2582.35
2016-17	708.25	1762.50	2470.75	300.00	2770.75
Total:	2950.00	6851.60	9801.60	1953.00	11754.60

Expansion and New Initiatives of the Scheme :

Opening of new JNVs in the remaining uncovered districts

SL. No	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non-Plan	Plan	Total	Plan	Non-Plan	Plan	Total
1	Establishment of new JNVs in uncovered districts - 27 Nos.#	0.00	362.36	362.36	1028.70	0.00	1391.06	1391.06
2	Establishment of two Special JNVs in the State of Manipur – 2 Nos.\$	0.00	35.70	35.70	76.20	0.00	111.90	111.90
3	Opening of one JNV in each of 31 districts of Tamilnadu State	0.00	394.68	394.68	1181.10	0.00	1575.78	1575.78

#On 27-9-2010, the draft EFC was sent to the M/HRD for approval.

\$On 26-7-2011, the draft Note of the Cabinet Committee (CCEA) was sent to the M/HRD for approval.

These new JNVs will have Class VI to XII with 160 students in each class. Each new JNV will have maximum strength of 1120 students.

Expansion and New Initiatives of the Scheme :

Opening of additional JNVs in the Districts having more than ten lakhs rural population

S.No	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non-Plan	Plan	Total	Plan	Non-Plan	Plan	Total
	Opening of additional JNVs in 349 Districts (Each having more than 10 lacs rural population)	0.00	3538.28	3538.28	10930.89	0.00	14469.17	14469.17

Existing JNVs

Proposed additional new JNVs

Classes : VI to XII with 2 streams.

VI to XII with four streams.

Intake : 80 per class. Maximum 560 students.

160 per class. Maximum 1120 students.

Norms : One in each district. Addition in district have 10 lacs rural population.

Expansion and New Initiatives of the Scheme :

Opening of Science Magnet Schools

S.No	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non-Plan	Plan	Total	Plan	Non-Plan	Plan	Total
5	Setting up of Science Magnet Schools as part of the existing Navodaya Vidyalaya Scheme(10 Nos.)	0.00	245.00	245.00	171.20	0.00	416.20	416.20

On 31-8-2010, the draft EFC memo for setting up of 10 Science Magnet Schools as a part of the existing Navodaya Vidyalaya Scheme was submitted to the Ministry of HRD.

Expansion and New Initiatives of the Scheme :

Opening of 12 new Regional Offices

SL. No	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non-Plan	Plan	Total	Plan	Non-Plan	Plan	Total
6	Setting up of additional Regional Offices (i.e 12 Nos.) and to augment the administrative structure for the existing Regional Offices(8 Nos.).	0.00	31.12	31.12	60.56	0.00	91.68	91.68

On 23-12-10, the draft SFC Memo for Setting up of additional Regional Offices (12 Nos) and to augment the administrative structure for the existing Regional Offices (08 Nos.) was submitted to the Ministry of HRD.

The sub-group was of the view that only 8 Regional offices may be added during the Plan period and for this a sum of Rs. 61.12 crore will suffice.

Expansion and New Initiatives of the Scheme :

Construction of permanent Buildings for existing seven ROs

SL. No.	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non-Plan	Plan	Total	Plan	Non-Plan	Plan	Total
8	Construction of permanent buildings of 7 existing Regional Offices together with Staff Quarters & Guest House and Construction of Staff Quarters for one Regional Office.	0.00	0.00	0.00	36.57	0.00	36.57	36.57

The SFC of Ministry of HRD in its meeting held on 3.2.2011 has accorded approval for construction of permanent buildings of 07 existing Regional Offices with staff quarters/Guest house and construction of staff quarters for one Regional Office. The Grant for this project from the Ministry of HRD is awaited.

Expansion and New Initiatives of the Scheme :

Construction of additional accommodation in existing JNVs

S.No.	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non-Plan	Plan	Total	Plan	Non-Plan	Plan	Total
9	Construction of additional accommodation in existing JNVs (i.e. additional Classrooms, Maths Lab., Store Room, Geog. Lab., Art room, Multi Gym and Music Room).	0.00	0.00	0.00	671.81	0.00	671.81	671.81

The draft EFC Memo for Construction of additional accommodation (Class room, Labs, Store) in existing JNVs was submitted in the Ministry of HRD on 15.11.2010.

Expansion and New Initiatives of the Scheme :

Construction of additional infrastructure in 2 JNVs

S.No	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non- Plan	Plan	Total	Plan	Non- Plan	Plan	Total
11	Creation of additional Infrastructure for providing additional inputs/assistance to the bright students of JNVs for the preparation of Medical and Engineering Examinations.	0.00	0.00	0.00	16.46	0.00	16.46	16.46

Construction of additional infrastructure for providing additional inputs/assistance to the bright students of JNVs, for preparing medical and engineering entrance examinations in two selected JNVs (i.e JNV, Bangalore Urban in Karnataka and JNV, Rangareddy in Andhra Pradesh), has been submitted to the Ministry on 18.08.2011.

This proposal was not recommended by the Sub-group.

Expansion and New Initiatives of the Scheme :

Pace Setting activities in JNVs

SL.No.	PARTICULARS	ANTICIPATED REQUIREMENT (Amount-in-crore)						
		Operational Expenditure (i.e Recurring & Non-recurring)			Capital Expenditure (i.e Construction of Buildings)	Total (Operational & Capital Expenditure)		
		Non- Plan	Plan	Total	Plan	Non- Plan	Plan	Total
12	Conduct of Pace Setting Activities in JNVs.	0.00	524.76	524.76	229.94	0.00	754.70	754.70

- Sharing resources available with the Vidyalaya for providing requisite services to the local community including conduct of training of Teachers of neighboring schools in the district.

- Training of children from neighboring schools in the field of ICT to give them exposure to make optimum use of other facilities like computer labs, internet, fax, library, science labs, multi-purpose hall & play field etc. available with the Vidyalaya by organising various programmes at district level.
- Engagement of Master Craftsmen & Experts from the local district in order to give exposure to the students in the areas like drama/dance/music/theater/art & crafts etc. for the overall development of the personality of vidyalaya students and children from neighborhood schools. The services of such experts will also be used during vacation/breaks period.

Expansion and New Initiatives of the Scheme :

- Computerization in JNVs
- Providing of 40 computers alongwith two printers for one Computer Lab in a JNV to achieve the target of Computer Student ration 1:14.
- Setting up of one Computer Lab on 560 students and two computer labs having the student strength of 1120 Nos. in a JNV alongwith the required facility of air conditioning, carpet flooring, curtains, etc.
- Provision for providing of Projector Device, Interactive Board, Computer with UPS & Electric Response System, for the e.class rooms in JNVs. (i.e. 7 class rooms for 560 students and 14 class rooms for 1120 students in a JNV.
- Implementation of Management Information System (MIS) in each JNV.
- Replacement of old computers and printers in a phased manner over a span of 7 years (i.e. @ 20% in each year commencing from 2012-13 onwards.

Expansion and New Initiatives of the Scheme :

- Expansion of Information and Communication Technology (ICT) Programmes in JNVs.

Sl. No.	Particulars	FINANCIAL REQUIREMENT (Amount-in-crore)		
		For Existing JNVs	For New/additional JNVs	Total
1.	Providing of Computers in Computer labs	2.80	116.36	119.16
2.	Replacement of old Computers & Printers of existing JNVs.	53.60	-	53.60
3.	Setting up of Computer labs	0.60	24.54	25.14
4.	Provision for e.class rooms in JNVs	73.01	100.20	173.21
5.	Implementation of MIS System	29.80	20.45	50.25
	Total:	159.81	261.55	421.36

CENTRAL TIBETAN SCHOOLS ADMINISTRATION, DELHI

PROJECTED REQUIREMENT OF FUNDS UNDER PLAN BUDGET UNDER 12TH FIVE YEAR PLAN.

S.No.	Head	Particulars	Provision under 11 th five year plan	Year wise requirement under 12 th five year plan					
				(Rs. in Crores)					
				2012-13	2013-14	2014-15	2015-16	2016-17	Total
1.	Construction, Repair and maintenance of school Buildings and staff quarters	1. Construction of 30 classrooms 2. 30 staff quarters 3. 04 Multipurpose hall 4. Play ground 5. Hostel Block 6. Boundary wall/ retaining wall 7. Maintenance and repair work	24.00	5.00	6.00	7.00	8.00	9.00	35.00
2	Development of Academic facilities	1. Provision of computers for students to reduce the ration 1:10 2. Development of smart classrooms 3. Training programmes for Teaching and Non-Teaching staff 4. Salary of computer teachers 5. Cultural, Sports and other co-curricular activities	10.00	2.00	2.00	2.00	2.00	2.00	10.00
	Total Amount		34.00	7.00	8.00	9.00	10.00	11.00	45.00

IMPROVEMENT OF CTSA HOSTELS

Six of the CTSA schools are residential with intake capacity as mentioned below:

Sl. No.	School	Capacity
7.	Mussoorie	550
8.	Shimla	440
9.	Dalhousie	500
10.	Kalimpong	300
11.	Mundgod	160
12.	Darjeeling	270
Total		2220 students

Most of these hostels were opened in old and dilapidated buildings donated by erstwhile rulers and non govt. Organisations. Many of these were without proper sanitation/drainage and proper residential facilities. Efforts are being made to convert the same into new buildings and to renovate old buildings but for want of sufficient funds, the same could not be taken up at desired level. Mainly, the following works need to be taken up urgently:

a) Civil and Electrical Works

Sl. No	Works	Est.Expenditure (Rs. In Cr.)
7.	Conversion of long dormitories into 3-4 beded rooms for proper academic environment and better lighting arrangements	3.00
8.	Renovation of kitchens and equipment	0.75
9.	Renovation of toilets/baths	2.00
10.	Replacement of two tier old beds purchased in 1961-65	1.00
11.	Replacement of mattresses	0.50
12.	Replacement of quilts and linen	0.50
	TOTAL	7.75

b) Recurring Expenditure

Presently CTSA is incurring expenditure on hostels at the following rates, lastly revised in 2007. Since most of the schools are located in highly expensive areas and prices of commodities have substantially risen, it is proposed to increase the rates as given in the table in next page.

Sl. No.	Item	Existing Rates (per month)	Proposed Rates (Per month)
5.	Ration:	Rs. 580	Rs. 1200
6.	Daily necessities:	Rs.60/-	Rs. 120/-
7.	Uniform:	Rs. 200/-	Rs. 2500/- per year in Winter schools and Rs.1800/- Per year in summer schools
8.	Hostel contingency	Rs. 60/-	Rs. 100/-
	Total	Rs. 900/-	Rs.1620/-

Total annual financial implications will be as follows:

Free Boarders(100% sponsored by CTSA) @Existing: 260 studentsX10monthsXRrs.900= Rs. 2340000/-

@ Proposed rates 260X10monthsXRrs.1620=Rs.4212000/-

Difference: Rs.

1872000/-

Paid Boarders (40% paid by CTSA) @Existing: 1860 studentsX10monthsXRrs.360= Rs. 6696000/-

@ Proposed rates

1860X10monthsXRrs.744=Rs.13838400/-

Difference: Rs.

7142400/-

Total annual financial implications= Rs.9014400 (Ninety lakh fourteen thousand four hundred only)

Therefore, requirement for the XII Five Year Plan = Rs.5 x .90 = Rs.4.5 crore.

Grand total for improvement of CTSA hostels = Rs.(7.75 + 4.5) crore = Rs.12.25 crore.

NATIONAL INSTITUTE OF OPEN SCHOOLING

1.	Development of On Demand Examination System and supporting ICT for Examination Reforms	Rs. 30 crores
2.	Improving of Examination and Academic Departments at Secondary and Senior Secondary Levels	Rs. 20 crores
	Total	Rs. 50 crores

**Repositioning of Boards of School Examinations, Networking of schools and Boards,
Guidance and Counselling and Environment Building Reforms**

A. Strengthening of Academic Units within Boards

B. Strengthening of IT use in Boards

Development of ICT infrastructure for capacity building and examination reforms for every Board (depending on the size of the Boards).

C. Online Network for Strengthening the Boards' Role in Capacity Building

A total sum of Rs.25.45 crore is required for the following:-

Access to a wide range of online journals relevant to school teachers – a national subscription arrangement as done by the UGC, rights to translate and repurpose portions	1.00 crores each year = 5.00 crores
Publication of online journals focussing on issues of school education in India, hosted at Indian institutions, [10.00 lakhs grant to each board on application each year (50.00 lakhs x 41 boards (approx))	20.50 crores; to cater to setting up of an editorial team, salaries, infrastructure, etc.]
For setting up and management of the teacher education portal	25 lakhs in first year, 5 lakhs each subsequent year for management of portal = 45.00 lakhs; includes setting up a small technical team at CBSE or NCERT, salaries, infrastructure, sourcing of content, hosting, etc.

D. Capacity building of Boards officials and International exchange on Examination Reforms and Pedagogy and Capacity building of Principals, Teachers and International Exchange on Examination Reforms and Pedagogy

A sum of Rs.14 lac per month per Board has been proposed which works out to Rs.344.4 crore for a period of 5 years for 41 Boards.

Networking of Schools

A sum of Rs.50 lacs per Board per year can be provided to 41 Boards.

Hence, Estimated expenditure (XII Plan) : Rs.(0.5 x 5 x 41) =Rs.102.5 crore

Strengthening of Networking of Boards through CBSE

For this purpose an amount of Rs.150 crore can be earmarked for the CBSE.

Guidance and Counseling

Guidance Resource Centres would need to be created/further strengthened, under the guidance of the NCERT, for providing aforementioned services at cluster/block/school levels.

Estimated expenditure (XII Plan)-**Rs 35 crore for organising meeting and workshops by the NCERT, and Rs. 205 crore for establishing the resource centres in the States (@Rs.1 core per year per Board for 41 Boards).**

Environment Building for Reforms

Every year 8 Boards will be chosen for this activity. For the electronic media, the following schedule is suggested during prime time:

1. first 3 months of the year – 15 days
2. next 3 months - 4 days
3. next 3 months - 2 days
4. next 3 months - 1 day

Every day a slot of 30 seconds (@Rs.50000) will be taken during prime time on different TV channels. On an average, 10 TV channels will be used.

Thus, the cost of electronic media plan will be –
(40/5) x (50000 x 10 x (15 x 3 + 4 x 3 + 2 x 3 + 1 x 3)) x 5 =Rs.132 crore

Similarly, an amount of Rs.10 lac per month has been earmarked for publicity through print media. The total cost of print media plan will be – (40/5) x 10 lac x 12 x 5 = Rs.48 crore

National Council of Educational Research & Training

S.No.	Existing Programmes/Activities	Proposed Programmes/Activities
1.	Elementary Education <ul style="list-style-type: none"> •Nodal centre under Sarva Shiksha Abhiyan. •Diploma course in ECCE •In-service training of KRPs in ECCE. •Development of textual and non-textual material at elementary level. 	<ul style="list-style-type: none"> •Coordinate activities under SSA being performed by different deptts./constituents. •Researches on themes of ECCE and aspects emerging from the contexts of RTE Act 2009. •Development of audio-video, non-print material for advocacy of ECCE and bridge course for age appropriate placement of out of school children. •Diploma course in ECCE and in-service training of KRPs in ECCE to be continued.
2.	Secondary Education <ul style="list-style-type: none"> •Development of vision document •Review of syllabi and textbook of states in the context of NCF- 2005. 	<ul style="list-style-type: none"> •Undertake researches on effective pedagogical impact of use of ICT in Mathematics education at secondary stage and on various aspects of quality for academic improvement in Science, Mathematics, Social Sciences and Languages and also on the status of curriculum reform and practices in states/UT at secondary stage. •Develop resource material such as proto-type kit, activity book, and professional development packages in Science, Mathematics and Social Science with the focus on research-based pedagogical approaches. •Develop quality parameters on various aspects such as curriculum, pedagogy and CCE in content areas.
3.	Art Education	<ul style="list-style-type: none"> •Implementing integration of arts as a tool of experiential learning across the primary school curriculum. •Need based training of teachers of different level in the field of arts education, will be an intensive programme to ensure quality elementary education to every child. •Capacity building of States for a functional Arts and Crafts Resource Center in every school and teacher education institutes at every level under RMSA.
4.	Education of Groups with Special Needs <ul style="list-style-type: none"> •Researches in the area of special education and education of children of SC,ST and minority groups. •In-service training programme for the KRPs working in the area of SC, ST and minorities. •Development of material for the education of children with special needs. 	<ul style="list-style-type: none"> •Researches on lesser participation of girls from Scheduled Caste, Scheduled Tribes, OBC and other minorities' communities. •Develop an inclusive curriculum and suggesting reforms in the examination process. •Networking will be established with state, national and international organizations working on promoting girls education.
5.	Education of the Girl Child	<ul style="list-style-type: none"> •Researches to evaluate the curriculum,

	<ul style="list-style-type: none"> •Researches in the area of girls education of minority group. •In-service training programme for the KRPs in sensitizing towards gender education. •Development of material on gender education and instructional material and training package for KGBV girls. 	<p>syllabus, textbooks, etc. from gender perspectives.</p> <ul style="list-style-type: none"> •Development of Modules and handbooks on gender issues. •One-year diploma course in gender education and development.
6.	<p>Science and Mathematics Education</p> <ul style="list-style-type: none"> •In-service training of KRPs in of Science and Mathematics education. •Development of textbook, teacher's handbook, supplementary material and laboratory manuals. 	<ul style="list-style-type: none"> •In-service training of KRPs in of Science and Mathematics education will be continued. •Work on development of textbook, teacher's handbook, supplementary material and laboratory manuals will be continued. •One-year PG Diploma Course in Physics, Chemistry, Biology and Mathematics Education. •Implementation of Frame-work of EOSE-2010.
7.	<p>Educational Evaluation</p> <ul style="list-style-type: none"> •In-service training of KRPs in CCE of Boards of Secondary Education of States •Researches in the area of CCE and pressure of examination on the students. 	<ul style="list-style-type: none"> •Training programmes for implementing school based Continuous and Comprehensive Evaluation. •National centre for assessment and evaluation will be established. <p>Expand the number and quality of NTS scholarship.</p>
8.	<p>Educational Psychology</p> <ul style="list-style-type: none"> •One-year International Diploma Course in Guidance & Counselling through Distance/online mode in collaboration with Commonwealth of Learning (CoL). •Strengthening of guidance and counselling services in schools in the context of RMSA. •In-service training of teachers and educators to promote peace related attitudes and values. •Development of resource book on peace of education. 	<ul style="list-style-type: none"> •One-year International Diploma Course in Guidance & Counselling through Distance/online mode in collaboration with Commonwealth of Learning (CoL) will be continued.

DETAIL OF FUNDS REQUIREMENT DURING TWELFTH FIVE YEAR PLAN (2012-2017)

2012-17		FIGURE IN CRORE	
S.No	Name/Title of the Project	Year	Estimated expenditure
1	Programme Activities	2012-17	150.00
2	Quality Improvement Scheme Programme	-do-	25.00
3	Adolescence Education	-do-	25.00
4	IX All India Educational Survey	-do-	50.00
5	National Innovation Scholarship	-do-	250.00
6	Dissemination of Priced Publications to Stake Holders in the states	-do-	100.00
7	Additional staff due to OBC reservation and Strengthening of PSSCIVE, four New RIEs and New courses at Hqrs.	-do-	300.00
8	Remaining Construction Work at PSSCIVE, Bhopal.(Target year)	-do-	10.00
9	Remaining Construction work at NERIE, Shillong (Target year)	-do-	15.00
10	Land & Building including special renovation and upgradation of residential facilities at Hqr. Including Director and Joint Director, Bangalow)	-do-	25.00
11	Construction of four additional RIEs at Dharbanga, Pune, Chandigarh & Hyderabad	-do-	300.00
12	Construction of Humanities Block and Convention Hall at Hqrs.	-do-	90.00
13	Construction of Hostels in RIEs and NIE including PG Hostel and Guest House extension.	-do-	30.00
14	Construction of Buildings for early childhood education in DM School of RIEs.	-do-	30.00
15	Furnitures, fixtures, Machinery etc. (including four new RIEs and New courses at Hqrs.	-do-	50.00
	Total		1450.00

DETAIL OF FUNDS REQUIREMENT DURING 2012-2013

2012-13		FIGURE IN CRORE	
S.No	Name/Title of the Project	Year	Estimated expenditure
1	Programme Activities	2012-13	25.00
2	Quality Improvement Scheme Programme	-do-	5.00
3	Adolescence Education	-do-	5.00
4	IX All India Educational Survey	-do-	10.00
5	National Innovation Scholarship	-do-	45.00
6	Dissemination of Priced Publications to Stake Holders in the states	-do-	20.00
7	Additional staff due to OBC reservation and Strengthening of PSSCIVE, four New RIEs and New courses at Hqrs.	-do-	10.00
8	Remaining Construction Work at PSSCIVE, Bhopal. (Target year)	-do-	10.00
9	Remaining Construction work at NERIE, Shillong (Target year)	-do-	15.00
10	Land & Building including special renovation and upgradation of residential facilities at Hqr. Including Director and Joint Director, Bangalow)	-do-	10.00
11	Construction of four additional RIEs at Dharbanga, Pune, Chandigarh & Hyderabad	-do-	-
12	Construction of Humanities Block and Convention Hall at Hqrs.	-do-	25.00
13	Construction of Hostels in RIEs and NIE including PG Hostel and Guest House extension.	-do-	10.00
14	Construction of Buildings for early childhood education in DM School of RIEs.	-do-	5.00
15	Furnitures, fixtures, Machinery etc. (including four new RIEs and New courses at Hqrs.	-do-	5.00
	Total		200.00

GLOSSARY

CABE	Central Advisory Board of Education
CBSE	Central Board of Secondary Education
CCE	Continuous and Comprehensive Evaluation
CIE	Central Institute of Education
CIET	Central Institute of Educational Technology
CTET	Central Teacher Eligibility Test
CTSA	Central Tibetan Schools Administration
GSHSEB	Gujarat Secondary and Higher Secondary Education
JNU	Jawaharlal Nehru University
KVS	Kendriya Vidyalaya Sangathan
KBHSE	Kerala Board of Higher Secondary Education
MHRD	Ministry of Human Resource Development
NIOS	National Institute of Open School
NPE	National Policy on Education
NVS	Navodaya Vidyalaya Samiti
NCERT	National Council of Educational Research and Training
NUEPA	National University of Educational Planning and Administration
NCF	National Curriculum Framework
RTE	Right to Education
SSC	Sahodaya School Complex
SCERT	State Council of Educational Research and Training
TOR	Terms of Reference
ZIET	Zonal Institutes of Education & Training